Towards a Framework of Reverse Knowledge Transfer by Emerging Economy Multinationals: Evidence from Chinese MNE Subsidiaries in the United States

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This article extends the research on knowledge transfer by emerging-economy multinationals (EEMs) by exploring the determinants of successful reverse knowledge transfer (RKT) in Chinese enterprises operating in the United States. Building upon organizational evolution and learning literature, we propose a model linking strategic asset-seeking motivations, headquarters (HQ) control, and subsidiary age to RKT. The model is empirically tested in the context of Chinese enterprises in the United States and further justified by four cases of Chinese multinationals. Our exploratory study provides initial evidence that strategic asset-seeking motivations and HQ control are significantly and positively related to RKT. Furthermore, our empirical evidence indicates a negative relationship between subsidiary age and RKT. We discuss the implications for theory development and practice for managing and organizing EEMs and their subsidiaries and suggest avenues for future research on this emerging phenomenon. © *2016 Wiley Periodicals, Inc.*

Introduction

The internationalization and competitive catch-up processes of emerging-economy multinationals (EEMs), generally, and Chinese multinational enterprises (MNEs), in particular, have been attracting an increasing amount of attention from researchers, which can be mainly attributed to the following. First, China has become increasingly important in international business, not only as the largest FDI recipient but, more importantly, as the world's third-largest source of outward FDI (OFDI) across multiple regions by 2014 (United Nations Conference on Trade and Development [UNCTAD], 2014). Second, Chinese firms, as the latecomers among internationalizing firms, tend to differ from early movers, especially at the early stage of their internationalization. These differences have implications for a more nuanced understanding of theory development of EEMs (Guillén & García-Canal, 2009; Li, 2003, 2007; Liu & Woywode, 2011, 2013).

Based on the observation of large MNEs from developed countries, traditional MNE theories (e.g., the ownership-location-internalization [OLI] model) indicate that MNEs expand internationally to exploit their existing firm-specific advantages in the host countries (Dunning, 1977; Vernon, 1966). However, the research on MNEs from emerging economies, such as China, suggests a diverse set of motivations (Li, 2007). The linkage-leverage-learning (LLL) model (Mathews, 2006), for example, proposes that MNE latecomers engage in FDI to achieve new competitive advantages via external linkage, leverage, and learning rather than exploiting existing internal advantages. It specifically emphasizes a dynamic process of MNEs in terms of discovering new knowledge via a global presence rather than exploiting existing advantages.

Given their role as latecomers, Chinese companies often have few firm-specific advantages (FSAs) in developed countries (Li, 2003). Practically, acquiring *ex post* new technology or know-how to become globally competitive has become the most important strategic motive for them to invest in advanced economies (Li, 2007; Lyles, Li, & Yan, 2014). Subsidiaries in developed countries play the role of knowledge-scanning units (Dunning, 1994), and transferring knowledge from foreign subsidiaries in developed countries back to headquarters (HQ) in China (i.e., reverse knowledge transfer [RKT]) becomes important in the competitive catch-up processes for Chinese companies (Young, Huang, & McDermott, 1996).

Despite the efforts made by some scholars to investigate this new phenomenon (Michailova & Mustaffa, 2012; Najafi-Tavani, Giroud, & Sinkovics, 2012; Rabbiosi, 2011), questions remain: what are the determinants of RKT in EEMs generally, and China's MNEs, in particular? Previous studies have identified a whole set of factors in MNE knowledge transfer and organizational learning, including organizational structure and HQ control, which refers to the influence that the HQ has on subsidiaries' decision making, (Foss & Pedersen, 2002, 2004, Huang, Rode, & Schroeder, 2011; Simonin, 1999). However, little research has been done in the context of EEMs. We do know that Chinese firms have their unique motivations and internal structures for their global operations (Deng, 2009; Li, 2007), but there is very limited research that has explored the determinants for RKT in Chinese firms.

Drawing upon previous literature, this study aims to explore the phenomenon of RKT within EEMs by proposing a conceptual model (see Figure 1). We test the model in the empirical setting of Chinese enterprises in the United States. We find that the RKT within Chinese

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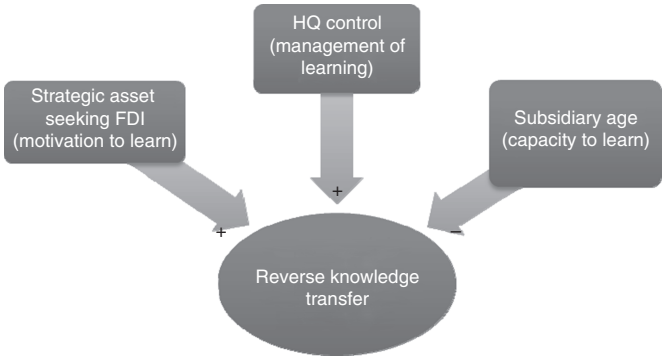
FIGURE 1 A Preliminary Conceptual Model of RKT within EEMs in Advanced Economies



companies can be explained by the MNEs' strategic asset-seeking behavior, HQ control, and subsidiary age. And the model is further justified by four cases of Chinese multinationals.

As an exploratory study, this article provides three contributions to the literature on knowledge-based MNE evolutionary theory and Chinese EEMs' global strategies. First, one of our key contributions rests on an examination of the effect of subsidiary age in RKT happening within Chinese firms. This is an issue that has not previously been studied, so far as we are aware. Second, this study suggests the importance of HQ control in facilitating RKT. In particular, we find that the higher the degree of HQ involvement in decision making and operations in the host countries, the higher the level of RKT. Last but not least, we found a positive relationship between motivations in expanding in advanced markets and RKT. The findings of this study have theoretical implications for future studies and practical implications for managers from Chinese multinationals as well as other EEMs in facilitating knowledge transfer.

Theory and Hypotheses

OLI, Evolutionary Theory, and MNE Knowledge Transfer

As an important traditional MNE theory, the ownership-location-internalization (OLI) model contends that MNEs possess ownership, location, and internalization advantages (Dunning, 1977). Specifically, the ownership advantage comes from the ownership of unique intangible assets (i.e., firm-specific technology and knowledge), the collective ownership of strategic assets (i.e., competences and capabilities), and the firm's multinationality (i.e., a platform from which the firm's assets can be further exploited internationally). An MNE is a coordinated system or network of cross-border value-creating activities (Cantwell, Dunning, & Lundan, 2010; Dunning & Lundan, 2008); these activities involve cross-border knowledge transfer within the boundary of the firm.

More recently, the evolutionary theory developed by Kogut and Zander (1993) explicitly transformed MNE theory to a knowledge-based theory of the firm. MNEs, therefore, have been conceptualized as networks of knowledge creation, transformation, and exploitation (Gupta & Govindarajin, 2000). This perspective not only rests on the MNE theories discussed above but also is supported by both the resource-based view and transaction cost economics. MNEs exist because intrafirm knowledge transfer is more efficient than obtaining knowledge through markets (Ghoshal & Moran, 1996; Grant, 1996). The key competitive advantage of MNEs lies in their abilities to exploit locally created knowledge worldwide and to transfer knowledge within organizational networks, characterized by separation through time, space, culture, and language (Kogut & Zander, 1993; Schlegelmilch & Chini, 2003).

RKT and Chinese MNEs

Subsidiary capabilities in knowledge acquisition and sharing play a critical role in MNE cooperation, integration, and, more importantly, global innovation (Frost & Zhou, 2005; Qin, Ramburuth, & Wang, 2008, 2011; Rabbiosi, 2011). This knowledge-based role of subsidiaries tends to be even more important for MNEs from emerging economies, especially when they enter industrialized economies, for three reasons. First, there is a large gap between the home and host countries in terms of both macro and micro institutional environments (Kim, Lu, & Rhee, 2012; Yang, Sun, Lin, & Peng, 2011). While this gap stimulates institutional arbitrage behavior in EEMs to escape from the competitive disadvantages that they have in their domestic market to pursue efficient institutions in Western countries (Boisot & Meyer, 2008; Witt & Lewin, 2007; Yang, Yang, Chen, & Allen, 2014), this gap makes it extremely difficult for HQ to manage overseas operations in an unfamiliar institutional environment. RKT can help the HQ better understand the global environment, and hence effectively manage the subsidiary.

Second, the competitive landscape has become more intense and product life cycles have shortened; firms no longer have the luxury of taking a long time to build up capabilities and competitive advantages. Therefore, strategic asset-seeking FDI has been conveniently used as a vehicle to acquire capabilities unavailable in MNE home countries, especially for EEMs (Moon & Roehl, 2001; Yang, Lim, Sakurai, & Seo, 2009). In fact, the acquisition

of strategic assets could be a springboard for Chinese firms to overcome their latecomer disadvantages (Luo & Tung, 2007; Wang, Hong, Kafouros, & Boateng, 2012).

Third, MNE latecomers do not start from a position of exploiting *ex ante* strengths (Mathews, 2006). Outward FDI from emerging countries is designed to acquire technology from abroad and serves as a mechanism to facilitate the technological asset accumulation process (Lecraw, 1993; Lyles, Li, & Yan, 2014). It is the absence rather than the ownership of advanced technology and competitive advantages that motivates firms from emerging countries to venture into industrialized economies (Yang, Lim, Sakurai, & Seo, 2009). Therefore, EEMs start from an acute need for acquiring *ex post* new advantages by global expansion (Li, 2007).

The existing literature on traditional MNEs also contains potential predictors of RKT within EEMs operating in developed economies (e.g., Borini, de Miranda Oliveira, & Silveira, 2012; Rabbiosi & Santangelo, 2013). First, the intensity of RKT is closely associated with the subsidiary role (Gupta & Govindarajin, 2000), which is the result of the combination of HQ assignment and subsidiary initiative (Birkinshaw & Morrison, 1995). If subsidiary roles are assigned by the HQ, we expect that the MNE's motivation in the host country may have significant effects on knowledge transfer. Second, the impact of HQ control on knowledge transfer has been widely discussed in the literature (Gupta & Govindarajan, 2000). Evidence can be found in the existing research for both positive effects and negative effects (Noorderhaven & Harzing, 2009; Rabbiosi, 2011); yet few studies have analyzed the RKT of Chinese MNEs. Third, existing research on EEMs implies that the extent of RKT could be related to subsidiary age and, more interestingly, different from Western MNEs. Conventional theory of Western MNEs surmises that MNEs' initial entry in a foreign market serves as a platform where the firm can apply its knowledge in the host countries. The extent of RKT, hence, tends to be low when a subsidiary is relatively young and increases as the subsidiary ages (Kogut & Zander, 1993). On the contrary, Mathews (2006) suggests that EEMs typically do not have an ownership advantage in their international expansion; rather, they set up their international value creating activity networks early to facilitate the competitive catch-up process (e.g., Li, 2003, 2007; Redding & Witt, 2009; Young, Huang, & McDermott, 1996). Therefore, one can expect that a higher level of RKT occurs at an early stage of their expansion into advanced markets rather than at a final stage.

Based on the preceding literature review and discussion, we propose a preliminary conceptual model of knowledge transfer within EEMs (see Figure 1). This model depicts overseas strategic asset-seeking FDI (e.g., motivation to learn), HQ control (e.g., management of learning), and subsidiary age (e.g., capacity to learn) as the key factors influencing RKT within EEMs. The next section develops a set of hypotheses on the effects of these three factors on the level of RKT within EEMs.

EEMs' Strategic Asset-Seeking FDI (Motivations to Learn)

The existing literature suggests that motivations for international expansion directly affect cross-border knowledge transfer. The motivation to acquire strategic assets directly affects EEMs' choices of FDI destinations (Yang, Yang, & Doyle, 2013). Young, Huang, & McDermott (1996), using Chinese OFDI as empirical evidence, argue that asset-seeking investment, motivated by RKT, is directed to developed countries, especially North America and Europe, where they tend to be aggressively seeking knowledge-based strategic assets (Deng, 2012; Rui & Yip, 2008).

Clearly, strategic asset-seeking FDI is most directly driven by the learning motive. Previous research has found that strong motivations to seek strategic assets can actually facilitate knowledge transfer between different entities by either sharing the same vision and mission or providing a common measure against which to assess vision and mission (e.g., Gupta & Govindarajan, 2000; Lyles & Salk, 1996; Szulanski, 1996). More specifically, among strategic asset-seeking FDI subsidiaries, learning by the HQ is the direct goal. Because of this, we expect that EEMs with high-level motivations will report more RKT from foreign subsidiaries back to the HQ. Therefore, we propose:

> **Hypothesis 1:** *Strategic asset seeking motivations are positively related to the level of RKT within EEMs.*

EEMs' HQ Control (Management of Learning)

Kostova, Marano, and Tallman (2016) indicate that the affiliation between knowledge transfer, especially reverse diffusion, and headquarters-subsidiary relationships has become one of the main themes in international business studies. Specifically, effective organizational setup between HQ and foreign subsidiaries is crucial to help EEM HQs manage the RKT from the foreign subsidiaries (Edwards & Tempel, 2010). Many companies fail to share and transfer knowledge internally due to lack of an organization structure or mechanism to control the transfer and sharing (Björkman, Barner-Rasmussen, & Li, 2004; Lane & Lubatkin, 1998).

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While HQ control is considered an important management mechanism affecting RKT, no consistent conclusion was achieved in previous studies. Foss and Pedersen (2002) suggest that giving a subsidiary more autonomy can enable it to transfer knowledge back to the HQ more successfully. This is in line with Liu and Woywode's (2011) observation on Chinese firms' internationalization through merger and acquisition (M&A): compared to state-owned enterprises with a hierarchical structure, privately owned Chinese enterprises with more transparent decision-making processes tend to have a stronger willingness to learn and to be more efficient in postacquisition integration. However, other studies argue for a positive relationship between MNE HQ control and RKT. Bartlett and Ghoshal (1989) indicate that MNEs rely on coordination and control to increase learning efficiencies among dispersed organizational units. Such control over its overseas units, through hiring and training and performance management, can enforce knowledge acquisition, distribution, and utilization (Fee, McGrath-Champ, & Yang, 2011; Takeda & Helms, 2010). Noorderhaven and Harzing (2009) suggest that RKT may be increased by giving a subsidiary less autonomy. Further, Lyles and Salk's (1996) empirical study shows that active involvement of the foreign parents in international joint ventures (IJVs) positively influences the degree of knowledge acquisition by subsidiaries.

Consistent with the latter arguments, we propose a positive correlation between HQ control and RKT for the following reasons. First, and most importantly, the involvement of HQ in decision making and operations in the host countries can facilitate RKT by making the knowledge-based strategic goals more explicit to the HQ and subsidiaries, hence stimulating RKT. A subsidiary is both an affiliated business unit directed by the HQ and an agent with motivations to pursue rent seeking and opportunism (Foss & Pedersen, 2004). Rent-seeking and opportunistic behaviors may harm the goal achievements that are preferable to the firm as a whole (Haas, 2010).

This could particularly be the case for the subsidiaries in Chinese MNEs. Subsidiaries, for instance, may be motivated to obtain out-of-date knowledge in developed countries (that could still be advanced in China) for convenience, given the fact that the parent company has little information about the situation in developed countries. With high HQ control, this kind of opportunistic behavior can be restrained, as high HQ control signals the subsidiaries that (1) their activities in the developed country are monitored by HQ, and (2) HQ can punish the subsidiaries that do not make enough effort to achieve organizational goals.

Second, a high degree of HQ involvement in decision making and operations in the host countries can help subsidiaries establish a strong learning alliance with the HQ based on a clear learning objective. Third, HQ control over the subsidiaries' decision making and operations provides richer information transmission channels, communication mechanisms, and social networks for the two parties (Björkman et al., 2004; Gupta & Govindarajan, 2000). The richness of transmission channels and strong social networks across organizational units have been found to be significant forces in effective knowledge transfer (Gupta & Govindarajan, 2000). Hence:

> **Hypothesis 2:** *HQ control is positively related to the level of RKT in EEMs.*

Subsidiary Age (Capacity to Learn)

Subsidiary age has been widely considered a control variable in the existing literature (e.g., Foss & Pedersen, 2002; Lee & MacMillan, 2008); very few studies have viewed it as a main factor in international knowledge transfer. Kim, Lu, & Rhee (2012) study on Japanese MNEs is one of the limited attempts to explore the impact of subsidiary age on the learning experience of MNEs. They note that the timing of entry into foreign markets is related to specific nonredundant knowledge that is beneficial to peer subsidiaries, and an MNE's international experience can be decomposed into the time-varying experience of its subsidiaries. Even though their study is mainly focused on the horizontal knowledge transfer between peer subsidiaries, it has implications in the vertical knowledge flow between subsidiaries and the HQ. The time-varying experience of subsidiaries can be expected to influence the knowledge transfer pattern within MNEs, notably RKT.

Similarly, Rabbiosi and Santangelo (2013) propose that older subsidiaries have more time to accumulate a knowledge stock, develop their capabilities, and hence tend to have more knowledge to share with parent companies and be more effective in the knowledge transfer process. Their arguments are based on organizational ecology theory, namely, the liability of newness (Freeman, Carroll, & Hannan, 1983; Stinchcombe, 1965), which suggests that young organizations lack the routines and capabilities necessary to undertake knowledge transfer. As firms grow older, they accumulate knowledge and develop competencies to innovate. The expanded knowledge base and improved innovation capabilities in turn facilitate more knowledge accumulation (Cohen & Levinthal, 1990). Liu & Woywode's (2013) study on Chinese cross-border M&A provides an explicit illustration of the positive relationship between RKT and absorptive capacity.

However, leaning upon organizational ecology theory, the liability of age, or liability of senescence may lead us in a different direction. The mechanism behind the liability of senescence underpins the erosion of capabilities due to the ossifying effect of growing bureaucratization (Ranger-Moore, 1997). Compared to younger companies, older organizations tend to have a higher degree of inertia, and thus are more resistant to change (Hannan & Freeman, 1989). Furthermore, some MNE subsidiaries may go native by emulating the behavior, corporate culture, and institutional artifacts that are perceived as most desirable in the host-country context to reduce the liability of foreignness (Cantwell et al., 2010). This going native effect may facilitate learning in newer subsidiaries.

Theoretically, liability of senescence and its implication on the negative relationship between subsidiary age and knowledge transfer can be echoed in evolutionary learning theory. As an organization ages, it tends to develop and refine its competencies within a particular set of domain activities or routines, resulting in escalation of commitment to those routines. While the commitment can increase the efficiency in existing activities, the organization may lose flexibility in searching for new practices/knowledge instead (Levitt & March, 1988) and, hence, has less knowledge to transfer. Meanwhile, as subsidiaries mature, the communication between the HQ and the subsidiaries is likely to become increasingly rigid, which may have a negative impact on both the extent and effectiveness of RKT.

Prior research suggests that cognitive conflict or puzzlement is the stimulus for learning, and it determines the learning process (Dewey, 1938). When Chinese MNEs first enter developed countries' markets, they are facing a whole new set of challenges and opportunities that they are unfamiliar with. Using subsidiaries as a vehicle, they have a tendency to acquire as much knowledge from the host country as possible, probably even before they can interpret, filter, and exploit it. Chinese EEMs also tend to have defined target knowledge and specific strategies to obtain the knowledge at an early stage. A significant amount of RKT, thus, is apt to occur.

However, over time, many inhibitors can reduce subsidiaries' motivation to transfer new knowledge. First, as stated above, the parent company's urgency to search for new knowledge tends to decrease, which in turn undermines a foreign subsidiary's motivation to make efforts. Second, it becomes difficult for the subsidiary to transfer new knowledge back to the home country; due to (1) research and development (R&D) institutions need time to create new knowledge, and/or (2) host country R&D institutions become more careful on sharing new knowledge.

In addition, the intensity and extent of RKT as required by HQ may change along with EEM subsidiary evolution. The experiences accumulated through previous knowledge sharing activities can improve the EEMs' capabilities in identifying and determining what knowledge should be transferred selectively to the HQ. Birkinshaw and Hood (1998) argued that HQ assignment works more effectively in the early stages of subsidiary evolution, where subsidiaries' capabilities are not too advanced. Maturation of a subsidiary with knowledge and capability build-up could lead to the subsidiary explicitly changing its charter such that RKT is no longer a top priority. Conversely, building specialized resources and distinctive capabilities in host countries may become goals for EEM subsidiaries at later stages of their evolution. At the same time, there is less need for RKT as EEMs accumulate knowledge while subsidiaries age. Thus:

> **Hypothesis 3:** *Subsidiary age is negatively related to the level of RKT in EEMs.*

Methodology

Following recent calls for mixed-method approaches in international business research (Harrison, 2013; Hurmerinta-Peltomäki & Nummela, 2006; Punnet & Shenkar, 2004), we supplemented the quantitative analysis of our survey data with qualitative case studies to confirm the validity of our results and to reveal additional insights into the phenomenon.

We first investigated the subsidiaries of Chinese firms in the US. Quantitative data for this study were collected through a survey, conducted in partnership with Chinese chambers of commerce and associations of Chinese enterprises in the United States. Lists of Chinese firms with contact detail, location, and industry sectors were furnished by these entities. A detailed questionnaire was designed in both English and Chinese. We contacted each Chinese firm in the list via phone to verify the CEOs/managing directors, mailing addresses, and to ask for their permission to be included in the survey. Once verified and permission granted, we either mailed the survey instrument by priority mail the following day or e-mailed the electronic version of the instrument if requested. Thus, a total of 218 member companies were included in the survey. Follow-up phone calls and some phone interviews were used to increase the respondent rate. For incomplete responses, a second and third round of phone calls were made to seek the missing data. A total

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of 38 companies responded to surveys. We had to drop 8 respondents from the list because of missing data, leaving 30 usable responses, corresponding to a 14% response rate. This response rate is not unusual for postal/e-mail surveys[1] (e.g., Noorderhaven & Harzing, 2009; Puck, Holtbrügge, & Mohr, 2009; Steenkamp, Batra, & Alden, 2003).

Among these 30 subsidiaries, 19 (63%) were established via greenfield investment, and 2 (7%) were established via acquisition, while the numbers for the establishment mode of joint venture and others were 8 (27%) and 1 (3%). Based on the North American Industry Classification System (NAICS) code, about one-third of the companies that participated in this survey are in manufacturing, while the rest of them are in service industries. The Chinese enterprises in our survey (mainly West Coast region) are concentrated in California (16), Texas (5), and Washington (4), and the remainder are located on the East Coast. California leads the nation in the number of subsidiaries it has attracted from Chinese firms, but ranks only fifth in total investment value from China.[2] All respondents[3] in our study were CEOs, presidents, vice presidents, or general managers based in the United States.

Measures

Generally, all measures were adapted or adopted from existing validated scales, and the 5-point Likert style was applied to multi-item constructs. Following Gupta and Govindarajin (2000), we adjusted the types of knowledge into six: new technological expertise, new marketing and sales expertise, product development, knowledge about foreign cultures, managerial techniques, and manufacturing processes. Accordingly, to capture reverse knowledge transfer, we asked respondents to rate the extent that the parent companies have learned from them. The strategic asset-seeking motivations were measured by asking respondents to indicate the level of importance of each of the following objectives: (1) to obtain high quality personnel; (2) to access advanced technology and R&D capacity; and (3) to acquire advanced management skills.

In order to assess the degree of HQ control on the subsidiaries, we asked respondents to rate the level at which a whole set of decisions are influenced by their parent companies, including (1) hiring top subsidiary management; (2) entering into new markets within the United States; (3) changes to subsidiary organization; (4) introduction of new products/services; and (5) approval of quarterly plan/schedules. To triangulate the results, we also asked the respondents: "Overall, how would you rate the influence of your parent company on your US company's overall operations?" Following previous studies (e.g., Rabbiosi & Santangelo, 2013), the variable subsidiary age in this study is operationalized as the difference between 2011 (when the data were collected) and the year when the subsidiary was established in the United States. Control variables, including firm size and subsidiary establishment mode (including four modes, i.e., greenfield investment, acquisition, joint venture, and others), were obtained through survey and later verified against the company records.

Survey Results

Table 1 shows the means, standard deviations, and correlations for all of the variables analyzed in this study. We first examined knowledge inflows and outflows at the subsidiaries (merely to and from the HQ, not including knowledge flows to and from peer subsidiaries) with *t*-test. The result shows that there was a statistically significant difference between inward knowledge transfer (M = 2.24, s = 1.07) and outward knowledge flows (M = 2.75, s = 1.43), t (29) = 3.12, p = .004, α = .000. This indicates that more outward knowledge transfer to the HQ happens than inward knowledge transfer from the HQ in Chinese MNE subsidiaries in the United States.

Due to the small sample size, we employed partial linear modeling (PLS) as the analysis technique to

TABLE 1 Descriptive Statistics and Correlations

	Mean	SD	1	2	3	4
1. Strategic asset-seeking motivation	3.62	1.09				
2. HQ control	2.86	0.93	.153			
3. Age	9.06	6.46	–.174	–.112		
4. Size	49.27	107.45	.264	.359*	.037	
5. RKT	2.75	1.43	.610**	.380*	–.600**	.247

*p < .05; **p < .01.

TABLE 2 PLS Results

Variables	Model 1	Model 2
Control variables		
Size	–.130*	–.130*
Entry Mode—Dummy 1	.460**	.178*
Entry Mode—Dummy 2	.257*	.003
Entry Mode—Dummy 3	–.191*	–.349**
Independent variables		
Strategic asset-seeking motivation		.274*
HQ control		.451**
Subsidiary age		–.140*
R^2	.353	.657
ΔR^2		.304

*$p < .05$; **$p < .01$.

justify the research hypotheses (Chin, 1996; Wixom & Watson, 2001). Table 2 presents the results of PLS analysis. In model 1, we entered the control variables, and in model 2, strategic asset-seeking motivation, HQ control, and subsidiary age were entered into the regression. While our sample size is small, our parsimonious models produced very robust results, explaining nearly 66% variation of the dependent variable.

As shown in Table 2, there was a strong support for Hypothesis 1 ($\beta = .274$, $p < .05$) predicting a positive relationship between strategic asset seeking motivation of MNE latecomers and RKT happening in developed countries. The results of this study also show a significantly positive relationship between HQ control and RKT ($\beta = .451$, $p < .01$). Therefore, Hypothesis 2 was supported. Additionally, subsidiary age is significantly negatively related to RKT from the subsidiaries ($\beta = -.140$, $p < .05$), providing support for Hypothesis 3.

Qualitative Study—Illustrative Cases

To mitigate the potential effects of the small size of the quantitative sample, and obtain a deeper understanding of the focal phenomenon, we employed the mixed method approach by involving some illustrative cases (Teddlie & Yu, 2007). Involving case studies as illustration is consistent with current trends in theory building and exploration attempts in international business (Birkinshaw, Brannen, & Tung, 2011). With an emphasis on storytelling, case studies can complement surveys and structured or semistructured interviews in revealing and explaining an emerging phenomenon (Liu & Almor, 2016; Strauss & Corbin 1998; Xing, Liu, Tarba, & Cooper, 2016). Following prior relevant research in the international business field (e.g., Peltokorpi & Vaara, 2014), we developed four case studies of Chinese MNEs to qualitatively triangulate our quantitative findings and improve the validity of the research (Eisenhardt, 1989; Hurmerinta-Peltomäki & Nummela, 2006). The multiple case study approach was used given that relatively little theoretical precedent can be found for study of this topic (Eisenhardt, 1989; Yin, 1994). Cross-case comparisons on multiple cases can also identify emerging patterns of relationships among constructs and bring important theoretical insights (Yin, 1994), which extend our quantitative results. Although independent from the initial survey, the four case companies can be expected to reasonably represent the quantitative samples, given there are overlaps between the cases and survey samples in terms of industry and location (e.g., Peltokorpi & Vaara, 2014).

Primary data were obtained from managers in Huawei, Neusoft, and Pactera to identify the key issues under study. We conducted one to two in-depth interviews (one hour to three hours long) of managers from the above firms between 2011 and 2014. Some of these interviews were part of the pilot study for the survey in this article. Interview data allowed us to construct case stories and extract evidence to corroborate survey results. We have also used publicly available data for these firms, including annual and case reports. Corporate reports are useful to study firm strategy, which complement interview data that rely on memory and may include a retrospective bias (Bettman & Weitz, 1983). Data from multiple sources provide sufficient information for triangulation of the data set.

We provide a summary of the four MNE cases (Geely, Huawei, Neusoft, and Pactera) in Table 3 and provide an analysis in the following section. In brief, we did find support for each of the firms we studied pursuing RKT with some relation to one or more of the variables we studied.

Company Background

Geely is a China-based automaker with over 18,000 employees. It was established in 1986 as a refrigerator manufacturer, and transformed into a motorcycle and small vans maker in the mid-1990s. Geely entered into the automobile industry in 1997 and sold its first car in 1998. It started exporting in 2003. Geely's international investment path started with a joint venture with MB Holdings, an MNE headquartered in the sultanate of Oman, in 2006. After successfully engaging in this joint venture and the acquisition of DSI Australia in March 2009, Geely's

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TABLE 3 Case Summary and Analysis

Company Description	Evidence of Drivers of RKT		
	Strategic Asset Seeking	HQ Control	Subsidiary Age
Geely, founded in 1986, has grown from building appliances in China to manufacturing automobiles worldwide.	Geely's acquisition of Volvo was motivated by its strategic asset-seeking goals, primarily Volvo's innovative technology and R&D capability as well as Volvo's global brand.	The acquisition of Volvo was engineered by HQ, and the Geely chairman confirmed the objectives of the acquisition, also implying clear control.	The Volvo acquisition was clearly planned and controlled by HQ at the outset (young age) of the subsidiary, although a diminishing of control is not confirmed by the case.
Huawei, founded in 1988, is a leading global telecom company.	In order to expand globally, Huawei needs to access many location-specific strategic assets. However, these assets are frequently controlled by government-connected companies or require a large amount of investments. As a result, accessing these assets motivates Huawei to seek partnerships with local partners and learn from them, leading to a higher level of RKT.	There is no obvious evidence of impact of Huawei's HQ control on RKT based on the current case.	Huawei's RKT activities in the Middle East started with the partnership with Etisalat in 2003. Later, they cooperated to build and expand Etisalat's networks in Saudi Arabia, Pakistan, Egypt, Tanzania, Nigeria, and Afghanistan, and in 2011, they decided to cooperate to deploy an LTE network in the UAE and to work together to provide innovative new technologies and services across the Middle East and Africa. This continuous cooperation shows that Huawei successfully learned to work with Etisalat from its early cooperation and is leveraging such learning for its global expansion.
Neusoft, founded in 1991, is one of largest IT solutions and services providers in China.	Neusoft's business model in Japan, allowed technical staff from Neusoft to learn from its clients' managers as a way of transferring knowledge to the parent firm.	The intense and frequent communication between Neusoft America and HQ enabled HQ to effectively control the level of RKT as the subsidiary understood what was desired by the parent company, and continuously collect relevant knowledge, skills, and experiences, and then transferred them back to parent company in China.	Neusoft demonstrated a very high focus on transferring knowledge from its subsidiaries at the early stages of its international expansion. While the case data do not confirm a diminishing focus on RKT over time, it appears that the intense focus of RKT shifts to the new locale of internationalization (e.g., from Japan to the United States) with the appointment of key executives (e.g., Mr. Fang), thus implying a somewhat lower focus on RKT of the older subsidiary.
Pactera, formed in 2012 through a merger between two Chinese IT service firms: VanceInfo and HiSoft, is a global China-based consulting and technology services company.	One of Pactera's major motivations for expanding into the United States was to access cutting-edge technology and talent, enabling it to better compete with other IT service providers in China and globally as a clear driver for RKT.	Frequent communication and active involvement of senior executives from the HQ ensured project implementation success and facilitated extensive knowledge acquisition and transfer.	When Pactera was new to the US market, acquiring tacit knowledge was very urgent and important, probably even exceeding the need for acquiring advanced technology. A few years later, with the accumulation of related experience, transfer of tacit business knowledge appeared to slow down.

appetite for international ventures expanded. When Ford, which has owned Volvo since 1999, decided to spin off its Volvo Car Division, Geely acquired it for US$1.8 billion in 2010. By 2010, Geely already owned 9 plants, 1,000 auto shops, 3 brands, and a production capacity of 560, 000 cars annually (Geely History, 2010).

Huawei, a leading global telecom company, was founded in China in 1988. The company has three main

product lines: Cloud, Pipe, and Devices. The Cloud business includes technology applications and provides enterprise solutions to corporate customers. The Pipe products work as the transportation and distribution channels in the system; this is their traditional telecom business. The Devices businesses include mobile phones, home modems, Internet decoders, and so on. Huawei's global expansion started in the late 1990s. The company now operates in 140 countries (Huawei, 2010) and has over 110,000 employees. Its revenue exceeded $44 billion in 2014.

Neusoft, one of the largest information technology (IT) solutions and services providers in China, began in a small classroom at Northeastern University in Shenyang, Liaoning Province of China in 1991. The company started with three people, three computers, and an initial investment of US$3,000 (Neusoft 2015). Neusoft's internationalization process began with its operation in Japan in 2001, followed by its expansion into the United States in 2003. By 2009, Neusoft had revenues of over US$600 million, 18,000 employees, 6 software bases, 8 regional HQs, and a comprehensive marketing and service network in over 40 cities across China, and subsidiaries in Japan, the United States, Europe, and the Middle East.

Pactera is a global China-based consulting and technology services firm, formed in 2012 through the merger between two Chinese IT service firms: VanceInfo and HiSoft. At the time of merger, the company had over 23,000 employees. It has several regional HQs in North American, Europe, and Asia Pacific. The origin of its US operation can be traced back to 2001, when predecessor VanceInfo opened an office in Silicon Valley. In 2013, North America contributed 40% of Pactera's total revenues, ranking second only to Greater China as the largest geography (Pactera, 2015).

Cross-Case Analysis

Three general categories are used to organize the presentation of findings derived from our case analyses: motivations for international expansion and RKT, HQ control and RKT, and subsidiary age and RKT.

Motivations for International Expansion and RKT

All of the case companies, even though from different industries, shared the same goals in their global expansions: to catch up with the leading competitors in the global markets through the acquisition of strategic assets, for example, technology, know-how, managerial marketing skills, and established brands. Geely's unbelievable acquisition (Xiong, 2012) of Volvo, for example, was prompted by its desire to obtain strategic assets. A comparison of these two firms' technological innovation and R&D capability reveals some insights: Geely has very limited technological and R&D capability, whereas Volvo has been very innovative and a pioneer of driving safety technology with profound R&D capability. As China was breeding a brand-conscious middle-class consumer group, Geely's challenge was to transform itself from a car manufacturer with the poor image of low quality and low price to a high quality and upscale product with innovative technology and a recognizable brand. Volvo became the answer. As its chairman, Mr. Li, stated, acquiring Volvo is the economical and efficient way to borrow advanced technology and market Geely's cars (Xiong, 2012).

While Geely mainly targeted technology and knowledge that can be applied globally, other companies, such as Huawei, tended to be more focused on location-specific strategic assets, although worldwide suitable assets are also desirable. For Huawei's telecom business, it frequently deals with customers or partners in highly regulated industries and their business dealings frequently face heavy government oversight. For its business-to-consumer (B2C) business, the strategic assets included local customer knowledge, distribution channels, and retailer networks. Only after Huawei has access to these assets, can HQ learn how to use these strategic assets to operate in foreign markets or to leverage these assets to develop products to fit the local markets. However, accessing and learning from these assets is not easy. These assets are frequently controlled by the host-country government or government-connected companies (e.g., telecom operator), or require a large amount of investments (e.g., distributor and/or retail channels). As a result, accessing strategic assets motivated Huawei to seek cooperation with local partners and learn from them. For example, when they entered the Africa market, they cooperated with Ethiopian Telecommunications Corporation and Safaricom in Kenya. In the Middle East, they cooperated with Etisalat, and in Europe, with British Telecom, Vodafone, France Telecom, and Telecom Italia, among others.

Three main mechanisms of RKT have been identified in our cross-case analysis: hiring people with relevant experience or knowledge, partnership with local companies, and acquisition. These mechanisms allow strategic assets seeking MNCs to acquire the capabilities and transfer them to the parent company. Taking Pactera as an example, the company has been able to soak up strategic technology, capabilities, and talent mainly through three mechanisms. First was hiring local talent and/or employees with US experience. At a technical and service level, recruiting senior consultants in the United States made it possible to meet the unique needs of US customers

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geographically and enabled the core competency of Pactera in providing customized service.

At the management level, senior executives with US and global market experience were brought on board as a source of extensive business and management insights. The current CEO, for example, was invited to join VanceInfo in 2001 in view of his extensive experience in Silicon Valley. This experience or related knowledge was related to the successful development and global expansion of Pactera, particularly in the United States, thereafter (Chen, Yang, Wei, Guo, Brownson & Petruska, 2015). Second, growth through acquisition was an effective way for Pactera to quickly gain skill sets, increase its customer base, and take advantage of local IT talent. Between 2006 and 2011, Pactera acquired five companies in the United States. All of these companies possessed specialty technology in certain fields, such as packaged software services and cloud computing, which were expected to facilitate Pactera's business not only in the United States, but also in China and other regions. Third, establishing a broad range of partnerships with other industry leaders made it possible for Pactera to learn abroad, especially in the United States.

In summary, consistent with our quantitative results, our qualitative findings support Hypothesis 1 regarding the relationship between motivations and RKT. Our case studies also illustrate the mechanisms through which RKT occurred.

HQ Control and RKT

In the case of Geely, for example, digesting and absorbing Volvo was reported as extremely challenging (Z. Wang, 2011), and the ongoing multiple steps of RKT clearly exemplified the impact of HQ control. During the first couple of years after the acquisition, Geely was taking a hands-off approach with respect to Volvo; as a consequence, no RKT was reported. In 2012, right after the acquisition, Geely announced that Volvo operated as a separate subsidiary managed by Swedish personnel, and the Volvo China team operated independent of Geely. This "Geely is Geely, Volvo is Volvo" (ChinaBizGov, 2012) strategy did not facilitate RKT at all. Between 2013 and 2014, Geely and Volvo formed four joint ventures, respectively, Europe R&D Center, Zhangjiakou Engine Plant, Daqing Vehicle Plant, and Shanghai R&D Center. These joint ventures with Volvo allowed Geely to absorb Volvo's technologies related to safety and engines, which involved some outdated technologies as stipulated by the agreement with Ford. The involvement of the HQ of Geely brought the synergy of the partners: transferred technology from Volvo to Geely and reduced the cost for Volvo (Vijayenthiran, 2013; Zhu, 2013). Specifically, the European R&D Center was responsible for designing emerging and new models and components for Geely and Volvo and thus enabled transferring knowledge from Volvo to Geely in the process. The President of Geely Holding Group, Mr. An Conhui, commented, "The center will allow Geely to improve its product quality and functions (from Volvo). … Volvo can prompt industrialization of its advanced technologies and tap into Geely's supply network in Asia" (Zhu, 2013). While Volvo gained a market hold in China since 2009, Geely's acquisition of Volvo helped the Chinese carmaker achieve transfer and upgrade of technology and R&D capability to the parent firm.

The case of Neusoft Japan explains how the interaction process between HQ and subsidiary facilitates RKT. To better understand and satisfy customers' demands to the fullest, Neusoft proposed a business model in Japan, in which the technical staff from Neusoft worked in teams for product managers of the client and learned key technical and management lessons in this process. To underline the business model, Mr. Walter Fang,[4] the company's former vice president and CTO said: "We started by working with Alphine, a Japanese company, about 15 years ago, and have been working together ever since. … We have engineers working closely with Alpine working on only audio and video equipment specifically for that company. … Neusoft owns the management and employees that are contracted to work under Alphine. …They send their product managers and use our product teams as their own" (Y. Yang, Chen, & Kwong, 2012). This business model enabled the subsidiary to rapidly transfer knowledge to the parent firm and also allowed more rapid overseas expansion. By 2010, Neusoft Japan had four offices and nearly 300 employees, which accounted for 80% of overseas business (Leung, 2009).

A similar strategy was also deployed by Neusoft America to facilitate effective RKT. In 2008, Neusoft appointed Mr. Fang, a 28-year IBM veteran, as the president of Neusoft America. His knowledge and experience of US market provided Neusoft America with appropriate guidance. More importantly, Fang had abundant communication channels to interact with the top management in parent company, which in turn guaranteed that the parent company in China had solid control of the Neusoft America.[5] Consequently, Neusoft America understood what was desired by the parent company, and continuously collected relevant knowledge, skills, and experiences and then transferred them back to the parent company in China.

The case of Pactera further confirms the impact of HQ control. It shows that frequent communication and active involvement of senior executives from the HQ could ensure project implementation success and facilitate extensive knowledge acquisition. For example, on projects done with Microsoft, the executive vice president and chief marketing officer, Mr. Wu, used to fly from their Beijing HQ to Seattle every month to coach junior Pactera staff working on Microsoft projects. He shuttled from one building to another on Microsoft's campus and established regular meetings with Microsoft managers. This HQ control ensured the success of Pactera at its early stage and laid a solid foundation for its operations in the United States.

Subsidiary Age and RKT

The Huawei case shows that intensity of HQ learning about foreign operation is higher in the early stages of foreign operation. This is illustrated in Huawei's cooperation with its partner in the United Arab Emirates (UAE), Etisalat. In 2003, Huawei started its partnership with Etisalat to develop the first 3G network (Huawei, 2003). Later, they cooperated to build and expand Etisalat's networks in Saudi Arabia, Pakistan, Egypt, Tanzania, Nigeria, and Afghanistan. In February 2011, the two firms signed an LTE contract to deploy an LTE network in UAE, and in July 2011, they signed a Memorandum of Understanding for strategic cooperation to continue working together to provide innovative new technologies and services across the Middle East and Africa (Economic Times, 2011). This continued cooperation with Etisalat clearly shows that Huawei successfully learned to work with Etisalat from its early cooperation and is leveraging such learning to continue its global expansion.

Similar patterns were also found in Huawei's expansion to European Union (EU) markets (Financial Times Chinese, 2010). European countries are more developed and present many social, economic, regulatory and cultural barriers to Huawei. Thus, the challenge of learning and acquiring knowledge of operating in the EU is large, especially in the early days of entry into the EU markets. To help ease such early learning challenges, Huawei first entered eastern EU countries and worked with second-tier western EU telecom companies where the barriers of learning are lower. Through the early cooperation, Huawei learned the EU's market structure, customer preferences, local partners, product technical qualifications, and quality requirements that are needed by western telecom companies. After successfully absorbing this initial learning, it was relatively easier for Huawei to work with first-tier telecom partners in the western EU as Huawei could leverage its earlier learning. As a result, Huawei successfully entered western EU markets and became a preferred supplier to BT Telecom and Vodaphone, among others (Kumar & Steenkamp, 2013). Such RKT activities helped facilitate Huawei's continuing global reach.

The case of Pactera confirmed that RKT patterns change over time. When Pactera was new to the US market, acquiring tacit knowledge, such as how to do business in the United States and satisfy local customers, was very urgent and important, probably even exceeding the need for acquiring advanced technology. This is illustrated in its cooperation with Microsoft. Although Pactera had been working with Microsoft China for eight years, it took significant efforts to initiate even temporary cooperation with Microsoft in the United States, and three years to become a primary vendor. During this stage, much knowledge was transferred from the foreign subsidiary back to the parent company. A few years later, with the accumulation of related experience, transfer of tacit business knowledge tended to slow down. Our case also showed that the way of learning seems to be changing as subsidiaries accumulate knowledge and experience. In the early stage, Pactera HQ learning entailed not only products/technologies, but also advanced business practices as well as working with partner companies, making RKT very intense. Later on, its learning activities became less intense and more focused and increasingly relied on attracting talent and buying technology/products. While learning from the United States enabled Pactera's moving upstream in the IT service value chain, less intensive reverse technology transfer at a late stage was observed in turn.

Discussions and Implications

This study explores the antecedents of reverse knowledge transfer by emerging economy multinationals, using a sample of Chinese MNEs. Based on the relevant theoretical and empirical literature, we developed a research framework in which some critical predictors of RKT were identified. To validate the proposed research hypotheses we conducted an exploratory quantitative study of Chinese MNEs operating in the United States and tested the effects of the antecedents on RKT. Then we conducted a qualitative study based on four illustrative cases of Chinese MNE operations to triangulate on the quantitative findings and further justify the hypothesized relationships and their underlying mechanisms. Together, both quantitative and qualitative studies have justified the proposed research framework and have important implications.

First, our findings, both quantitative and qualitative, reinforce the importance of stated goals in affecting

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MNEs' learning from subsidiaries (Lyles & Salk, 1996). Our findings show the importance of clarifying and explicitly articulating the goal of seeking strategic assets (e.g., advanced technologies and managerial skills) from their foreign subsidiaries, as this will help the MNEs more effectively achieve these goals.

Second, our study sheds lights on the debate regarding HQ control and knowledge transfer by contextualizing it specifically to Chinese MNEs. While some studies (e.g., Foss & Pedersen, 2002; Young, Huang, & McDermott 1996) argue a negative relationship between HQ control and knowledge transfer from its subsidiary, our findings corroborate studies that suggest a positive relationship (e.g., Fee, McGrath-Champ, & Yang, 2011; Lyles & Salk, 1996), and suggest that a higher degree of control from the HQ is likely to facilitate such learning. Furthermore, as HQ control enables effective communication between the HQ and the subsidiary, a higher level of HQ control is likely to enable the HQ to learn from the subsidiary more smoothly and efficiently, thus, leading to a higher level of RKT. Although a high level of HQ control may have some drawbacks on knowledge transfer, as indicated in the literature, our findings suggest that the benefits may outweigh the drawbacks, thus likely leading to a more positive relationship between HQ control and RKT.

Contrary to the predictions of previous studies (e.g., Kim, Lu, & Rhee, 2012; Rabbiosi & Santangelo, 2013), our results indicate that a subsidiary will likely transfer less knowledge to HQ as it gets older. Upon reflection, this relationship appears reasonable on a couple of counts. First, it is reasonable to expect that a maximum amount of new learning will occur when the subsidiary is newly established in a new international location with so many managerial and technological differences to observe and digest by the EEM. Second, it is also reasonable to assume that a newly established EEM subsidiary will be very dependent on its HQ for financial support and other resources, and thus communication is likely to be more frequent and intense, further facilitating RKT. This newness or *wonderment* factor as well as HQ dependency is likely to wane over time.

Managerial Implications

This study also has important managerial implications. Our study shows that RKT from foreign subsidiaries does not happen randomly. Rather, it is likely to be driven by organizational goals and objectives. EEMs tend to have many objectives when establishing foreign subsidiaries. These different objectives may compete for the HQ attention and resources. Our findings imply that the HQ needs to prioritize and focus on certain key objectives, making the objectives explicit and well understood by managers, which will help the company to achieve the objectives effectively.

Our study also sheds light on the balance between HQ control and subsidiary autonomy. It is generally understood that there are obvious advantages and benefits in less HQ control. It gives subsidiaries more freedom to explore new opportunities and to localize operations. Such freedom may be beneficial for market-seeking subsidiaries. However, such subsidiary freedom could cause subsidiaries to speed up the going-native process and make it harder for the HQ to achieve its intended objectives if the objectives for subsidiaries are to acquire strategic assets and transfer knowledge back to parent companies.

Furthermore, to effectively help the HQ learn and acquire knowledge, the subsidiaries need to establish effective communication channels and trust relationships with the HQ. This may also require the HQ to have more influence over the subsidiaries. Our study suggests that EEMs will need to take a more granular approach in deciding the level of HQ control over their subsidiaries. Foreign subsidiaries need to achieve varying objectives and play different roles in their companies' global networks, including exploring market opportunities in host markets and learning and sharing with HQs host-country knowledge.

These different roles and objectives may require HQs to take different approaches and insert different levels of HQ controls. EEM decisions on HQ control may need to vary with the nature of the objectives or the tasks that the subsidiaries need to perform. For the objective of making foreign subsidiaries grow to become independent and strong players in host markets, HQs may need to grant more freedom and flexibility to the subsidiaries. To the contrary, for the tasks of having foreign subsidiaries learn and share foreign capabilities, the HQs may need to insert more control and supervision. Such subsidiary task/objective-dependent approaches of managing HQ control may require EEMs to develop more sophisticated systems and mechanisms in interacting with foreign subsidiaries.

Finally, our findings on the negative age effect on subsidiary knowledge transfer suggest that when subsidiaries are young, the HQ learning from the subsidiaries is likely to be intense. Young subsidiaries tend to experience many new practices, challenges, and new information in the host markets, and these new materials present HQs with great opportunities and challenges to learn from their subsidiaries. This requires that both the HQ and the subsidiaries have adequate preparation both

psychologically and in resources, to effectively achieve the learning and benefit from RKT. Otherwise, these initial difficulties may prevent the HQ and the subsidiaries from effectively achieving their knowledge transfer objectives.

Our finding on subsidiary age and knowledge transfer has important implications for learning by MNCs that have mainly old foreign subsidiaries. These MNCs can use different ways to take advantages of effective learning among young foreign subsidiaries. For example, their older subsidiaries may focus on market-seeking returns and new subsidiaries may be spun off from existing older subsidiaries to focus on knowledge transfer. Alternatively, they can establish venture investing divisions, or co-investments with local venture capital firms to help increase strategic asset seeking or learning opportunities.

Limitations and Areas of Future Research

This study has some limitations. The most obvious one is the small sample size. While we attempted to minimize this limitation with statistical verification of the sample adequacy, more studies are needed to verify our findings based on larger samples and in different settings. Second, our data set is from Chinese firms. While this controls for some extraneous cultural factors, it may also limit the generalizability of the findings. Third, our study is mainly from the subsidiary perspective. For our topic of subsidiary knowledge transfer, subsidiary perspective is crucial for our understanding of the matter. However, the HQ is the recipient side of subsidiary knowledge transfer; it will be helpful to have the HQ perspective on this issue to complement subsidiaries' view. Given data limitations, we are not able to include both perspectives in our study. Future studies may address this weakness by collecting data from the HQ. Finally, our sample is skewed toward small to medium-size subsidiaries with an average of 49 employees per subsidiary. It is not clear if this bias toward small to medium-size affects our results, an uncertainty that future studies need to address.

Future research may also explore the linkage between RKT among EEMs and the level of innovation from the parent organization, as this may provide a corroborative measure of the success of the RKT. A broader derived model of RKT may also be conceived from the operational elements of strategic asset-seeking behavior, HQ control, and subsidiary age. These measurable variables could be viewed from the admittedly more conceptual constructs of motivation to learn, management of learning, and capability to learn. In this broader conceptual model, EEM behavior and, more broadly, MNE behavior might be recognized more readily.

Conclusions

As EEM globalization behavior differs from that of Western MNEs, it is important to explore the theoretical underpinnings as well as the practical implications of such behavior in order to deepen our understanding of firms' globalization process. Our exploratory study contributes to the understanding of an early empirical phenomenon: RKT in EEMs. Specifically, our study contributes to the literature on knowledge-based MNE evolutionary theory and internationalization of Chinese firms in three ways. First, the core of our contribution rests on an examination of the effect of subsidiary age on RKT in EEMs. Second, this study demonstrates the importance of HQ control in facilitating RKT. In addition, we found a link between motivations in expanding in advanced markets and RKT. We hope that this study adds some initial empirical evidence and provides tentative answers to some of the pressing questions and, more importantly, raises more questions to spur more future studies on RKT in EEMs.

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Notes

1. Nonresponse bias was evaluated using both within-sample and out-of-sample methods. First, we followed Armstrong and Overton's (1977) time trend extrapolation test. We compared the answers of early respondents (the first one-third of respondents who replied to the study) with those of late respondents (the last one-third). In this procedure, late respondents were treated as a proxy for nonrespondents (Noorderhaven & Harzing, 2009). A *t*-test of group means on key firm characteristics (sales number, size [number of employees], age, entry mode, industry sector) revealed no significant differences, providing confidence in the representativeness of our sample. We then randomly chose 30 nonresponse firms, and compared them with responding firms with regards to industry (given the company list that was used for this survey study does not include other constructs, we were not able to compare responding and nonresponding firms in regards with other demographic characteristics). No significant differences were found in terms of industry distribution. Hence, it does not appear that nonresponse bias is a major problem in our study.

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2. California, with its large economy, diversified industries, and gateway position to the United States, appears to be the preferred destination for Chinese investors, especially small and medium-sized Chinese private enterprises. In addition, California's large Asian/Chinese population could also serve as a catalyst for attracting Chinese investors to the region.

3. While it would be optimal to collect data from multiple sources, subsidiary managers are knowledgeable and can assess subsidiary behavior and performance. The theoretical mechanism behind that is as follows: subsidiary managers have "significant skill, judgment, and talent, as well as a broad knowledge of their subsidiary" (Nell & Ambos, 2013, p. 1091). In this study, subsidiary managers' responsibilities in terms of strategic planning, operations management in the United States and communication/coordination with their HQ in China make them knowledgeable informants. Their perceptions of important issues related to the performance of their subsidiary, particularly concerning RKT, should, on average, correspond relatively closely with objective reality (McGrath, 2001). In order to deal with the threat of social desirability bias, the following strategies have been employed in this study. First, following prior relevant research (e.g., Tsai, 2001), we promised that we would not reveal the true names of the subsidiaries and the respondents involved in this study, and the respondents were asked to return the completed questionnaires directly to the researchers. Second, we conducted data analysis on the main multi-item variables. Specifically, Harman's one-factor test (Podsakoff & Organ, 1986) generated four principal constructs, and the unrotated solution shows that the first construct explains only 26% of the variance, indicating that our data do not suffer significantly from social desirability bias.

4. It should be noted that Mr. Walter Fang does not work for Neusoft now.

5. Authors' personal communications with Mr. Fang between 2010 and 2013.

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