EMERGING MARKET FIRMS' INTERNATIONALIZATION: HOW DO FIRMS' GAINS FROM INWARD ACTIVITIES AFFECT THEIR OUTWARD ACTIVITIES?

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ABSTRACT

In this study we examine how an emerging market firm's inward international activities ("inward activities") are related to its outward international activities ("outward activities") by focusing on the role of the firm's gain from its inward activities. On the one hand, drawing upon the organizational learning perspective, we propose that a firm's gain from inward activities may facilitate its outward activities through improving its resource fungibility. On the other hand, we draw upon the prospect theory to propose that a firm's gain from inward activities may hinder its outward activities by discouraging the firm's top managers from taking risks that are inherent in outward activities. With detailed data from a sample of manufacturing firms in China, we find empirical support for both lines of arguments.

INTRODUCTION

After years of being investment destinations for traditional multinational companies (MNCs) in developed markets, emerging market countries in the past decade have become increasingly active in outbound foreign direct investment (FDI). Is the internationalization of emerging market firms different from that of MNCs in developed markets? While these two groups of firms share many aspects in their internationalization processes (Dunning, Kim, and Park, 2008), one key difference is well accepted. That is, since emerging market firms' internationalization is relatively recent, they have benefited tremendously from the presence of inward FDI in their home markets (Buckley, Clegg, and Wang, 2002; Gu and Lu, 2011; Luo and Tung, 2007; Zhang, Li, Li, and Zhou, 2010). More specifically, inward international activities (hereafter "inward activities") such as distributing foreign products or forming a joint venture with a foreign firm provide opportunities for domestic firms in emerging markets to acquire important resources and capabilities from foreign firms (Steensma, Tihanyi, Lyles, and Dhanaraj, 2005; Zhang et al., 2010), which can help them adapt to international business environments and facilitate their outward international activities (hereafter "outward activities").

The key argument underlying this line of research is that it is the resources and capabilities that a firm acquires from its inward activities that facilitate its outward activities. However, previous studies have not made a distinction between what a firm *does* in terms of inward activities and what it *gains* from its inward activities (e.g., Buckley et al., 2002; Karlsen et al, 2003; Luo and Tung, 2007). Rather, it is assumed that to the extent a firm engages in inward activities, it will gain resources and capabilities from such activities. Note that not all firms benefit to the same extent from their inward activities. Therefore, it is crucial to separate a firm's *gain from inward activities* from the *inward activities* in which it participates. More importantly,

the relationship between a firm's gain from inward activities and its outward activities may not be as straightforward as previously argued. Indeed, Li, Li, and Shapiro (2012) have shown that an emerging market firm's gain from its inward activities may decrease the firm's propensity to participate in outward activities because of the risky nature of these activities.

In this study, we aim to address these issues by revisiting the link between a firm's inward and outward activities and focusing on the role of the firm's gain from inward activities. A firm's gain from inward activities (hereafter "inward gain") refers to the benefits (e.g., capital, technologies, and knowledge) that the firm achieves from engaging in inward activities. We propose that inward gain has two possible effects on a firm's participation in outward activities. On the one hand, drawing upon the organizational learning perspective (Helfat and Peteraf, 2003; March, 1991), we argue that a firm's inward gain will improve its resource fungibility, which will further increase the firm's participation in outward activities. Resource fungibility refers to the extent to which a firm's resources and capabilities can be deployed in multiple geographical and country settings (Oviatt and McDougall, 1994; Sapienza, Autio, George, and Zahra, 2006). On the other hand, drawing upon the prospect theory (Kahneman and Tversky, 1979), we argue that controlling for the effect of resource fungibility, a firm's inward gain may induce its top managers to frame their situation as a gain domain. As such, these top managers may behave in a risk-averse manner and are less likely to engage in risky activities such as outward activities (Carpenter, Pollock, and Leary, 2003).

We tested these arguments with detailed data collected from 314 manufacturing firms in China's emerging market. We found that a firm's inward gain is positively related to the firm's outward activities through improving the firm's organizational resource fungibility (but its technological resource fungibility does not seem to matter in this relationship). Moreover, after

controlling for this indirect relationship, we found that a firm's inward gain has a negative direct relationship with its outward activities. This direct negative relationship is more salient for high-risk outward activities (e.g., overseas mergers and acquisitions and establishing wholly owned overseas subsidiaries) than for those with low risk (e.g., franchising). This negative relationship is also stronger for firms with low-risk propensity than for those with high-risk propensity.

Overall, our findings suggest that there are three possible paths through which a firm's inward activities may be related to its outward activities: (1) a firm's inward activities have a direct positive relationship with its outward activities; (2) a firm's inward gain has an indirect positive relationship with the firm's outward activities through improving its organizational resource fungibility; and (3) a firm's inward gain has a direct negative relationship with the firm's participation in outward activities, particularly if those activities involve great risk and/or if the firm has low-risk propensity. Our theoretical arguments and empirical findings provide a more complete picture of the inward-outward connection of emerging market firms' internationalization and make important contributions to both the strategy and the international business literature.

THEORY AND HYPOTHESES

Research Background

A firm's internationalization comprises two important processes: inward activities and outward activities (Gu and Lu, 2011; Johanson and Vahlne, 1977; Korhonen, Luostarinen, and Welch, 1996; Luo and Tung, 2007). Inward activities refer to the activities that domestic firms engage in with foreign firms in their home market, including technology imports, product imports, product agency business, original equipment manufacturing (OEM), inward franchising and licensing, and joint ventures. Outward activities refer to the activities that domestic firms

conduct in overseas markets, including franchising and licensing to foreign firms, overseas mergers and acquisitions, and establishing wholly owned subsidiaries in overseas markets.

In comparing recent outward activities of emerging market firms with those of developed market firms, Dunning et al. (2008, p.177) wrote: "perhaps most important of all, unlike yesterday's developed country TNCs (*transnational companies*), today's emerging market TNCs rarely have the firm specific ownership advantages (notably organizational and management skills) to ensure success in their outward FDI" (italics added by the authors). In this sense, emerging market firms' outward activities are disadvantaged because they do not have ownership advantages, which are highlighted in Dunning's (1993) OLI (Ownership advantage, Locational advantage, and Internalization) paradigm as well as in Johanson and Vahlne's (1977) stage model for internationalization.

Scholars have argued that the inclusion of inward activities in the internationalization framework can help elucidate emerging market firms' outward activities given their ownership disadvantage (Gu and Lu, 2011; Luo and Tung, 2007). Different from the internationalization path of developed market firms, emerging market firms have benefited tremendously from inward activities with foreign companies (Luo and Tung, 2007; Zhang, Li, and Li, 2014). These inward activities may generate knowledge spillovers, which allow emerging market firms to ascertain how to conduct businesses internationally even before actually investing overseas.

Several empirical studies have examined the relationship between inward and outward activities in the context of emerging markets. For example, Young, Huang, and McDermott (1996) used case studies of Chinese multinationals and found that through inward internationalization, Chinese firms have accumulated considerable financial and operational assets and improved technological and operational assets, thus strengthening their outward

expansion activities. Using cross-sectional data, Buckley et al. (2002) found that Chinese firms could learn advanced technologies from their foreign partners through inward activities, which improves their export performance. In addition, Gu and Lu (2011) used cross-country, industry-level data on venture capital investments worldwide from 1985 to 2007 to examine how inward investments from the home country influence outward investments from the host country. Their results suggest that even though emerging market firms do not have the advantages or resources to expand internationally, their home market internationalization through inward investments of foreign firms can facilitate future growth into global markets.

Theoretical Model

In this study, we revisit the link between a firm's inward and outward activities by focusing on the role of the firm's inward gain. While outward activities in general are risky to any firms (Carpenter et al., 2003; Hitt et al., 1997), this is particularly true in the case of emerging market firms. As previously noted, compared with traditional MNCs in developed countries, emerging market firms do not have ownership advantages that can help mitigate the liability of foreignness in international markets (Zaheer, 1995). Moreover, emerging market firms typically face an underdeveloped financial system at home that can seriously limit their access to financial capital for overseas investment (Aulakh, Rotate, and Teegen, 2000). These firms also lack the legitimacy of their home country origins (Gubbi et al., 2009; Luo and Tung, 2007) and thus have limited credibility in overseas markets. In addition, because most emerging markets have only recently opened to the global economy, there is a scarce pool of managerial talent that can help these firms' participation in international operations (Aulakh et al., 2000; Ramachandran and Pant, 2010). Equally important, isolated by cultural, administrative, geographic, and economic

distance from international markets (Ghemawat, 2001), emerging market firms may also have difficulties in comprehending foreign markets.

Considering the risk that is inherent in outward activities for emerging market firms, we argue that emerging market firms' inward gain may affect their outward activities in two different ways. On the one hand, if a firm's inward gain can improve its capabilities for international operations, the risk inherent in outward activities should be of less concern to the firm and as a result, the firm is more likely to explore business opportunities in international markets. In other words, a firm's inward gain may facilitate its outward activities by *improving its capabilities* for undertaking such activities. On the other hand, due to the risk inherent in outward activities, a firm's inward gain may discourage the firm's top managers from taking the risk. In short, a firm's inward gain may hinder its outward activities by *reducing its motivation* for undertaking such activities.

In the following sections, we draw upon the organizational learning perspective (Cyert and March, 1963; Helfat and Peteraf, 2003; Sapienza et al., 2006) and the prospect theory (Kahneman and Tversky, 1979), respectively, to develop these two lines of arguments. Figure 1 presents the overall theoretical model of this study. Considering that previous studies have primarily focused on the direct link between inward and outward activities, we also include this link in our model to control for alternative explanations.

[Insert Figure 1 about here]

Path I. Inward gain, resource fungibility, and outward activities: An organizational learning perspective

The organizational learning perspective emphasizes the importance of experiential learning (Cyert and March, 1963; Huber 1991; March, 1991), a process by which organizations as

collectives derive meaning from direct observations or interactions with their environments (i.e., learning from experience). In the emerging market context, prior research argues that a firm's engagement in inward activities facilitates the learning of foreign advanced technologies, establishes routines for international operations, and cultivates a compatible organizational culture (Guthrie, 2005; Luo and Tung, 2007) that may be used for the firm's outward activities.

We argue that a firm's inward gain may stimulate its outward activities through improving its resource fungibility. Resource fungibility represents a firm-level capability that enables the firm to deploy existing resources to new endeavors, thus reducing the cost of new investment (Oviatt and McDougall, 1994; Vassolo, Anand and Folta, 2004). The idea that fungible resources can create benefits for operations in multiple market domains is also reflected in the resource-based view. For example, Penrose (1959) argued that when the same resource can be used for different purposes or in different ways, more diverse services could be provided.

Outward activities often require firms to deal with unfamiliar environmental settings. Therefore, such activities intrinsically incur a higher level of complexity and risk and often consume significant resources (Carpenter et al., 2003). In emerging market contexts, firms are generally characterized with limited resources, and their resource acquisition activities are often constrained because local strategic factor markets are underdeveloped (Zhang and Li, 2010). By deploying resources acquired from inward activities to outward activities, emerging market firms can lower their initial investment of outward activities to an affordable extent. Also, previous research has shown that high-resource fungibility increases firms' propensity to engage in experimentation because deploying the same resource for alternative purposes reduces the cost of experimentation, whereas low-resource fungibility inhibits experimentation by increasing the cost of developing or implementing new organizational processes (Autio, George, and Alexy,

2011). Outward activities are largely comparable to experimentation since outward activities often necessitate trial-and-error learning, which implies executing various routines until successful outcomes are finally discovered (Sapeinza et al., 2006). As argued by Hitt, Hoskisson, and Kim (1997) and Sapienza et al. (2006), a firm must adjust its resource configurations and organizational process routinization to support subsequent international activities. Thus, as resource fungibility encourages experimentation, it may also encourage a firm's outward activities.

Previous research has provided support for our argument. For example, Guthrie (2005) argued that inward partnership with foreign firms transfers Western management practices to China, thus making Chinese firms' managerial systems suitable for international observance. Luo and Tung (2007) argued that inward activities, ranging from import and OEM to alliances and joint ventures, prepare the indigenous firms to adjust their resource configurations to international operations. In addition, as Anand and Delios (2002) noted, technology is intrinsically fungible across borders compared with downstream resources, such as distribution systems and sales force. Thus, technological gains can help domestic firms improve their technological capabilities that can be easily deployed across borders.

High levels of resource fungibility may be particularly crucial for emerging market firms' outward activities because these firms tend to be more resource-constrained than developed country firms (Hitt, Li, and Worthington, 2005). High levels of resource fungibility also allow these firms to share or reallocate their limited resources across multiple geographic markets (Sapeinza et al., 2006). In summary, we argue that a firm's gain from its inward activities may facilitate its outward activities by *improving its capabilities* for undertaking such activities. Therefore, we propose the following hypothesis.

H1. A firm's inward gain is positively related to the firm's outward activities through improving its resource fungibility.

We further make a distinction between organizational resource fungibility and technological resource fungibility. Organizational resource fungibility refers to the extent to which a firm's organization-related resources and capabilities (e.g., organizational structure, culture, and management system) are adaptable across multiple geographical regions, while technological resource fungibility refers to the extent to which a firm's technological resources and capabilities (e.g., manufacturing technologies and new product development technologies) are adaptable across geographical regions. Although both are important, organizational resource fungibility may be more critical than technological resource fungibility for emerging market firms' outward activities.

There are two primary reasons. First, while all outward activities of emerging market firms require some organizational resources, not all of their outward activities require technological resources. Take overseas acquisitions as an example. Emerging market firms would need organizational resources to negotiate the deals and manage the integration processes. As Rui and Yip (2008) have noted, Chinese firms' overseas acquisitions are closely related to the growing entrepreneurship and management skills embedded in these firms. However, these firms do not necessarily need technological resources for overseas acquisitions. This is because many emerging market firms use international expansions, particularly overseas acquisitions, as a "spring board" to seek advanced technologies from developed markets (Luo and Tung, 2007).

Second, relative to technological resources, which may be used across country boundaries (Anand and Delios, 2002), organizational resources are more specific to individual countries and cultures. Note that emerging market firms generally face significant challenges in overseas

markets including reconciling disparate national- and corporate-level cultures, organizing globally dispersed complex activities, and integrating home and host country operations (Luo and Tung, 2007). Since emerging market firms typically lack international experience and organizational expertise in handling these issues (Ghemawat, 2001), developing organizational resource fungibility becomes imperative for them to participate in outward activities. Fungible organizational routines, processes, and cultures can help coordinate activities within the firms and across borders and facilitate the internationalization process (Sapienza et al., 2006). Thus, we propose that,

H2. The relationship as proposed in H1 is stronger when a firm's organizational resource fungibility is improved than when its technological resource fungibility is improved.

Path II. Inward gain and outward activities: A prospect theory perspective

Prospect theory describes how individuals choose between probabilistic alternatives and evaluate potential losses and gains (Kahneman and Tversky, 1979). The central premise of this theory is that individuals tend to frame alternatives either as a gain domain or as a loss domain in comparison to a reference point, and they show tendencies toward being more aggressive and risk-seeking in the loss domain but more conservative and risk-averse in the gain domain. While this theory was initially developed at the individual level, several studies have provided strong support for the implications of its basic propositions to firm behaviors. For example, using extensive data on U.S. firms, Fiegenbaum and Thomas (1988) consistently found that a large majority of firms are risk-averse when experiencing performance gain (above the target level) and risk-seeking when experiencing performance loss (below the target level). Lehner (2000), using different measures of risk and longer time frames, found similar findings.

As previously noted, outward activities are risky for emerging market firms. To the extent that a firm has gained from its inward activities, its top managers tend to perceive the situation as a gain domain. In this situation, according to the prospect theory, managers tend to behave in a risk-averse and conservative manner because they now have something to lose. Managers may also become concerned about the possibility of losing their current gain (Sitkin and Pablo, 1992) if they take the risk that is inherent in outward activities. Thus, top managers of firms with greater inward gain are more likely to adopt a conservative attitude toward outward activities. Therefore, according to the prospect theory, we argue that to the extent that emerging market firms have gained from their inward activities, their *motivation* for participating in outward activities may be reduced. As Li et al. (2012: 280) argued, "Since emerging market firms can benefit from inward FDI in their home markets, inward FDI represents an important alternative source for them to acquire technological knowledge." Empirically, with a sample of Chinese manufacturing firms, Li et al. (2012) found that inward FDI from countries with advanced technologies decreases the propensity of Chinese firms to invest in those countries for technology seeking. Based on the abovementioned discussions, we expect that after controlling for the resource fungibility effect, a firm's inward gain may have a direct and negative relationship with the firm's participation in outward activities, because its inward gain constructs a gain domain that may *reduce its top managers' motivation* for outward activities. Therefore,

H3. A firm's inward gain has a direct negative relationship with the firm's outward activities, after controlling for its indirect relationship with outward activities through resource fungibility.

To further validate the logic underlying Hypothesis 3, we follow Shimizu's (2007) suggestion of taking contextual factors into account when applying the prospect theory at the

organizational level. More specifically, we argue that while, in general, inward gain may be related to risk-averse and conservative managerial behaviors according to the prospect theory, the negative relationship between inward gain and outward activities may depend upon the risk levels of outward activities (i.e., high-risk vs. low-risk outward activities) as well as the firms' own risk propensity. We develop specific hypotheses in the following sections, which help verify the underlying assumption of Hypothesis 3 regarding risk and, if supported, may lend additional support to the prospect theory logic underlying Hypothesis 3.

High-risk vs. low-risk outward activities. Different types of outward activities involve different levels of resource commitment and risk (Johanson and Vahlne, 1977). For example, export, franchising, or establishing sales subsidiaries and R&D facilities in overseas markets tend to require less resource commitment than building joint ventures, acquiring firms, or establishing wholly owned production subsidiaries in overseas markets. Relatively, the former group of activities requires fewer resources and involves lower risk than the latter group of activities. In particular, most emerging market firms have low managerial capabilities and weak technological competences. These firms will face greater challenges when becoming involved in joint ventures, mergers and acquisitions, and wholly owned production subsidiaries as opposed to conducting export, franchising, or establishing sales or R&D facilities. Therefore, we expect that for outward activities with low risk, the direct negative relationship between inward gain and outward activities will be less salient, while the negative direct relationship between inward gain and outward activities will be stronger for outward activities with high risk. Thus, we propose that,

H4. The direct negative relationship between inward gain and outward activities as proposed in H3 is stronger for high-risk outward activities than for low-risk outward activities.

Firm risk propensity. According to the prospect theory, a firm's inward gain may discourage its outward activities by reducing the firm's top managers' motivation for outward activities because in a gain domain, the managers tend to behave in a more risk-averse manner (Kahneman and Tversky, 1979). However, firms differ in their risk propensity, which refers to a firm's proclivity to engage in risky projects and its managers' preferences for bold vs. cautious actions to achieve firm objectives (Miller, 1983). We expect that since a firm's risk propensity affects its top managers' willingness to take risks, it may moderate the direct negative relationship between the firm's inward gain and its participation in outward activities.

For firms with low-risk propensity, their top managers are more likely to have a strong sense of loss aversion (Levy, 1996), an attitude that values what they have more than comparable things they do not have (Tversky and Kahneman, 1991). Thus, top managers of these firms are less willing to take additional risks that would be associated with outward activities. In contrast, firms with high-risk propensity have a greater appetite for risky actions, including overseas expansions, which will reduce their top managers' concerns of possible loss associated with outward activities. Therefore, we argue that the direct negative relationship between inward gain and outward activities will be more salient for firms with low-risk propensity than for those with high-risk propensity. Based on the above arguments, we propose the last hypothesis.

H5. The direct negative relationship between inward gain and outward activities as proposed in H3 is stronger for firms with low-risk propensity than for firms with high-risk propensity.

METHODS

Sample and data collection

The data used in this study was collected through a survey in China. We conducted the survey in 2010 with the help of a major global research company and its proprietary panel of firm executives. The research company regularly uses this panel to perform surveys to generate reports on industry development and managerial problems facing these firms.

In this study, we focused on four major manufacturing sectors—food and beverage, textile and apparel, electric machinery and electronics, and transportation equipment manufacturing. We chose not to include firms in natural resources, finance and banking, and business services because based on our interviews, outward activities in the first two sectors often reflect government agendas and outward activities in business services often require different (lower) levels of resource commitment than those in manufacturing sectors.

In the research company's proprietary list, there were 54,282 firms in these four target industries, which represented 33.6% of all firms in these industries at the national level (There were 161,772 firms in these industries in China based on the Industry Enterprises Survey by China's National Statistical Bureau in 2009). [1] Considering the large number of firms in the proprietary list, it is reasonable to argue that the list has a high level of representativeness of firms in the target industries in China. For budgetary reasons, we selected 1,500 firms from the list with a random sample of 375 firms from each of the four industries (375*4).

With the help of the research company, we sent questionnaires to the 1,500 firms. At the beginning of the questionnaire, we asked whether the company had any international business activity. Only those with international business activity were invited to complete the

[1] The database of Industrial Enterprises Survey contains the most comprehensive information about firms in China (Tian, 2007; Zhang, Li and Li, 2014; Zhang et al., 2010). By law, all firms in China are required to cooperate with the National Statistical Bureau and submit their basic and financial information to the Bureau (Chang and Xu, 2008). The aggregation of firm-level information collected by the Bureau is published in the official *China Statistics Yearbooks*.

questionnaire. We adopted this screening procedure because not all firms are interested in international businesses and our research questions on the linkages between inward and outward activities would not be relevant to firms that are not interested in international businesses. Possible limitations of this sampling approach will be further discussed in the discussion section.

To minimize the bias of common method variance, we designed the questionnaire by following the procedures suggested by Podsakoff, Mackenzie, Lee, and Podsakoff (2003). We carefully constructed the questionnaire items based on the literature in English and then translated the items into Chinese to make them as simple, specific, and concise as possible. Comprehension problems caused by item complexity or ambiguity may have induced respondents to develop their own idiosyncratic meanings, which may have resulted in common method bias (Podsakoff et al., 2003). Item wording and terminology in Chinese were refined accordingly to ensure the validity and appropriateness of the measures in the Chinese context. The Chinese version was then back-translated into English and we paid special attention to any misunderstandings that might have arisen due to translation. On the questionnaire, we assured respondents that (1) the collected information is for academic use only, (2) there were no right or wrong answers to the questions, and (3) respondent anonymity was guaranteed.

The questionnaire was sent to top executives of the sampled firms who were familiar with their firms' international activities. After two weeks, we made follow-up phone calls and sent email reminders to those who had not responded. Finally, 314 completed questionnaires were collected, resulting in a response rate of 21%. At the end of the survey, our research assistants independently placed phone calls to a random 10% of the respondents to verify their identities and responses to the survey. All of the respondents confirmed that they had participated in the survey. To check for nonresponse bias, we compared the respondents' firm size and industry

profiles with those of non-respondents. We found no statistically significant differences. We also used t-tests to examine if differences existed in terms of the means of key constructs between early and late respondents as recommended by Armstrong and Overton (1977) and we found no statistically significant differences. These results indicate that nonresponse bias was not an issue in the study.

Four weeks after completion of the major survey, we sent all of the respondents a shorter version of the questionnaire that only included the measures of the key constructs for validation purposes. We received responses from 146 firms in the second-round survey. These data were used to examine the reliability of the survey in the first around and to conduct a robustness check of our findings. To examine the reliability of the first-round survey, we ran a Pearson's correlation test to each paired-item and found that for every paired-item, the correlation coefficient was significant and above 0.9, indicating a high reliability of our data. We also calculated the aggregated scores for inward activities and outward activities, and found that first-round scores and second-round scores were highly correlated (0.95 and 0.96, respectively).

Measurement

Table 1 lists the measures for all of the multi-item constructs, each of which will be discussed in details below. We averaged the items to create the scores for each of the constructs.

[Insert Table 1 about here]

Outward activities. We draw upon the work by Korhonen et al. (1996) and Luo and Tung (2007) and asked each respondent to evaluate the degree to which his/her firm had engaged in various types of outward international activities. These activities included: (1) franchising in overseas markets, (2) exporting products to overseas markets, (3) forming alliances or joint ventures in overseas markets, (4) acquiring or merging firms in overseas markets, (5)

establishing wholly owned production subsidiaries in overseas markets, (6) establishing wholly owned sales subsidiaries in overseas markets, and (7) establishing wholly owned R&D facilities in overseas markets.

To test H4, we categorized outward activities into high-risk and low-risk based on resource commitment and risk that each activity may involve. Low-risk outward activities include: (1) franchising in overseas markets, (2) exporting products to overseas markets, (3) establishing wholly owned sales subsidiaries in overseas markets, and (4) establishing wholly owned R&D facilities in overseas markets. High-risk outward activities include: (1) forming strategic alliances or joint ventures in overseas markets, (2) acquiring or merging firms in overseas markets, and (3) establishing wholly owned production subsidiaries in overseas markets.

Inward activities. To measure inward activities, we asked each respondent to indicate the degree to which his/her firm was involved in various types of inward activities, including (1) importing new products or new services from foreign countries, (2) acting as agents for selling foreign companies' products, (3) introducing foreign capital (including foreign venture capital), (4) forming joint ventures with foreign companies in China, and (5) introducing product lines or manufacturing equipment from foreign countries.

Inward gain. This construct was measured by asking the respondent to indicate the degree to which his/her firm had benefited from inward activities compared with competitors in the following dimensions: (1) the firm has obtained sufficient foreign capital, (2) the firm has acquired advanced manufacturing technologies, (3) the firm has acquired advanced product development technologies, (4) the firm has acquired advanced management knowhow and managerial talent, and (5) the firm has acquired a large amount of overseas market knowledge and customer information.

Resource fungibility. Drawn upon the work by Oviatt and McDougall (1994) and Sapienza et al. (2006), we measured resource fungibility by asking the respondent to indicate the degree to which his/her firm's resources could be easily applicable to cross-border deployment. We focused on six dimensions: (1) overall resources, (2) organizational structure, (3) organizational culture, (4) product manufacturing technologies, (5) product development technologies, and (6) human resource management system. To test H3, we further categorized resource fungibility into technological resource fungibility and organizational resource fungibility. Technological resource fungibility includes the following two dimensions: (1) product manufacturing technologies, and (2) product development technologies. Organizational resource fungibility includes the following three dimensions: (1) organizational structure, (2) organizational culture, and (3) human resource management system.

Firm risk propensity. Based on Miller (1983), this construct was measured by asking each respondent to indicate the degree to which his/her firm favored risk-taking. We used two items: (1) Our firm has a strong culture for adventure and risk-taking, and (2) we believe that a strategy emphasizing stability is more suitable for our firm than a strategy emphasizing adventure (reverse-coded). We calculated the sum of these two items (after reverse-recoding the second one) and divided the sample into two groups (high-risk vs. low-risk propensity firms) based on this variable's sample median value.

Control variables. To tease out alternative explanations, we controlled for several firm- and industry-level factors in our analyses. We controlled for *firm size* because larger firms may be more likely to engage in outward activities. Firm size was measured by the natural log of the number of employees in a firm. *Firm age* was controlled for because according to Johanson and Vahlne's (1977) stage model for internationalization, older firms are more likely to engage in

outward activities. Firm age was measured by the natural log of the number of years since a firm's inception. *R&D intensity* was controlled for because previous literature suggests that firms that invest heavily in R&D are more likely to take the risk to go international (Filatotchev and Piesse, 2009). R&D intensity was measured by asking the respondent to indicate the average percentage of a firm's R&D investment to its sales revenue in the past three years.

International experience of the top management team (TMT) may also play an important role in a firm's internationalization decision (Carpenter, Sanders, and Gregersen, 2001). Following Sambharya (1996), we measured this variable by using the average number of years that TMT members have spent abroad on assignment and/or in higher education, or in an international division. We defined TMT members as including the highest level of management—the chairman, chief executive officer, president, and chief operating officer— as well as the next highest tier (Wiersema and Bantel, 1992).

At the industry level, we controlled for *industry competition intensity,* which was measured by four items: (1) the degree of fierce competition in the industry, (2) the frequency of price wars in the industry, (3) the frequency of promotions in the industry, and (4) the degree of product homogeneity in the industry.

Structural equation method

We followed Anderson and Gerbing's (1988) recommendation and used structural equation modeling (SEM) to test our hypotheses. We chose SEM rather than multiple regressions for the following reasons. First, it has been argued that SEM is particularly effective when testing models that contain latent constructs that are measured with multiple indicators (Steensma and Lyles, 2000). In our model, a number of variables are latent constructs measured with multiple indicators. Second, an important difference between SEM and multiple regressions is that SEM

has a unique ability to simultaneously examine a series of dependence relationships (Shook et al., 2004). In our model, the theoretically related and intertwined relationships between inward activities, inward gain, resource fungibility, and outward activities can be better tested by using SEM than by multiple regressions. Third, SEM differs from multiple regressions in that SEM can simultaneously analyze multiple dependent variables (Joreskog et al., 1999). In our study, testing H4 required comparing the effects of predicting variables on two dependent variables (low-risk outward activities and high-risk outward activities). This kind of comparison can be better done with SEM than with multiple regressions.

We conducted a two-step analysis. In the first step, we conducted a confirmatory factor analysis to test the construct validity of the latent variables we defined, including both convergent validity and discriminant validity. In the second step, we established the structural model based on the measurement model verified in the first step. The structural model tested our hypotheses. In addition, SEM enables the comparison of alternative models that helps to identify causal relationships (James, Mulaik, and Brett, 1982). Therefore, this two-step approach allowed us to evaluate the construct validity in the measurement model and assess the adequacy of the proposed theoretical relationships in the structural model, respectively (Bollen, 1989).

RESULTS

Measurement model

We validated the measurements by following the standard procedures (Anderson and Gerbing, 1988). First, for each of these constructs, we conducted a principal component factor analysis with varimax rotation. The results demonstrate that for each of the constructs, only the first eigenvalue is greater than one, leading support to the unidimensionality of these constructs (Anderson and Gerbing, 1988). Second, we conducted a confirmatory factor analysis by

including five multi-item constructs previously proposed (i.e., outward activities, inward activities, inward gain, resource fungibility, and industry competition intensity).[2] We then examined the fit to the data of the five-factor model in which the five latent variables were assessed by different sets of indicators. The measurement model fits the data well by demonstrating a series of good model fit indexes (χ^2 = 724.87, d.f. = 314, CMIN/DF = 2.31, CFI = 0.91, RMSEA = 0.060).

Table 1 presents the standardized coefficient for each item, composite reliability, and average variance extracted (AVE) for each construct. The results show that the five latent variables perform well in terms of their convergent validity. Convergent validity was demonstrated through the statistical significance of the measurement model's parameter estimates using a Z-ratio. The Z-ratio is calculated by dividing the parameter estimate by its standard error (Widaman, 1985) and the Z-ratio greater than 1.96 is considered significant at the 0.05 level. We also examined convergent validity through the size of factor loadings. All of the factor loadings are greater than 0.40, which provides support for convergent validity (Ford, MacCallum, and Tait, 1986). In addition, we calculated the AVE, which measures the amount of variance captured by a specific construct relative to the amount of variance attributable to the measurement model. In our measurement model, the AVEs for the constructs range from 0.5002 to 0.6212, all of which are above the 0.5 cut-off value (Fornell and Larcker, 1981). Finally, we calculated the composite reliability for each latent variable by dividing the squared sum of the individual standardized loadings by the sum of the variance of their error terms and the squared sum of the individual standardized loadings. The value of composite reliability ranges from 0.80

[2] "Firm's risk propensity" was not included in the measurement model because it was not used as a latent construct. Instead, as discussed in the method section, we divided the sample into two groups (high-risk propensity firms vs. low-risk propensity firms) based on this variable's sample median value.

to 0.92, which all exceed the threshold value of 0.70 (Nunnally, 1978). These results suggest that the measurement model shows adequate internal consistency, indicating strong convergent validity.

Table 2 summarizes the descriptive statistics and correlations among the constructs of the study. Apparently, some constructs such as inward activities and inward gain are conceptually related and empirically correlated in a substantial way. To deal with this issue, we followed the approach suggested by Tanriverdi and Venkatraman (2005) and compared our measurement model (χ^2 = 724.87, d.f. = 314, CMIN/DF = 2.31, CFI = 0.91, RMSEA = 0.060) with alternative measurement models, respectively: (1) modeling inward activities and inward gain as one construct instead of separate constructs (χ^2 = 832.22, d.f. = 318, CMIN/DF = 2.62, CFI = 0.80, RMSEA = 0.078); and (2) modeling resource fungibility as part of the inward gain construct (χ^2 = 949.87, d.f. = 318, CMIN/DF = 2.99, CFI = 0.77, RMSEA = 0.086). The results show that our measurement model has a better model fit than the two alternative models, thus supporting the notion that inward activities, inward gain, and resource fungibility are independent constructs.

Moreover, following Zhang and Bartol (2010), we conducted additional analyses to establish the discriminant validity of these constructs. We assessed their discriminant validity by comparing the chi-square differences between a constrained confirmatory factor model (in which the inter-factor correlation is set to 1) and an unconstrained model (in which the inter-factor correlation is free). Specifically, we compared the fit of the unconstrained five-factor measurement model in which all covariances between latent variables were unconstrained, with the fit of alternative models in which the number of factors was reduced by setting different combinations of covariance between latent variables equal to one. Our results show that the five-factor model fits the data better than all other models in which one or more covariance was set

equal to one ($\Delta\chi^2$ ranges from 37.13 to 188.30, $p < 0.01$ in all cases), suggesting strong discriminant validity among the constructs. Finally, we evaluated discriminant validity of the constructs by examining whether the AVE of each construct was greater than the squared correlation between two constructs (Fornell and Larcker, 1981). The AVEs are all higher than the squared correlations, which indicate good discriminant validity at the construct level.

[Insert Table 2 about here]

The use of survey data may raise the concern of common method variance bias because the independent variables and the dependent variable were from the same respondents. We conducted several analyses to address this potential issue. First, we constructed Harman's one-factor test. The result revealed five factors with eigenvalues greater than 1. Second, we employed statistical methods to address this concern. Podsakoff et al. (2003) recommended a confirmatory factor analysis on competing models to test the severity of the concern. That is, if the method variance is a significant problem, a single factor model should then fit the data as nicely as a more complex model. We found that our theoretical model containing multi-factors (χ^2 = 724.87, d.f. =314, CMIN/DF = 2.31, CFI = 0.91, RMSEA = 0.060) yielded a significantly better fit of the data than the simple model (χ^2 = 1,788.26, d.f. = 324, CMIN/DF = 5.52, CFI = 0.68, RMSEA = 0.120). Third, we used the data from the second round of the survey to validate our data from the first round and to conduct a robustness check, which yielded highly consistent findings. These results will be reported in the "Robustness checks" section.

Structural model

Table 3 reports the results of the structural models. Model 1 is the basic model that includes control variables only. The data has a good fit with the model (Browne and Cudeck, 1993) (χ^2 = 413.31, d.f. = 168, CMIN/DF =2.46, CFI = 0.82, RMSEA = 0.068). The path from *inward*

activities to *outward activities* is statistically significant (b = 0.66, p < 0.01), suggesting that a firm's inward activities have a significantly positive relationship with its outward activities. The path from *firm size* to *outward activities* is statistically significant (b = 0.14, p < 0.01), suggesting that larger firms are more likely to participate in outward activities. In addition, *R&D intensity* has a significantly positive relationship with outward activities (b = 0.15, p < 0.01). Furthermore, the *industry competition intensity* has a significant and positive relationship with outward activities (b=0.11, p<0.05).

[Insert Table 3 about here]

Compared with Model 1, Model 2 (χ^2 = 981.10, d.f. = 428, CMIN/DF =2.29, CFI = 0.89, RMSEA = 0.064) adds the path from inward gain to outward activities through resource fungibility. Two other paths are also added. Specifically, the path from *inward activities* to *inward gain* is added because it is natural to conjecture that a firm's inward gain should come from its participation in inward activities. Also, the path from *inward activities* to *resource fungibility* is added in order to ensure that the relationship between inward gain and resource fungibility does not reflect the possible relationship between inward activities and resource fungibility.

H1 proposes that a firm's inward gain has a positive relationship with its outward activities through improving its resource fungibility. As shown in Model 2, inward gain has a significantly positive relationship with resource fungibility [Path I(a)] (b = 0.62, p < 0.01) and resource fungibility has a significantly positive relationship with outward activities [Path I(b)] (b = 0.32, p < 0.01). These results support H1.

H2 proposes that the relationship as stated in H1 is stronger when a firm's organizational resource fungibility is improved than when its technological resource fungibility is improved.

This hypothesis is tested by the results reported in Model 4 in Table 4. As shown in this model (χ^2 = 899.87, d.f. = 394, CMIN/DF =2.28, CFI = 0.90, RMSEA = 0.063), technological resource fungibility does not have a significant relationship with *outward activities* (b = -0.12, n.s.) whereas organizational resource fungibility has a significantly positive relationship with *outward activities* (b = 0.54, $p < 0.01$). We further compared these two coefficients by using the critical ratio of the parameters following Byrne (2010). The critical ratio with an absolute value greater than 1.96 for differences between these two paths is considered to be significant at $p < 0.05$ (Byrne, 2010). In our model, the absolute value of the critical ratio of the coefficients of the two paths is 2.18 (larger than 1.96), indicating that the effect of organizational resource fungibility is significantly stronger than the effect of technological resource fungibility on a firm's outward activities, thus supporting H2.

H3 states that after controlling for the indirect relationship between inward gain and outward activities through resource fungibility, inward gain has a direct negative relationship with outward activities. To test H3, Model 3 of Table 3 adds the direct link between inward gain and outward activities (Path II) (χ^2 = 971.01, d.f. = 427, CMIN/DF =2.27, CFI = 0.90, RMSEA = 0.063). This model shows that inward gain has a significantly negative relationship with outward activities (Path II) (b = -0.37, $p < 0.01$), thus supporting H3.

H4 proposes that the relationship as proposed in H3 is stronger for high-risk outward activities than for low-risk outward activities. We tested this hypothesis by Model 5 in Table 5 (χ^2 = 955.47, d.f. = 418, CMIN/DF =2.29, CFI = 0.90, RMSEA = 0.063). As shown in this model, the direct relationship between inward gain and low-risk outward activities is negative and significant (b= -0.27, $p < 0.05$) whereas the direct relationship between inward gain and high-risk outward activities is also negative and significant (b = -0.45, $p < 0.01$). The absolute

value of the critical ratio of the coefficients of these two paths is 2.12 (larger than 1.96), indicating that inward gain has a stronger negative direct relationship with high-risk outward activities than with low-risk outward activities, thus supporting H4.

[Insert Tables 4 and 5 about here]

H5 proposes that the relationship as stated in H3 is stronger for firms with low-risk propensity than for those with high-risk propensity. To test H5, we followed Byrne (2010) and Denis (2010) and divided the sample into two groups based on the median value of *firm risk propensity*. We then compared the coefficients of the same path (Path II) in the two groups by using the critical ratio of the parameters based on a z-test because the critical ratio should have a standard normal distribution if the coefficients are assumed to be equal in the population (Byrne, 2010; Denis, 2010). Model 6 in Table 6 presents the results of the pairwise parameter comparison (χ^2 = 1527.94, d.f. = 861, CMIN/DF =1.78, CFI = 0.92, RMSEA = 0.050). As shown in this model, the direct relationship between inward gain and outward activities (Path II) is significantly negative for firms with low-risk propensity (b = -0.47, p < 0.01), but it is not statistically significant for firms with high-risk propensity (b = -0.19, n.s.). Moreover, the absolute value of the critical ratio of the two coefficients is 2.05 (larger than 1.96), thus supporting H5. Since firm risk propensity is a continuous variable, as a robustness check, we created an interaction term between inward gain and firm risk propensity and run a regression analysis. As shown in Table 7, the main effect of inward gain on outward activities is significantly negative (b=-.203, p < .05). The interaction term between inward gain and firm risk propensity is positively and significantly related to outward activities (b=.210, p <.01), suggesting that the negative effect of inward gain on outward activities is stronger when firm risk propensity is low than high. These findings provide additional support for H5.

[Insert Tables 6 and 7 about here]

Robustness checks

One may argue that in the Chinese context, state-owned enterprises (SOEs) and private firms may behave differently in that SOEs' outward activities tend to reflect government agendas. To address this issue, in supplementary analyses, we divided the sample into two groups—SOEs (N = 154) and private firms (N = 160). The results, as reported in the Appendix, show that the positive indirect relationship (i.e., inward gain→resource fungibility→outward activities) holds for both groups. However, the negative direct relationship (i.e., inward gain → outward activities) only holds for private firms ($b = -0.33$, $p < 0.05$), not for SOEs ($b = -0.30$, n.s.). (However, the critical ratio of the two coefficients is not statistically significant.)

To check the robustness of our results, we used the data obtained in the second round of the survey (four weeks after the first-round survey, N = 146) to measure outward activities, but kept the measures of other constructs unchanged. We then replicated the models in Tables 3—6 (results available from the authors upon request). The results are consistent with those reported in Tables 3—5 (for H1, H2, H3, and H4); however, the sample size was too small to perform the sub-group analysis in Table 6 (for H5). We acknowledge that four weeks may not be long enough to establish causal relationships. Nevertheless, these results help to build the robustness of our findings.

DISCUSSION AND CONCLUSION

Complex linkages between firm inward activities and outward activities

In this study we drew upon organizational learning theory and prospect theory to examine how a firm's gain from inward activities may be related to its outward activities in an emerging

market context. With data from a sample of Chinese manufacturing firms, we found empirical evidence to support both lines of logic.

In support of the organizational learning logic, we found that a firm's inward gain is positively related to its resource fungibility, which is further positively related to its outward activities. This indirect positive relationship is more salient when the firm's organizational resource fungibility is improved than when its technological resource fungibility is improved. In support of the prospect theory logic, we found that a firm's inward gain has a direct negative relationship with its outward activities, especially for high-risk outward activities, and for firms with low-risk propensity. While not hypothesized, our results also show a direct positive relationship between inward activities and outward activities. These results provide a relatively comprehensive portrait of the complex linkages between a firm's inward and outward activities.

Overall, according to our findings, there are three possible paths through which an emerging market firm's inward activities may be associated with its outward activities: (1) a firm's inward activities have a direct positive relationship with its outward activities; (2) a firm's inward gain has an indirect positive relationship with its outward activities through improving its resource fungibility (particularly its organizational resource fungibility); and (3) a firm's inward gain has a direct negative relationship with its propensity for outward activities, particularly for those activities with high risk.

These three paths seem to be in line with the awareness-motivation-capability (AMC) model in the strategy research (Chen, Su, and Tsai, 2007). According to the AMC model, for a firm to take a competitive action (e.g., participating in outward activities), it needs to be aware of the opportunity and possess the motivation and capabilities to take the action (Chen et al., 2007). Consistent with the "capability" component of the AMC model, our findings show that a firm's

inward gain can enhance its resource fungibility, which can further facilitate the firm's outward activities (Path I). Our finding that a firm's inward gain has a direct negative relationship with its outward activities (Path II) is consistent with the "motivation" component of the AMC model. In other words, as a firm can gain from its inward activities, its motivation for participating in outward activities would be reduced.

Interestingly, after controlling for the "capability" and "motivation" factors, we still find a direct positive link between a firm's inward activities and outward activities. It is possible that a firm's inward activities, *per se*, may increase the firm's awareness of the opportunities for outward activities and thus direct the firm's attention to overseas markets. According to the AMC model, awareness of competitive opportunities is required for a firm to take action to explore international opportunities (Chen et al., 2007). Inward activities can enhance the firm's awareness of overseas opportunities by connecting the firm with foreign companies and allowing the firm to understand the "nuts and bolts" of foreign market activities (Karlsen et al., 2003). For example, inward activities may involve trips to foreign countries, discussions and negotiations with foreign partners, visits of foreign partners' plants and facilities, and investigation of foreign partners' overseas markets, all of which can be positively related to the focal firm's awareness of potential business opportunities in overseas markets. As Gu and Lu (2011: 280) noted, "a local firm can become internationalized in its home market, through the inward investments of foreign firms, and its interactions with those foreign firms."

Contributions

Our study makes contributions to the literature on emerging market firms' internationalization in several important ways. First, previous studies of the inward-outward relationship have mainly drawn upon the organizational learning argument to examine the direct

link between inward activities and outward activities (e.g., Korhonen et al., 1996; Luo and Tung, 2007). Our findings suggest that there are three possible ways through which a firm's inward activities may be related to its outward activities. Our study thus portrays a far more complex picture of the inward-outward connection than previous studies have suggested and thus could significantly advance our understanding of this important question. Our theoretical arguments and empirical findings associated with prospect theory are particularly intriguing as they point out the potential negative effect of a firm's inward gain on its outward activities, whereas previous studies have almost all suggested a positive inward-outward connection (Gu and Lu, 2011; Luo and Tung, 2007; Welch and Luostarinen, 1993).

Second, our study highlights the crucial role of resource fungibility in the inward-outward connection. While prior research has emphasized the importance of resources and capabilities in the inward-outward connection, few studies have explicitly examined the role of resource fungibility in this connection. We fill this loophole by empirically demonstrating that a firm's inward gain can facilitate its outward activities through improving its resource fungibility. As shown in Model 5 in Table 5, resource fungibility is equally important for both high-risk outward activities and low-risk outward activities. Moreover, as shown in Model 6 in Table 6, resource fungibility is important for both firms with low-risk propensity and those with high-risk propensity (although its importance is greater for firms with low-risk propensity than for those with high-risk propensity, which is not surprising). These findings are important because they empirically validate the relevance of "resource fungibility" to firms' internationalization process as proposed in the literature (Autio, 2005; Oviatt and McDougall, 1994; Sapienza et al., 2006). As Sapienza et al. (2006: 926) specifically posited, "highly fungible firm resources can buffer costs and facilitate the development of capabilities to pursue new market entry opportunities."

More important, we made a distinction between organizational and technological resource fungibility and found that it is organizational resource fungibility rather than technological resource fungibility that facilitates a firm's outward activities (Model 4 in Table 4). These findings are consistent with Dunning et al.'s (2008) argument that emerging market firms lack firm-specific ownership advantages (notably organizational and management skills) to ensure success in their outward FDI. We believe that our study is the first empirical study that has systematically examined the role of resource fungibility in firms' internationalization processes. Our findings are particularly important for emerging market firms, as these firms tend to have fewer firm-specific resources or capabilities. Developing resource fungibility—particularly organizational resource fungibility—from inward activities thus becomes crucial to internationalization.

Third, while prior research has acknowledged that internationalization is risky, our study makes an extra effort in examining how risk may shape firm internationalization. For the first time in the literature, we incorporate the prospect theory to propose and support that a firm's inward gain may discourage the firm from participating in outward activities by reducing its top managers' motivation for taking risk in outward activities. Also, since not all outward activities involve the same level of risk, we distinguish between outward activities with high risk and those with low risk and find that the discouraging role of a firm's inward gain is more likely to hold for outward activities with high risk than for those with low risk. We further distinguish firms with high-risk propensity from those with low-risk propensity and empirically show that the discouraging role of a firm's inward gain holds only for firms with low-risk propensity, not for those with high-risk propensity. Indeed, our result of the control variable, firm R&D intensity, is also consistent with this line of logic. R&D and outward activities are both risk-taking activities

(Filatotchev and Piesse, 2009) and it appears that firms favoring one also favor the other. Overall, our results show that whereas a gain situation may reduce a firm's top managers' motivation for taking risks, this depends upon the risk level of the potential outward activities as well as the firm's own appetite for risk.

Our study also has important practical implications by providing a comprehensive explanation of emerging market firms' outward international activities. Thus, to answer the question of whether emerging market firms with higher inward gain engage in greater or fewer outward activities, we would argue that it depends upon how a firm uses its gain from inward activities. If the firm can improve its resource fungibility (particularly organizational resource fungibility) from its inward gain, the indirect positive relationship (inward gain → resource fungibility → outward activities) would likely dominate the direct negative relationship (inward gain → outward activities). If the firm cannot improve its resource fungiblity, the direct negative relationship would likely dominate the indirect positive relationship. Moreover, the indirect positive relationship would likely dominate the direct negative relationship for outward activities with low risk. The indirect positive relationship would also likely dominate the direct negative relationship for firms with high-risk propensity. It is critical to note that for emerging market firms, internationalization is not just a path toward new markets; instead, it reflects how these firms exploit and explore what they have learned from their interactions with foreign firms at home in new (foreign) markets. It is thus important for managers to think more strategically on developing their (organizational) resource fungibility from their inward activities.

Limitations and future research directions

Like any investigation, our study has limitations that should be addressed in the future. First, our data were collected from four manufacturing industries in a single country. Moreover,

as noted in the Methods section, in order to ensure that our research questions were relevant to the firms that answered the questionnaire, we excluded firms that did not have any international businesses at the time of the survey. As a result, our findings may not be generalizable to firms that have not had international businesses. How such firms become interested in international businesses, of course, is an interesting question, yet it is beyond the scope of this study.

Second, we focused on the contingent roles of the types of outward activities and firms' risk propensity in the negative relationship between inward gain and outward activities. Other contingent factors are also worth exploring. For example, we found that the negative relationship between inward gain and outward activities holds for private firms but not for SOEs. It is possible that government support may be an important contextual factor in the way that high government support reduces top managers' concerns on the potential loss of outward activities and thus weakens the negative relationship between inward gain and outward activities.

Third, our arguments are based upon firms' general internationalization experience. It may be interesting for future research to consider both the country origins of foreign partners in inward activities and the target countries for outward activities. For example, would a firm's gain from inward activities with foreign partners from Country A be more relevant to the firm's outward activities in Country A than in Country B? Moreover, it is likely that firms entering into less developed countries such as those in Southeast Asia, Africa, and South American may face different levels and types of risk and resource requirements from those firms that invest in North America and Europe, and that these firms may also differ in their entry modes as well as risk tolerance in internationalization. Also, the role of TMT international experience could be further explored. We measured the average international experience of TMTs and did not find any significant relationship between TMT international experience and outward activities. Future

research could examine the variance of international experience among TMT members. For example, a team of five in which each member has two years of international experience may be less effective than a team in which only the CEO has ten years of experience (but the other four do not have any experience).

Fourth, while China is the largest emerging market, people may wonder if our conclusions would hold for firms in other emerging markets that may demonstrate different characteristics. Given the heterogeneity of emerging markets, further examination of our hypotheses is encouraged in different geographic and country settings. Also, because of the cross-sectional nature of our research design, we are cautious in inferring the direction of causality among the key constructs even though we have used a second round of surveys to validate our findings. However, as Kenny (1979) argued, a careful study of cross-sectional relationships before attempting to validate the findings via costly longitudinal studies is a commonly accepted approach for building causal relationships (c.f., Li and Atuahene-Gima, 2002). We hope that this study will serve as a foundation for future research to adopt a longitudinal research design (with a lag of a year or longer) to verify our hypothesized relationships.

In conclusion, we have proposed and found empirical support that emerging market firms' inward gain may have dual effects on their outward internationalization. Our arguments and results provide a relatively complete picture on emerging market firms' internationalization and will encourage more future research effort on this interesting and important topic.

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TABLE 1

Coefficients, Z-statistics, and Reliability for the Measurement Model [a]

Item descriptions	Standardized Coefficient	Standard Error	Reliab-ility	AVE
Outward Activities [b]			0.9180	0.6212
Rate the degree to which your firm is involved in the following activities in oversea markets:				
- Franchising in oversea markets.	.822	/		
- Exporting products to overseas markets	.479	.047***		
- Forming alliances or joint ventures in overseas markets.	.850	.056***		
- Acquiring or merging firms in overseas markets.	.831	.058***		
- Establishing wholly owned production subsidiary in overseas markets.	.841	.055***		
- Establishing wholly owned sales subsidiaries in overseas markets.	.774	.052***		
- Establishing wholly owned R&D subsidiaries in overseas markets.	.851	.054***		
Inward Activities [b]			0.8320	0.5002
Rate the degree to which your firm is involved in the following activities in the domestic market:				
- Importing new products and/or new services from foreign countries.	.642	/		
- Acting as agents for selling foreign companies' products.	.664	.117***		
- Introducing foreign capital (including foreign venture capital).	.762	.109***		
- Forming joint ventures with foreign firms in China.	.814	.129***		
- Introducing production lines or manufacturing equipment from foreign firms.	.636	.079***		
Inward Gain [b]			0.8330	0.5003
Rate the degree to which your firm has benefited from inward international activities along the following aspects:				
- The firm has obtained sufficient foreign capital.	.699	/		

- The firm has acquired advanced manufacturing technologies.	.735	.082***		
- The firm has acquired advanced product development technologies.	.748	.090***		
- The firm has acquired advanced management knowhow and managerial talent.	.721	.085***		
- The firm has acquired a large amount of overseas market knowledge and customer information.	.627	.081***		
Resource Fungibility [c]			0.8733	0.5362
Rate your firm's resource deployment from the following aspects:				
- The firm's overall resources can adapt well to overseas markets.	.650	/		
- The firm's organizational structure can adapt well to overseas markets.	.784	.115***		
- The firm's organizational culture can adapt well to overseas markets.	.778	.119***		
- The firm's product manufacturing technologies can adapt well to overseas markets.	.697	.106***		
- The firm's product development technologies can adapt well to overseas markets.	.670	.104***		
- The firm's human resource management system can adapt well to overseas markets.	.800	.126***		
Industry Competition Intensity [c]			0.7995	0.5067
Evaluate the accuracy of the following statements about your key industry.				
- There is fierce competition in the industry.	.897	/		
- There are frequent promotions in the industry.	.581	.082***		
- There are frequent price wars in the industry.	.709	.085***		
- There is a high level of product homogeneity in the industry.	.618	.088***		

N=314

[a] Significance levels: $p < 0.001^{***}$; $p < 0.01^{**}$; $p < 0.05^{*}$; $p < 0.1^{\dagger}$

[b] 7-point scale: 0 = none; 6 = a lot.

[c] 7-point scale: 1 = totally disagree; 7 = totally agree.

TABLE 2

Summary Statistics and Correlation Matrix [a]

	Mean	Std.	1	2	3	4	5	6	7	8	9
1. Outward activities [b]	3.48	1.44									
2. Inward gain [b]	4.62	0.93	0.53								
3. Resource fungibility [c]	5.45	0.93	0.51	0.41							
4. Firm risk propensity [d]	0.50	0.50	0.07	0.03	0.06						
5. Inward activities [b]	3.83	1.31	0.56	0.47	0.50	0.07					
6. Firm age	2.85	0.59	0.04	-0.01	-0.02	0.01	-0.02				
7. Firm size	7.15	1.25	0.08	0.06	-0.02	-0.01	-0.02	0.25			
8. International experience of TMT	8.44	6.43	0.18	0.18	0.17	0.04	0.20	0.12	-0.01		
9. R&D intensity	9.38	3.87	0.24	0.19	0.14	0.03	0.15	0.01	-0.07	-0.02	
10. Industry competition intensity [c]	5.53	0.93	0.22	0.20	0.21	0.04	0.15	-0.07	-0.01	0.02	-0.08

N=314

[a] Correlations with absolute values larger than 0.21 are significant at the level of $p < 0.05$ (two-tailed tests).

[b] 7-point scale: 0 = none; 6 = a lot.

[c] 7-point scale: 1 = totally disagree; 7 = totally agree.

[d] Coded as a dummy for subgroup analysis.

TABLE 3

Path Coefficients and Model Fit Indexes of Core Models [a,b]

	Model 1	Model 2	Model 3
Paths			
Firm age → Outward activities	.01	.02	.02
Firm size → Outward activities	.14**	.13**	.13**
International experience of TMT → Outward activities	.02	-.01	-.01
R&D intensity → Outward activities	.15**	.10*	.06
Industry competition intensity → Outward activities	.11*	.04	.06
Inward activities → Outward activities	.66**	.48**	.65**
Inward activities → Inward gain		.65**	.67**
Inward activities → Resource fungibility		.09	.05
Path I(a): Inward gain → Resource fungibility		.62**	.67**
Path I(b): Resource fungibility → Outward activities		.32**	.45**
Path II: Inward gain → Outward activities			-.37**
Model fit index			
χ^2	413.31	981.10	971.01
Degree of freedom	168	428	427
CMNI/D.F.	2.46	2.29	2.27
CFI	.82	.89	.90
RMSEA	.068	.064	.063

N=314

[a] The coefficients are all standardized regression coefficients.

[b] Significance levels: $p < 0.01^{**}$; $p < 0.05^{*}$; $p < 0.1^{\dagger}$ (two-tailed tests).

TABLE 4

Differences between Technological and Organizational Resource Fungibility [a,b]

		Model 4
	Paths	
	Firm age → Outward activities	.01
	Firm size → Outward activities	.11**
	International experience of TMT → Outward activities	.01
	R&D intensity → Outward activities	.06†
	Industry competition intensity → Outward activities	.08
	Inward activities → Outward activities	.63**
	Inward activities → Inward gain	.67**
	Inward activities → Technological resource fungibility	-.04
	Inward activities → Organizational resource fungibility	.11
Path I(a):	***Path I(a.1):*** Inward gain →Technological resource fungibility	.70**
	Path I(a.2): Inward gain →Organizational resource fungibility	.59**
Path I(b):	***Path I(b.1):*** Technological resource fungibility → Outward activities	-.12
	Path I(b.2): Organizational resource fungibility → Outward activities	.54**
Path II	Inward gain → Outward activities	-.31*
	Model fit index	
	χ^2	899.87
	Degree of freedom	394
	CMNI/D.F.	2.28
	CFI	.90
	RMSEA	.063
	| Critical ratio of Path I(b.2) vs. Path I(b.1) |	2.18*

N=314

[a] The coefficients are all standardized regression coefficients.

[b] Significance levels: $p < 0.01^{**}$; $p < 0.05^{*}$; $p < 0.1^{\dagger}$ (two-tailed tests).

TABLE 5

Differences between High-Risk and Low-Risk Outward Activities [a,b]

	Model 5	
	DV1: Outward activities refer to low-risk activities	DV2: Outward activities refer to high-risk activities
Paths		
Firm age → Outward activities	.01	.03
Firm size → Outward activities	.13**	.09*
International experience of TMT → Outward activities	-.02	-.01
R&D intensity → Outward activities	.06	.06
Industry competition intensity → Outward activities	.08†	.05
Inward activities → Outward activities	.58**	.67**
Inward activities → Inward gain [c]	.68**	.68**
Inward activities → Resource fungibility [c]	.05	.05
Path I(a): Inward gain → Resource fungibility [c]	.67**	.67**
Path I(b): Resource fungibility → Outward activities	.46**	.43**
Path II: Inward gain → Outward activities	-.27*	-.45**
Model fit index		
χ^2	955.47	
Degree of freedom	418	
CMNI/D.F.	2.29	
CFI	.90	
RMSEA	.063	
| Critical ratio of Path II for DV2 and DV1 |	2.12*	

N=314

[a] The coefficients are all standardized regression coefficients.

[b] Significance levels: $p < 0.01^{**}$; $p < 0.05^{*}$; $p < 0.1^{\dagger}$ (two-tailed tests).

[c] These paths only appear once in the model because the variable of "outward activities" is not involved in these paths. We report the coefficients of these paths under both DV1 and DV2 to show the whole picture on how results are different/the same for low-risk outward activities (DV1) and high-risk outward activities (DV2).

TABLE 6

The Moderating Role of Firm Risk Propensity [a,b]

	Model 6	
	Firm risk propensity	
Paths	Low	High
Firm age → Outward activities	.04	.04
Firm size → Outward activities	.09**	.11*
International experience of TMT → Outward activities	-.01	-.01
R&D intensity → Outward activities	.04	.05
Industry competition intensity → Outward activities	.07	.07
Inward activities → Outward activities	.62**	.69**
Inward activities → Inward gain	.66**	.69**
Inward activities → Resource fungibility	.15	-.02
Path I(a): Inward gain → Resource fungibility	.60**	.72**
Path I(b): Resource fungibility → Outward activities	.60**	.30**
Path II: Inward gain → Outward activities	-.47**	-.19
Model fit index		
χ^2	1527.94	
Degree of freedom	861	
CMNI/D.F.	1.78	
CFI	.92	
RMSEA	.050	
| Critical ratio of Path I(a) between two groups |	.01	
| Critical ratio of Path I(b) between two groups |	1.65†	
| Critical ratio of Path II between two groups |	2.05*	

N=314

[a] The coefficients are all standardized regression coefficients.

[b] Significance levels: $p < 0.01^{**}$; $p < 0.05^{*}$; $p < 0.1^{\dagger}$ (two-tailed tests).

TABLE 7

Robustness Check: Results of Regression Analysis of the Moderating Role of Firm Risk Propensity

	Model 1	Model 2
Constant	-3.255**	-3.441**
	(.540)	(.538)
Firm age	.005	.005
	(.004)	(.004)
Firm size	.112*	.077
	(.055)	(.056)
International experience of TMT	-.001	.001
	(.010)	(.010)
R&D intensity	.014	.017
	(.017)	(.017)
Industry competition intensity	.045	.014
	(.072)	(.072)
Firm risk propensity	.180*	.198**
	(.076)	(.076)
Resource fungibility	.422**	.419**
	(.092)	(.091)
Inward gain	-.203*	-.134
	(.088)	(.090)
Inward gain* Firm risk propensity		.210**
		(.073)
F-value	7.12**	7.41**
R-square	.16	.18
Adjusted R-square	.14	.16
N	314	314

Significance levels: $p < 0.01^{**}$; $p < 0.05^{*}$; $p < 0.1^{\dagger}$ (two-tailed tests).

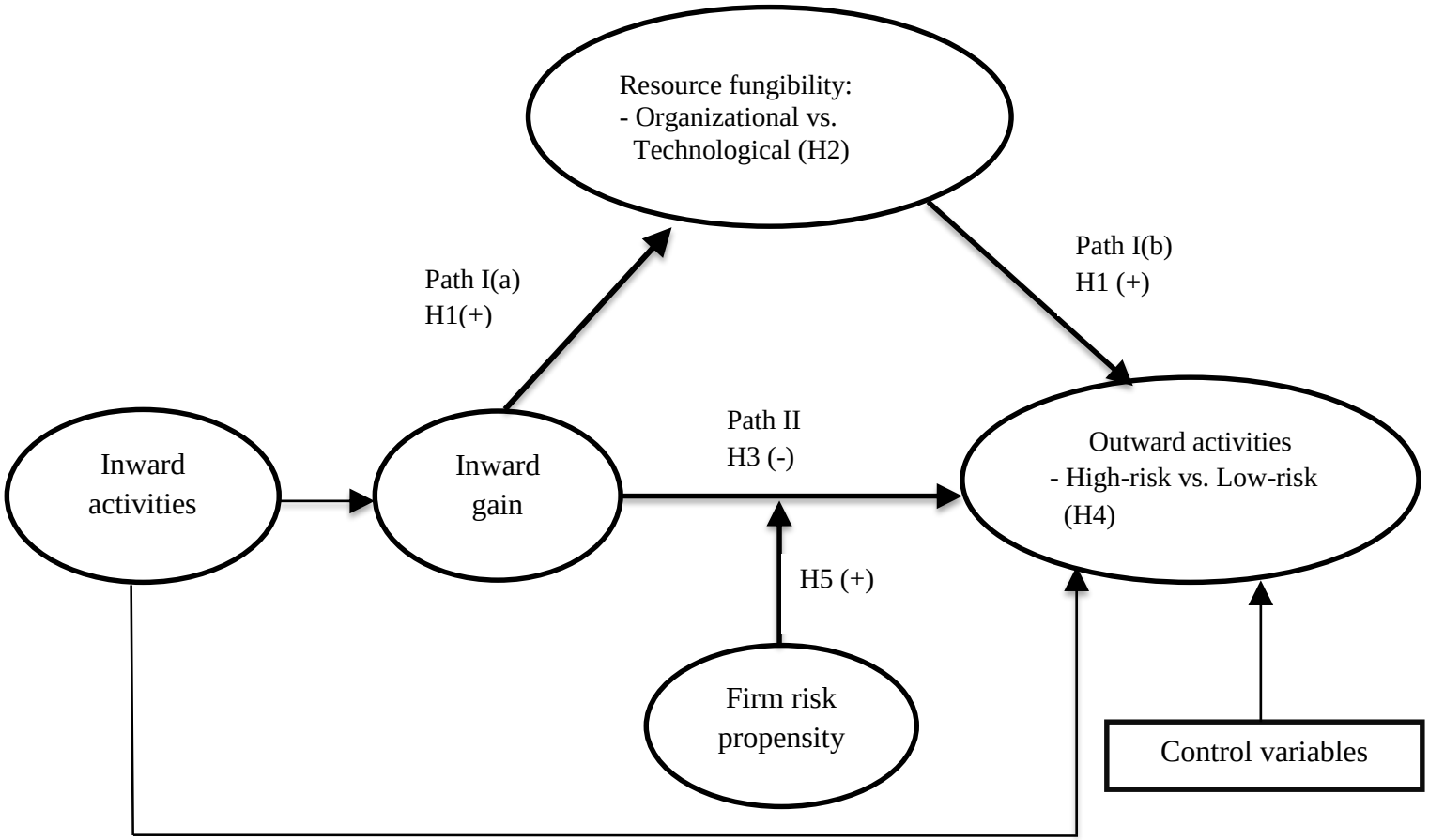

FIGURE 1. The Conceptual Model

APPENDIX

Path Coefficients for SOEs vs. Private Firms [a,b]

	Model 7	
Paths	**SOEs**	**Private firms**
Firm age → Outward activities	-.03	.07
Firm size → Outward activities	.10*	.11*
International experience of TMT → Outward activities	-.04	.03
R&D intensity → Outward activities	.02	.07
Industry competition intensity → Outward activities	.06	.04
Inward activities → Outward activities	.56**	.69**
Inward activities → Inward gain	.74**	.62**
Inward activities → Resource fungibility	.01	.01
Path I(a): Inward gain → Resource fungibility	.76**	.64**
Path I(b): Resource fungibility → Outward activities	.56**	.38**
Path II: Inward gain → Outward activities	-.30	-.33*

Model fit index	
χ^2	1521.38
Degree of freedom	854
CMNI/D.F.	1.78
CFI	.87
RMSEA	.050
| Critical ratio of path I(a) between two groups |	.12
| Critical ratio of path I(b) between two groups |	.63
| Critical ratio of path II between two groups |	.22

N=314

[a] The coefficients are all standardized regression coefficients.

[b] Significance levels: $p < 0.01^{**}$; $p < 0.05^{*}$; $p < 0.1^{\dagger}$ (two-tailed tests).