

**PERFORMANCE AND BUSINESS RELATEDNESS AS DRIVERS OF EXIT  
DECISION: A STUDY OF MNCs FROM AN EMERGING COUNTRY**

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# PERFORMANCE AND BUSINESS RELATEDNESS AS DRIVERS OF EXIT

## DECISION: A STUDY OF MNCs FROM AN EMERGING COUNTRY

### **Abstract:**

#### ***Research summary:***

This study examines the exit behavior of emerging market MNCs in the context of the parent company (PC)–foreign affiliate (FA) relationship. Specifically, we consider business relatedness as a moderating variable and examine its impact on the relationship between a FA’s international performance and its exit decision from a foreign market. Our results, based on data collected from multiple informants in 180 Chinese firms, indicate that product relatedness and intangible resources relatedness have a different moderating impact on the FA performance-FA exit decision relationship. Implications of these findings along with the limitations of the study are discussed.

#### ***Managerial summary:***

Although the research on international entry and expansion is particularly important, an aspect which has been largely ignored in the literature is the exit behavior of firms. This study examines whether the extent to which a foreign subsidiary is similar to its parent’s core business may influence the firm’s exit decision. The findings indicate that managers are more likely to exit a poorly-performing FA if there is a high (versus low) level of product relatedness between the FA and its PC’s core business. The results also suggest that intangible resources relatedness exerts a different contingent effect on the FA performance-FA exit relationship from product relatedness.

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## INTRODUCTION

As the trend towards globalization intensifies, emerging markets play an increasingly important role in the global economy (Gaur, Kumar, and Singh 2014; Luo, Xue, and Han 2010). According to the World Investment Report (WIR 2008), most emerging economy governments (e.g. China and Brazil) now actively encourage local enterprises to go global. While most studies have focused on MNCs from developed economies, a growing body of studies (e.g., Ang, Benischke, and Doh 2015; Contractor, Kumar, and Kundu 2007; Kalasin, Dussauge, and Rivera-Santos 2014; Peng 2012; Sun *et al.* 2012; Yaprak and Karademir 2011) have examined the expansion behavior and international entry strategies of emerging market firms into other foreign markets.

Although this research on international entry and expansion is particularly important, an aspect which is in need of further research attention is the exit behavior of firms (Getachew and Beamish 2017; Pattnaik and Lee 2014). Firms' entry, expansion, and exit are three basic activities in the cycle (Campbell 1998) which are interdependent since entry, expansion and exit activities are in a long-run equilibrium (Hopenhayn 1992). Indeed, in the United States, 13.9 million new establishments were created between 1991 and 2009, while 12.3 million establishments closed over the same period demonstrating a long-run equilibrium between these activities (Elfenbein and Knott 2015). As markets become more globalized and competition intensifies, many firms are pushed to the verge of exiting from the foreign market. For instance, the recent announcement by Barclays' new chief executive to exit its African operations, Tesco's exit from the US market because of the lack of profits, and the

declarations by several firms that they may exit the UK market following the Brexit vote are just a few examples of the relevance of this issue in today's business environment. As a result, calls have followed for a much deeper understanding of the firm's exit decision and its determinants (e.g., Song 2015; Wan, Chen, and Yiu 2015).

In our study, exit refers to a foreign direct investment (FDI) firm's long-run voluntary decision to liquidate or sell an active operation in a foreign market. While research on entry and expansion behavior is very important, research on exit behavior informs managers about factors that inhibit success. Learning from unsuccessful ventures may be more valuable than learning from success, as managers will become more aware of the success inhibitors based on painful lessons, which may increase the probability of subsequent success (Madsen and Desai 2010). Using economics models, studies have considered firms' exit decisions as largely rational responses to changing economic circumstances such as lagging profits and unsatisfactory performance (Wan *et al.* 2015). According to the behavioral theory of the firm, firms respond to low performance by making strategic changes (Greve 2008) which could lead to exit decisions.

In addition to performance outputs, scholars consider business relatedness as a crucial element to understand the firm's exit decisions (Benito 2005; Hamilton and Chow 1993). For instance, researchers of the organizational learning theory emphasize the importance of relatedness in learning as it can facilitate learning and knowledge transfer between firms (Pehrsson *et al.* 2015). The more unrelated a subsidiary is to the parent firm's core business activities, the more difficult it is to learn and transfer knowledge and the greater the risk of it being divested (Berry 2013; Duhaime and Grant 1984). A good example is the recent news

that Royal Dutch Shell is eyeing a possible \$40bn spin-off of non-core assets around the globe (Cunningham 2016).

Consequently, this paper focuses on the role of business relatedness to explain the firm's exit decision. In this study, business relatedness refers to the extent to which a foreign subsidiary is similar to its parent's core business (Pehrsson 2006), which is consistent with Hennart (1988)'s 'scale' type of relatedness. The contributions to the literature are the following: Firstly, the results will expand our understanding of the entry and expansion activities to firms' exit behavior, thereby providing a more holistic picture of the issues involved in the international business cycle. Research on foreign entry and expansion has been the center of much of the attention in the past few decades, while less attention has been paid to foreign exit and the factors motivating firms to exit their foreign markets (Nyuur and Debrah 2014; Wan *et al.* 2015).

Secondly, by simultaneously examining the influence of performance and business relatedness on firms' exit behavior, the findings complement those studies which ignored the moderating role of business relatedness in explaining this exit decision. To focus solely on performance as the determinant of divestment is overly simplistic, and while some studies have considered the role of business relatedness in divestment studies, its moderating role in explaining the firm's exit decision has been ignored. However, organizational learning theory, for instance, suggests that different business development activities are moderated by the relatedness between the company and its partner (Keil *et al.* 2008). Thus, although past studies have greatly enriched our understanding of the firm's exit behavior, this study contributes to the literature by exploring the moderating effect of business relatedness. This,

in turn, addresses the call to examine contingency variables to explain the firms' exit decision (Berry 2013; Tan and Sousa 2015).

Thirdly, this study contributes to the exit literature by distinguishing between two types of relatedness (i.e., product relatedness and intangible resource relatedness). While the vast majority of past studies focus only on business relatedness as a whole, it should be considered a multidimensional concept (Pehrsson 2010; Pehrsson 2006). Thus, the distinction between two types of relatedness provides a more fine-grained understanding of the moderating effects of business relatedness on the performance-exit relationship. This is the first time in the literature that the above issues are empirically examined, thereby contributing to a better understanding of this topic which we believe to be of great interest to academics and managers both at headquarters and in foreign affiliates (FA).

## **THEORETICAL BACKGROUND AND RESEARCH HYPOTHESES**

### **Research on the foreign exit decision**

Compared to international entry and expansion decisions, little attention has been devoted to the decision to withdraw a firm from a foreign market. The studies conducted by Boddewyn and his colleagues in the 1970s and 1980s (e.g., Boddewyn 1983; Boddewyn 1979; Boddewyn and Torneden 1973) are among the first to provide a detailed analysis of firms' exit decisions. They found that financial considerations predominate when it comes to explaining divestment, and that these considerations can stem from poor performance of the subsidiary and the inability of the parent company (PC) to sustain further losses (Boddewyn 1979). Firms' exit decisions are seen as a rational response to profit and performance

concerns (e.g., Berry 2013; Dranikoff, Koller, and Schneider 2002; Duhaime and Grant 1984). In this context, it is also noteworthy to mention that the decision to exit a foreign market follows not only unsuccessful performance, but also the successful completion of the planned project (see Makino *et al.* 2007).

Nonetheless, while most of the literature supports the argument that firms' exit decisions are made because of lagging profits and disappointing performance results, other factors have been found to influence the firm's decision. Previous studies have established that firms exiting from a foreign market may be influenced by factors such as economic growth in the host country (e.g., Benito 1997); human capital (e.g., Mata and Portugal 2000); political risk (e.g., Soule, Swaminathan, and Tihanyi 2014); a search for better opportunities for firm resources (Berry 2010); civil violence (e.g., Hiatt and Sine 2014); mode of entry (e.g., Li 1995); international experience (e.g., Shaver, Mitchell, and Yeung 1997); organizational image and identity (e.g., Wan *et al.* 2015); geographic concentration (e.g., Dai, Eden, and Beamish 2013); investment size (e.g., Song 2014); cultural distance (e.g., Pattnaik and Lee 2014); top management teams' ethical values (e.g., Nyuur, Amankwah-Amoah, and Osabutey 2016); and size of subsidiary (e.g., Song 2015).

However, among all the drivers of a firm's exit decision, financial considerations such as unsatisfactory performance have been singled out as the most important antecedent (Berry 2010). That said, while poor performance is expected to encourage divestment, it would be too simplistic to assume a direct relationship without determining the possible moderating effects influencing the performance-exit relationship (Berry 2013). The model we present in

this study examines the moderating effect of business relatedness on the performance-exit relationship.

### **Conceptual framework**

The behavioral theory of the firm (Cyert and March 1963) continues to be widely used to explain the relationship between performance relative to aspirations and firm responses. Firms are predicted to regulate their behavior based upon performance relative to those aspirations (Kuusela, Keil, and Maula 2017). The theory postulates that past performance shapes strategic behavior (Shinkle 2012). A core aspect of the behavioral theory of the firm is the distinction between outcomes that are considered as being ‘successful’ and those associated with ‘failure’ (Gavetti *et al.* 2012). According to the behavioral theory of the firm, performance below a firm’s aspiration level causes strategic change (Greve 2008). Firms are, therefore, expected to act in order to enhance their degree of success in achieving their aspirations (Lant 1992). The subjective feeling of success/satisfaction or failure/dissatisfaction determines whether MNCs will change their behavior in the future (Lages, Jap, and Griffith 2008). Assuming survival is based on comparative performance within a group of competitors (March 1991), if an FA’s performance is satisfactory (i.e., better than that of the major competitor), the FA is likely to survive and stay in the foreign market, whereas an FA with dissatisfactory performance is likely to exit.

Every MNC needs to make an important decision concerning its business relatedness, namely the extent to which an FA should be related or similar to the PC’s core business (Pehrsson 2006; Tang and Rowe 2012). The relationship between business relatedness and



exit decision has been examined previously in the literature from various theoretical perspectives. Industrial organization scholars suggest managers are less likely to exit a highly-related foreign business unit because the exit barrier is very high due to the relatedness between the FA and its PC (Benito 2005; Caves and Porter 1976). Strategic management researchers posit that unrelated businesses are at a higher risk of being divested due to the need to focus on core activities (Hamilton and Chow 1993). Resource-based theorists propose that business relatedness has the potential to favor an FA's assimilation/exploitation of its PC's core competence (Pehrsson 2010), and facilitate value realization via economies of scale and scope between the FA and its PC (Dutta and Beamish 2013). This enables the FA to enjoy advantages in cost and competitive positions, and therefore increase its likelihood of survival (Delios and Beamish 2004; Sharma and Kesner 1996; Watson 2007). Institutional theorists (e.g., Lu and Xu 2006) view business relatedness as a contributing factor to the attainment of internal legitimacy from the PC, and, therefore an FA with a high level of business relatedness with its PC is more likely to display a higher survival rate.

As the direct descendent of the behavioral theory of the firm, the organizational learning theory emphasizes the importance of relatedness in learning (Chang and Wang 2007; Kogut and Zander 1992). They argue that an increased level of relatedness among business units can create greater value of learning. However, researchers of the social network theory (e.g., Sarala *et al.* 2016) while acknowledging the importance of knowledge transfer and learning, also believe that opportunities for learning and knowledge transfer increase with the level of complementarity (instead of similarity) between businesses. That said, this also implies that each firm must have the capacity to learn the know-how of the other (Tsai 2001). As a

consequence, firms learn from each other only when their knowledge bases are at least somewhat similar (Ireland, Hitt, and Vaidyanath 2002). These opportunities for learning and knowledge transfer increase with the level of similarity between businesses (Porter 1985). Previous studies have shown that related subsidiaries are likely to learn more from their PCs (Lane, Salk, and Lyles 2001), thereby being able to more effectively receive and assimilate knowledge transferred from the PC (Fang *et al.* 2013). Thus, business relatedness should facilitate knowledge transfer from the PC to the FA.

It is, therefore, expected that business relatedness should play an important role in the PC and in the FA's strategic decisions. Specifically, a high relatedness between an FA's business and its PC's core business indicates that the FA focuses more on exploiting firm-specific advantage from the PC than on exploring particularities from the host market. Based on the Levinthal and March (1993, p. 95) definition that learning is about dealing with the problem of "balancing the competing goals of developing new knowledge (i.e., exploring) and exploiting current competencies in the face of dynamic tendencies to emphasize one or the other", it can be argued that a high business relatedness indicates a bias towards/focuses more on exploiting learning from the PC, whereas a low business relatedness implies a bias towards/focuses more on explorative learning from the host market (cf. Schildt, Maula, and Keil 2005). As exploitative learning and explorative learning are different in learning cost (Pehrsson 2010), knowledge/competence transfer efficiency (Tang and Rowe 2012), and the PC's level of commitment (Sharma and Kesner 1996), MNC managers should have different expectations of the FA performance, and different levels of time tolerance in respect of a poorly-performing FA and its stay in the foreign market when a different level of business

relatedness is involved. When compared with running a highly parent-related FA, operating an FA which has a low level of business relatedness with its PC is a more difficult task. Considering the positive association between task complexity and completion time (Liu *et al.* 2013), a longer time to turn around a poorly-performing FA is expected, and also acceptable by the managers. Therefore, managers are likely to set a higher level of time tolerance for recovering poorly-performing FAs which is highly unrelated with the PC.

In addition, as learning involves two-way communication, the FA's business could also provide resources to the PC. A related poorly-performing FA should provide different values of resources for the PC from an unrelated poorly-performing FA (Lee and Madhavan 2010), which may also influence MNC managers' exit decision. Therefore, whether to exit a poorly-performing FA from the foreign country should be contingent on the different level of business relatedness.

### **Two types of relatedness**

Although the majority of past research focuses on only one dimension of business relatedness, managers' perceptions of relatedness are actually multidimensional (Pehrsson 2010). Therefore, it is essential to distinguish different types of business relatedness in order to generate more finely-grained theoretical and managerial insights. Tangible and intangible resources are the most frequently used categories of resource in the strategic management literature (Barney 2001), and tangible and intangible inter-relationships are the two most basic kinds of inter-relationships between business units (Davis *et al.* 1992; Porter 1995). Therefore, in this study we classify business relatedness as product relatedness (i.e., tangible

relatedness, see Sharma, 1996), and intangible resources relatedness. This classification is appropriate for our study of business relatedness because the two types of relatedness display distinct characteristics such as learning/duplication cost and ease of knowledge transfer (Galbreath 2005; Haanes and Fjeldstad 2000).

In general, the learning/duplication and knowledge transfer of intangible resources between two parties (e.g., FA and PC, FA and host foreign market) involves greater difficulty when compared with tangible product resources, because they are more embedded in organizations (Haanes and Fjeldstad 2000; Tanriverdi and Venkatraman 2005). The effective learning implies the successful combination of the PC's existing knowledge with the FA's new situation and then its subsequent embedding into the FA's practice in the foreign market (cf. Delios and Beamish 2001; Nonaka and Teece 2001). In this case, managers may have different expectations and tolerance times in respect of their FA performance. Therefore, MNC managers may respond differently to their poorly-performing business in foreign countries when different types of business relatedness are involved.

To sum up, a decision on the extent of business relatedness between the FA and PC represents two different motivations to learn, and different expectations of performance. In addition, product relatedness and intangible resources relatedness display different characteristics. This may influence MNC managers' learning expectations and tolerance time regarding the FA performance. We, therefore, argue that whether an MNC will exit its poorly-performing FA is not only contingent on the level of relatedness between the FA's business and its PC's core business (as stated above), but is also likely to be different for the type of business relatedness (i.e., intangible resources relatedness and product relatedness

between the FA's and PC's core business). The basic research framework of this study is shown in Figure 1.

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Insert Figure 1 about here  
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### **The FA's international performance and exit: boundary conditions**

The behavioral theory of the firm posits that with bounded rationality, firms usually aim at satisficing their result, and their organizational changes are largely influenced by the comparison between their levels of performance and managerial aspiration levels (Argote and Greve 2007). In this case, when performances remain above the aspiration level, firms are satisfied and tend not to initiate behavioral changes. Only when the performances fall below the aspiration level, are organizational changes more likely to occur (Argote and Greve 2007; Cyert and March 1963).

Whereas previous studies posit that an FA's poor performance is likely to trigger exit from the foreign market, this is an incomplete picture of foreign exit decisions (Song 2015). The negative relationship between the two may become different if we take the FA's decision on the level of business relatedness between the FA and its PC's core business into consideration.

Based on the Tang and Rowe (2012) framework, an FA operating in a foreign market involves an interplay of two types of learning: exploitative learning of the PC-specific advantage, and explorative learning of the host market particularities. If an FA's product is highly related to that of the PC, the FA is expected to focus more on exploiting learning from

the PC and less on explorative learning from the host market particularities (cf. Schildt *et al.* 2005). As exploitative learning is usually less difficult than explorative learning (March 1991), the FA should have less difficulty in effectively and efficiently achieving the learning objectives, because this mainly involves a direct transfer/duplication of the PC's existing product design, product technology, and after-sale services to the host foreign market (Özsomer and Genctürk 2003). Hence, MNC managers would expect the quick realization of good performance. Therefore, if a highly product-related FA yields poor performance in the foreign market, managers are likely to feel disappointed. In addition, under such circumstances, MNC managers may not have the confidence to turn the situation around, because the learning/knowledge transfer is relatively straightforward and, therefore, little room exists for them to improve the FA's international performance in this regard.

On the other hand, if an FA's product is highly unrelated to that of the PC, the FA is expected to focus more on explorative learning from the host market particularities and less on exploiting learning from the PC (see Schildt *et al.* 2005). In this case, the FA should encounter more difficulties in effectively and efficiently achieving the learning objectives, because this mainly involves firstly, a good understanding of the host foreign market particularities, and secondly, adopting different technology, designing a different product, and/or providing different after-sale services to match the host foreign market particularities and the FA's strategic decisions (Özsomer and Genctürk 2003; Tang and Rowe 2012). It is generally suggested that task difficulty has a positive impact on the completion time due to the need to seek more information (Liu *et al.* 2013). Hence, MNC managers are aware of possible difficulties and longer time in this explorative learning, and would not expect the

quick realization of good performance. Instead, they expect to achieve good performance in a longer time frame, because returns from exploration are systematically more uncertain and organizationally farther from the locus of change (March 1991). Therefore, when a highly product-unrelated FA generates poor performance, MNC managers may be more willing to keep its presence in the foreign market and give more time for it to improve in the future. Therefore, we expect that:

*Hypothesis 1: The negative relationship between an FA's international performance and its exit from the foreign market is strengthened by product relatedness between the FA and its PC's core business*

Similarly, if an FA's intangible resources are highly related to those of the PC, the FA is expected to focus more on learning from the PC than from the host market particularities (see Schildt *et al.* 2005). Unlike the learning of tangible product resources, which could be accomplished via direct transfer, the sharing and learning of intangible resources such as management skills from the PC is generally more difficult for an FA (Berry 2013; Pehrsson 2010). This is because the effective learning of intangible resources can only transpire when there is a successful combination of the existing knowledge of the PC with the FA's new situation, and this new knowledge combination is then applied within the FA's practice in the foreign market (cf. Delios and Beamish 2001; Nonaka and Teece 2001).

An FA therefore needs to first *search* for information about the environmental differences between home and host countries, use this information to *analyze* the possible barriers to the transfer of the PC's existing intangible resources to the FA in the new environment and select

an effective solution, then *document* the necessary modifications and new capabilities to be highlighted in the host country, and finally *practice* to capture the value of the modified intangible resources in the host country (see Lee *et al.* 2012). Namely, for each step of the group-level learning process of searching, processing, codifying, and practicing, the exploration of new knowledge/capabilities is the main input and focus (see Walter, Lechner, and Kellermanns 2016). In this sense, even when there is a high relatedness in terms of intangible resources between an FA and its PC's core business, considering the large amount of adaptation during the practice (Andreas 2007), the mode of learning and knowledge transfer is not mainly exploitative, but explorative. As for the low level of intangible resource relatedness with the PC, an FA needs to develop its own intangible resources based on the host market particularities and, therefore, the learning is largely exploratory. It is, therefore, reasonable to argue that explorative learning is more important for both low and high levels of intangible resources relatedness between an FA and its PC's core business.

When FA international performance is poor, for highly intangible resources-related FAs, MNC managers may not immediately exit the FA from the foreign market, because they are aware that a relatively long time is needed for the achievement of good performance. Specifically, they need to first extract the value from the PC's intangible resources such as management skills, technical skills, marketing skills, and administrative skills as intangible resources reside within individuals at the PC (cf. Sullivan 1998). Then they need to successfully transfer these intangible resources across borders (Kogut and Zander 1993) and apply them to a new competitive setting (Delios and Beamish 2001). In addition, managers tend to be confident that they could improve the future performance because they themselves



are very familiar with intangible resources, capabilities, and managerial experience (Berry 2013).

On the other hand, when the level of intangible resources relatedness between an FA and its PC's core business is very low, we argue that managers are more likely to exit a poorly-performing FA from the foreign market. Low intangible resources relatedness means that an FA needs to not only first have access to, and then extract the less accessible and imitable intangible resources from, the foreign market (Hoskisson and Hitt 1990; Nonaka and Teece 2001), but also adapt the learned intangible resources to its own situation (Tang and Rowe 2012). These combined difficulties may be very costly for MNC managers to handle. When an unrelated FA's international performance is poor, MNC managers may blame the FA's incapability to operate the business in the host country or the great external difficulties of running the business in the host country, neither of which attributed situations can be improved in a short time. More importantly, as the intangible resources relatedness between FAs and their parent companies is very low, managers tend not to be confident that they could improve the future performance in the near future because they themselves are very unfamiliar with intangible resources, capabilities, and managerial experience (Berry 2013). In this case, MNC managers' perceived probability of turning the business around in the near future will be very low, which makes MNC managers less motivated to try the business again (see Vroom 1964). They consequently become less patient, despite their strong motivation to learn about intangible resources and capabilities abroad. Therefore, we posit that:

*Hypothesis 2: The negative relationship between an FA's international performance and its exit from the foreign market is weakened by intangible resources relatedness between the FA and its PC's core business*

## **METHODOLOGY**

### **Sample and data sources**

The population consists of all the current and fully-exited Chinese outward foreign direct investment (OFDI) firms as at the end of March 2012. China provides an interesting setting to test our model because: (1) China's total outward FDI has skyrocketed over the last decade, going from a mere \$5.5 billion in 2004 to \$116 billion in 2014 (UNCTAD 2015); (2) China has become the world's third-largest investor (MOFCOM, 2013) and will become the world's biggest cross-border investor by 2020 (Anderlini 2015); (3) China has also taken the lead among the BRICS countries (Brazil, Russia, India, China and South Africa) in OFDI (UNCTAD 2014); (4) Chinese OFDI firms have been suffering from the highest failure rate all over the world (Hill 2012); and (5) studies demonstrate that a unique characteristic of Chinese OFDI firms is their stronger motivation for learning (Lu, Liu, and Wang 2011; Mathews 2006). Therefore, the decision on the relatedness between the PC and the FA should also reflect their motivation for learning, and whether the decision to exit from a foreign market will be influenced by the achievement of their motivational goals. In this sense, Chinese OFDI offers a particularly relevant research context.

In this study, a Chinese OFDI firm must be registered in mainland China and have investment in another economy (OECD 2008). The total population of OFDI firms in China in 2012 was 15,541. Our sampling frame accounts for approximately 80% of the population (12,420 firms) and is the complete list of OFDI firms in Zhejiang, Guangdong, Jiangsu, Shandong, Fujian, Shanghai, Liaoning, Tianjin, Hunan, Heilongjiang, Henan, and Beijing. These firms are in the top 12 provinces/municipal cities by number of OFDI firms, and are also representative of the whole population regarding firm characteristics, industrial characteristics, product characteristics, and governmental support. We then drew a geographic area 'province'-based stratified random sample of 1,000 firms from the sampling frame to ensure the representativeness of our final sample (Babbie 2012).

Data was collected through questionnaire survey. The suitability of the method is especially appropriate in our case of collecting our model-specific data as we need information about particular subsidiaries' strategies and performance, which can only be identified and offered by MNC managers. However, with cross-sectional survey data, there are possible threats (e.g., omitted variables, omitted selection, simultaneity) that could reduce the validity of any causal links identified between variables (Antonakis *et al.* 2010). Consequently, we made further efforts to mitigate such disadvantages as potential common method bias and endogeneity, which are discussed later.

Two respondents from each firm were asked to complete the questionnaire. The respondents were senior managers, one being well-informed in respect of the strategies and performance of the Chinese PC, and the other being responsible for the FA's business. The effective response rate of this study is 18% (180 firms), which denotes a fairly high response

rate even when compared with studies using only single informants (cf. Diamantopoulos and Kakkos 2007: 15.14%). The analysis of FDI in the sample is made for the period 1980-2012. The final sample firms were broadly spread across 18 Chinese industries, and of these, high-tech manufacturing, and low-tech manufacturing account for 18.3% and 26.7%, respectively. In terms of their locations, these firms were in Asia (58.3%), America (27.3%), Europe (8.9%), Africa (3.3%), and Oceania (2.2%). The majority (83.3%) of the host countries are developed countries. Regarding their ownership, 11.1% of the parent companies are state-owned and all the others are privately-owned. Greenfield investments account for 78.3% of the sample firms. On average, the Chinese parent companies have 22.3 years of operation in domestic business, 7,260 full-time employees, 11.4 years in international business, and 7.6 years in the specific foreign market. The majority (63.3%) of the Chinese parent companies have annual sales volumes of one billion Chinese Yuan and above.

Based on the assumption that non-respondents will be similar to late respondents, the tests for non-response bias were made by comparing the difference between the response of early and later respondents (Armstrong and Overton 1977), with regard to the means of all the non-nominal variables in the research model (Lages *et al.* 2008). No significant differences among these two groups were found, suggesting that response bias was not a significant problem in the study. In addition, an analysis was conducted to compare the demographic characteristics (e.g., year of establishment, locations, registered ownership of the PC, revenue, number of employees, and product/industrial coverage) between the 180 respondent firms and the 820 actual non-respondent firms. The results revealed that there were no significant differences between respondent firms and non-respondent firms.

To reduce the likelihood of common method bias we used multiple respondents. The use of multiple respondents is the most preferred data collection strategy for reducing common method variance (CMV) bias (Rindfleisch *et al.* 2008). In addition, measures for different constructs were collected from different sources (Rindfleisch *et al.* 2008). Specifically, the independent variables are self-reported by the respondents, whereas the data for the dependent variable (i.e., exit from a foreign market) were obtained from the officially published archive. Therefore, common method bias should not be an issue for this study.

## **Measurement**

### *Dependent variable*

The dependent variable *exit* is a binary variable representing the decision of an FA's exit from a foreign market. *Exit* takes a value of 1 if the FA exits the foreign market, otherwise it equals 0. In our dataset, 102 MNCs take a value of 0 and 78 MNCs take a value of 1.

### *Independent variables*

A firm's decision on whether to exit is a function of performance relative to a firm-specific threshold rather than economic performance (Gimeno *et al.* 1997), and the measure of performance should be based on the comparison with a threshold. Therefore, *International Performance* (Cronbach's  $\alpha = 0.90$ ) was measured as the overall satisfaction with an FA's international performance when compared with the performance of its major competitor. Following the suggestion that strategy researchers should use multidimensional measures for capturing relatedness, in this study *Product Relatedness* (Cronbach's  $\alpha = 0.76$ ) consists of

three items, and *Intangible Resources Relatedness* (Cronbach's  $\alpha = 0.95$ ) was measured by four items. These measurement items for *Product Relatedness* and *Intangible Resources Relatedness* are validated by previous studies (e.g., Pehrsson 2010; Pehrsson 2006) (see appendix for the measurement items).

### *Control variables*

Several variables that could threaten the accuracy of our model estimation are controlled in our study. Specifically, a foreign exit decision has frequently been shown to also be influenced by the *size of the parent company (PC Size)* (Delios and Beamish 2001), measured by the number of the employees in the foreign affiliate; *age of the parent company (PC Age)* (Engel, Procher, and Schmidt 2013), measured by the years since the time of establishment to 2011; *size of the foreign affiliate (FA Size)* (Dhanaraj and Beamish 2004), measured by the number of the employees in the foreign affiliate; *age of the foreign affiliate (FA Age)* (Dai *et al.* 2013), measured by the years since the time of entry to the time of exiting from the foreign market (or to 2011 if it was still in operation); *product life cycle stage (PLC Stage)* (Agarwal, Sarkar, and Echambadi 2002), taking the value of 1 if the product is at the introductory stage and zero otherwise; *PC Ownership* (Colombo and Delmastro 2000), coded as 1 if the *PC* is a state-owned enterprise and zero otherwise; *FA Industry* (Bercovitz and Mitchell 2007), consists of six categories: high-tech manufacturing, low-tech manufacturing, construction, agriculture, forestry, husbandry & fishery, mining & quarrying, and other services; *FA Ownership*, coded as 1 if the *PC* is wholly-owned and 0 otherwise; *PC International Experience* (Shaver *et al.* 1997), measured as the years of operation in

international market; *FA Establishment Method* (Li 1995), a dummy variable with the value of 1 if the FA is established via Greenfield and 0 otherwise; *Political Freedom* in the foreign market, measured as the ratings of political rights in a country from the Freedom of the World Survey (Soule *et al.* 2014); *Economic Stage* of the foreign market, a dummy variable taking the value of 1 if the foreign country is classified as a developed country by the World Bank and zero otherwise (Geroski, Mata, and Portugal 2010); *Cultural Distance* (Pattnaik and Lee 2014), measured as the Euclidean distance index based on the six dimensions of Hofstede, Hofstede, and Minkov (2010); *Market Turbulence* in the foreign market (Bergh and Lawless 1998), measured by the four items from Sethi and Iqbal (2008); and *Organization Slack* of the PC (Harris and Li 2011), measured by the four items used in Tan and Peng (2003) (see the appendix).

### **Assumptions tests, scale validity, and reliability**

The basic assumptions of multivariate analysis, including normality, homoscedasticity, linearity, independent errors, and multi-collinearity were first tested and the results suggest that all the assumptions are well met. To avoid collinearity between interaction terms, mean-centered z-standardizing values were used (Dawson 2014). For the two-way interactions, we first calculated the centered value of international performance and the two types of innovation capabilities. Then the centered value of international performance was multiplied by that of incremental innovation capability and radical innovation capability, respectively. In addition, VIFs of models with and without the interaction terms and their components have an average of less than 2 and the maximum is 4.29, well below the

established guidelines (Slangen 2013). To assess measurement reliability and validity, we conduct a confirmatory factor analysis that included all multi-item scales in Amos 20. As the Appendix shows, after the purification process, the CFA model indicates a close fit to the data (goodness-of-fit index = 0.90; comparative fit index [CFI] = 0.90; root mean square error of approximation [RMSEA] = 0.07). All scale reliabilities meet the threshold of 0.70 (Nunnally 1978), and the average variance extracted (AVE) values range from 0.61 to 0.84, well above the threshold of 0.50 (Bagozzi and Yi 1988). Overall, the results indicated the strong reliability and convergent validity of our measures. Moreover, we assessed discriminant validity using the Fornell and Larcker (1981) criterion that the AVE should exceed the squared correlations between all pairs of constructs. All measures for which an AVE was available meet this criterion (see Table 1).

### **Estimation method**

To aggregate the data from multiple informants, a knowledgeability weighted mean has been used in the current study, because it always performs best when compared with other alternatives such as unweighted group mean and response-data weighted mean (Van Bruggen, Lilien, and Kacker 2002; Wagner, Rau, and Lindemann 2010). Specifically, in the questionnaire respondents were asked to indicate their knowledgeability on an 11-point Likert scale about the PC's strategies, the PC's performance, the foreign affiliate's strategies, and the foreign affiliate's performance, respectively. The formula is adapted from Van Bruggen *et al.* (2002), as follows:



$$WKMEAN_{xi} = \sum_{j=1}^{n_i} \left[ \frac{KNOW_{x_{ij}}^{\alpha}}{\sum_{j=1}^{n_i} KNOW_{x_{ij}}^{\alpha}} \times X_{ij} \right]$$

where  $WKMEAN_{xi}$  denotes the value of variable  $X$  for group  $i$  in which informant  $j$ 's response is weighted by his or her knowledgeability  $KNOW_{x_{ij}}$ ,  $n_i$  is number of informants in group  $i$ ,  $X_{ij}$  is the response for the value of variable  $X$  by informant  $j$  in group  $i$ , and  $\alpha$  is a parameter which allows the researcher to manipulate the weight assigned to responses from more knowledgeable informants (in this study  $\alpha$  was set as the reference value of 1).

Binary Logistics regression was used to test our hypotheses because the dependent variable in the model was binary<sup>1</sup>. The model involved interaction effects, and therefore, the variables were previously mean-centered (Aiken, West, and Reno 1991). Additionally, in order to generate robust results, we used all possible cross products of the existing indicators as indicators of the two latent interaction factors in our model (Kenny and Judd 1984; Marsh, Wen, and Hau 2004). Moreover, to allow for a simultaneous comparison of different models, hierarchical regression analysis was used.

A potential concern for the empirical analysis is that FA performance may be endogeneous, thereby resulting in biased estimation of parameters (Jean *et al.* 2016). To address the issue of endogeneity, the instrument variable (IV) approach is used (Baum 2006). Marketing capabilities are suggested to be among the most important factors that directly influence FA performance (Morgan, Vorhies, and Mason 2009), but usually do not have a direct impact on its exit (Kolev 2016). Therefore, we chose two of the marketing capabilities *promotion capability* and *distribution capabilities* as our two IVs. We also ran diagnostic tests to ensure

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<sup>1</sup> As a robustness check, we conducted the probit regression and the results show no significant difference.

the appropriateness of the IVs: (1) the two IVs are highly related to performance ( $r = 0.30$  and  $0.34$ , respectively) but not significantly related to exit ( $r = -0.01$  and  $-0.11$ , respectively); (2) the two IVs are jointly statistically significant ( $F = 12.4$ ,  $p < 0.01$ ); (3) the Hausman test result cannot reject the hypothesis that performance is exogenous (Chi-square =  $1.11$ ,  $p > 0.10$ ). Therefore, we employ the binary logistic regression to yield unbiased estimates.

## RESULTS

Table 1 reports means, standard deviations, and correlations of all the variables in the model, based on the data from both the parent companies and the foreign affiliates of the 180 multinationals.

\*\*\*\*\*  
Insert Table 1 about here  
\*\*\*\*\*

The results of the three different binary logistic regressions models are reported in Table 2. Model 1 contains only the eight control variables. Model 2 adds FA international performance, product relatedness, and intangible resources relatedness, all of which are significant. The final model (Model 3) adds the two interactions: (1) the interaction between FA international performance and product relatedness, and (2) the interaction between FA international performance and intangible resources relatedness. Both of the interaction effects are statistically significant.

Based on the Likelihood Ratio Chi-square, all the three models are statistically significant and fit the data well. In addition, the Pseudo R<sup>2</sup> shows that Model 3 explains the largest amount of variance (Pseudo R<sup>2</sup> = 0.35).

\*\*\*\*\*  
Insert Table 2 about here  
\*\*\*\*\*

The results of Model 3 suggest that the higher the FA's international performance in a foreign market, the less likely the firm will exit from the foreign market ( $B = -1.66, p < 0.01$ ). H1 predicted that product relatedness would strengthen the negative relationship between an FA's international performance and its exit from the foreign market. The results of Model 3 confirm this prediction, as the coefficient for this interaction is significant and negative ( $B = -0.95, p < 0.05$ ). Further evidence is provided in Figure 2 (Figure 2A), which shows that a significant negative relationship between an FA's international performance and its exit from the foreign market holds for both high and low levels of product relatedness. However, the negative impact of an FA's international performance on its exit from the foreign market is stronger for a high level of product relatedness (simple slope:  $b = -2.45, t = -3.92, p < 0.01$ ) than for a low level of product relatedness (simple slope:  $b = -0.87, t = -2.15, p < 0.05$ ).

\*\*\*\*\*  
Insert Figure 2 about here  
\*\*\*\*\*

Model 3 shows that intangible resources relatedness would attenuate the negative relationship between an FA's international performance and its exit from the foreign market ( $B = 1.04, p < 0.05$ ), therefore supporting H2. Further evidence is provided in Figure 2

(Figure 2B), although a significant negative relationship between an FA's international performance and its exit from the foreign market holds for both high and low levels of intangible resources relatedness. This negative impact is stronger for a low level of intangible resources relatedness (simple slope:  $b = -2.44$ ,  $t = -3.58$ ,  $p < 0.01$ ) than for a high level of intangible resources relatedness (simple slope:  $b = -0.88$ ,  $t = -2.19$ ,  $p < 0.05$ ).

In terms of the control variables, product life cycle stage, PC's ownership, FA establishment, cultural distance, and market turbulence have a positive impact on the likelihood of exit. International experience, political freedom, and organizational slack were found to have a negative influence on the likelihood of exit. All the other control variables show no significant association with the exit decision.

## **DISCUSSION AND IMPLICATIONS**

### **Discussion and theoretical implications**

Our results reveal several important findings. First, an FA's international performance is strongly and negatively associated with its exit from a foreign market (Table 2). Studies show that one of the distinct but important motivations for emerging OFDI firms is learning (Deng 2004; Luo and Tung 2007; Mathews 2006); hence one may postulate that MNC managers may not exit a poorly performing FA due to the learning motivation. Namely, the negative relationship between the FA's international performance and its exit from a foreign market may not hold in an emerging OFDI context. Our finding indicates that for Chinese OFDI firms, FA international performance is still one of the most important predictors of the FA's

exit from a foreign market. Therefore, this study extends the external validity of the negative performance-exit relationship from developed OFDI firms to emerging OFDI firms, consequently pushing the research on MNCs' exit behavior a step further.

Secondly, our study theoretically argues and empirically demonstrates that emerging market MNC managers are more likely to exit a poorly-performing FA if there is a high (versus low) level of product relatedness between the FA and its PC's core business. This is a novel finding since the moderating impact of business relatedness has not yet been investigated in the context of a firm's exit decision. Moreover, this finding is different from previous studies where business relatedness is found to have a direct and negative influence on an FA's exit (e.g., Berry 2013; Davidson and McFetridge 1984; Shaver and Flyer 2000). One possible explanation is that rather different measures of relatedness are used in different studies, and each captures a different aspect. For example, Benito (1997) used a dummy variable distinguishing between related (i.e., horizontally-linked) subsidiaries and unrelated (i.e., vertical and conglomerate) subsidiaries, while Berry (2013) and Li (1995) respectively used a dummy based on whether or not a subsidiary was in the same three and four digit SIC code as the PC's core business. As the multiple items approach taken in this study is both different and more finely-grained, this could explain the seemingly divergent results. Another explanation is that previous studies mainly focus on developed OFDI firms, for which the purpose of doing any business (either highly related or highly unrelated product) abroad is mainly to exploit the PC's existing knowledge and skills for good performance in the less developed countries, and not to learn from them. In an emerging OFDI context such as China, however, although it is still more difficult to turn a product-unrelated business around, MNC

managers may be less willing to exit it because managers usually have a higher level of time tolerance for completing a more difficult task, and also because learning is another important motivation for their remaining in the foreign market (Lu *et al.* 2011). Therefore, our empirical finding indicates that learning is indeed a distinct motivation for emerging OFDI and thus provides some support for the Luo and Tung (2007) springboard perspective and the Mathews (2006) linkage-leverage-learning (LLL) perspective.

Thirdly, our research shows that intangible resources relatedness exerts a different contingent effect on the FA performance-FA exit relationship from product relatedness. Many researchers have long acknowledged that intangible resources are more difficult to gain and imitate, and therefore are more valuable for creating sustainable competitive advantage (e.g., Delios and Beamish 2001). However, few studies have explored how emerging MNCs treat the different role of intangible resources relatedness differently from product relatedness in the face of an exit decision. As such, our finding provides a deeper understanding of the contingent role of business relatedness in MNCs' exit decisions. This also confirms recent arguments that business relatedness should be considered as a contingent factor in strategic management studies (e.g., Berry 2013; Fang *et al.* 2013; Keil *et al.* 2008). Business relatedness was previously treated as a predictor of exit decision and the role of different types of business relatedness (i.e., product relatedness and intangible resources relatedness) was not differentiated (e.g., Davidson and McFetridge 1984; Duhaime and Grant 1984). Therefore, by demonstrating the differential role of business relatedness on the FA performance-FA exit decision relationship, our study advances research on the role of business relatedness in the strategic management and international exit areas.

## **Managerial implications**

Our findings also have important managerial implications. Firstly, our study shows that despite the possible learning motivations of emerging MNCs, performance may still function as the most important trigger of an FA's exit from a foreign market. Although many emerging MNCs claim that learning is one important motivation for their going global, good performance remains as PC's unchanged expectation of their FAs. In this case, FA managers should be aware of the simple fact that good performance is always the fundamental reason for their presence in a foreign market.

Secondly, further to the first point, our study also indicates that FA managers should be aware that keeping a high level of product relatedness does not secure its position in the foreign market. Instead, for a highly product-related FA, the quick realization of good performance via effective exploitative learning from the PC (i.e., application of existing knowledge in the foreign market) is highly expected. Otherwise, the FA is likely to be quickly exited. For a highly product-unrelated FA, the PC's tolerance time in respect of poor performance may be longer, due to the learning motivation behind a decision to establish a highly unrelated product. Therefore, when a product-unrelated FA yields poor performance, FA managers' positive demonstration of great progress in effective learning from the foreign market may be essential to the FA's continuing stay in that market.

Thirdly, our study shows that in the presence of poor FA performance, MNC managers are more likely to exit an FA when the level of intangible resources relatedness between the FA and the PC's core business is very high (versus low), due to the expected large difficulty in

turning the business around. This demonstrates that it is a great challenge to manage a foreign business which does not share intangible resources such as management knowledge, skills and experience with its PC's core business. This also reflects the fact that Chinese MNCs do not have much tolerance time for a poorly-performing and highly intangible resources-related FA business, despite their claimed learning motivation. Therefore, emerging MNC managers should think twice when making entry decisions on the relatedness of the intangible resources. Specifically, before MNC managers decide to establish a highly unrelated FA, they need to slightly overestimate the upcoming combined difficulties in managing such business in a foreign market and judge whether they are able to overcome all the difficulties in their tolerance time. Otherwise, they need to prolong their tolerance time or give up the entry decision. This is insightful for many Chinese OFDI firms, especially those MNCs which are planning to gain advanced managerial knowledge and experience from a foreign market via a merger or acquisition.

### **Limitations and future research**

This study has a few limitations, which set the directions for future research. Firstly, our sample is focused on Chinese OFDI firms, and any extension of our research findings to a larger research context should be made with caution. Therefore, future studies may test our model in a different emerging MNC context to check whether our research findings have favorable external validity. Secondly, although our sample size is comparable to that used in previous studies which also used multiple respondents (e.g., Glick *et al.* 1990), caution should also be exercised in interpreting test results and drawing conclusions. Therefore,



future research based on a larger sample size is recommended in order to increase the statistical power of the research findings. Thirdly, with cross-sectional survey data, we can only take a snapshot of our model and cannot explain the dynamic processes of how performance and relatedness interactively influence the exit decision process. Relatedly, ex-post rationalization bias could be a concern due to the use of strategic-level managers' retrospective reports on performance. Therefore, future research may use longitudinal data and objective performance data to better capture the dynamism of the exit decision. Fourthly, while the focus of this study is on the differential contingent effects of two types of business relatedness (i.e., product relatedness and intangible resources relatedness) on the FA performance-FA exit relationship, in the future the model could be expanded to include other relevant moderators such as escalation of commitment and environmental uncertainty. Moreover, while acquisitions have received more attention in the international business literature, in this study Chinese MNC favor greenfield investments over other modes of expansion. Future studies are therefore encouraged to focus more on this entry mode. For instance, it would be interesting to examine if greenfields and acquisitions are managed in the same way when the MNC is facing an exit decision. Finally, by pointing out the impact of business relatedness to explain the firm's exit decision, this study emphasizes the importance of business relatedness in the strategic management and international exit areas. It is hoped that this study will contribute to a better understanding of this topic and will stimulate further research in this area.

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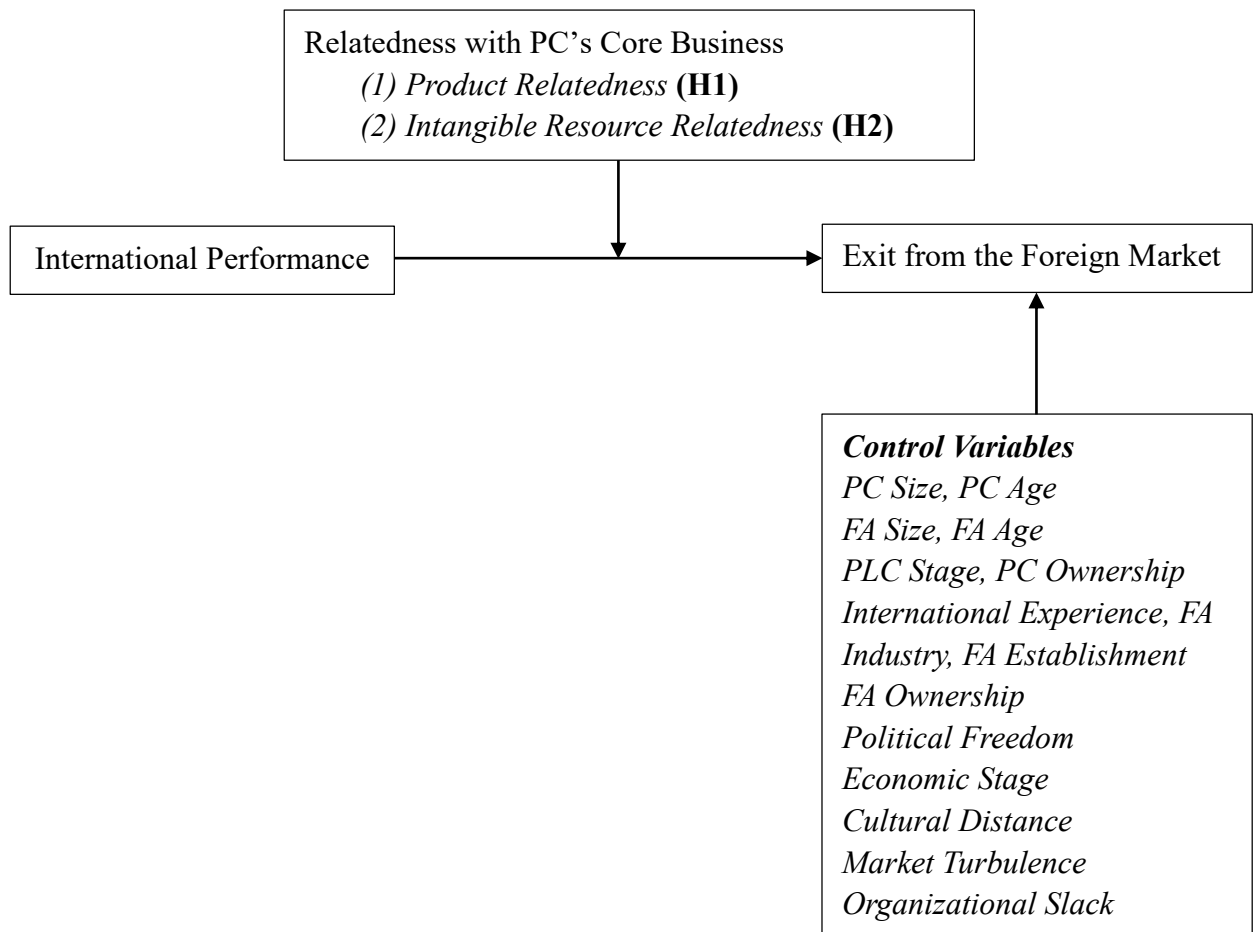
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**Figure 1. Research Framework**



**Figure 2. Moderating Effects**

Figure 2A: Moderating Effect of Product Relatedness on the Relationship between International Performance and Exit from the Foreign Market (H1)

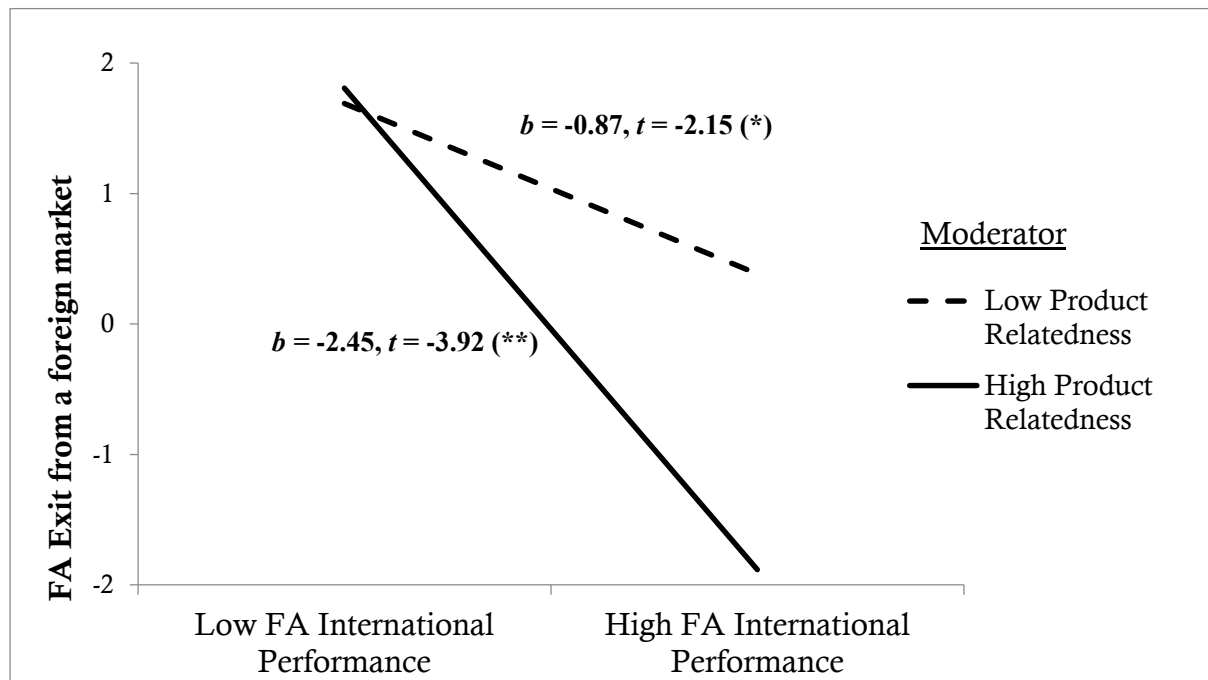
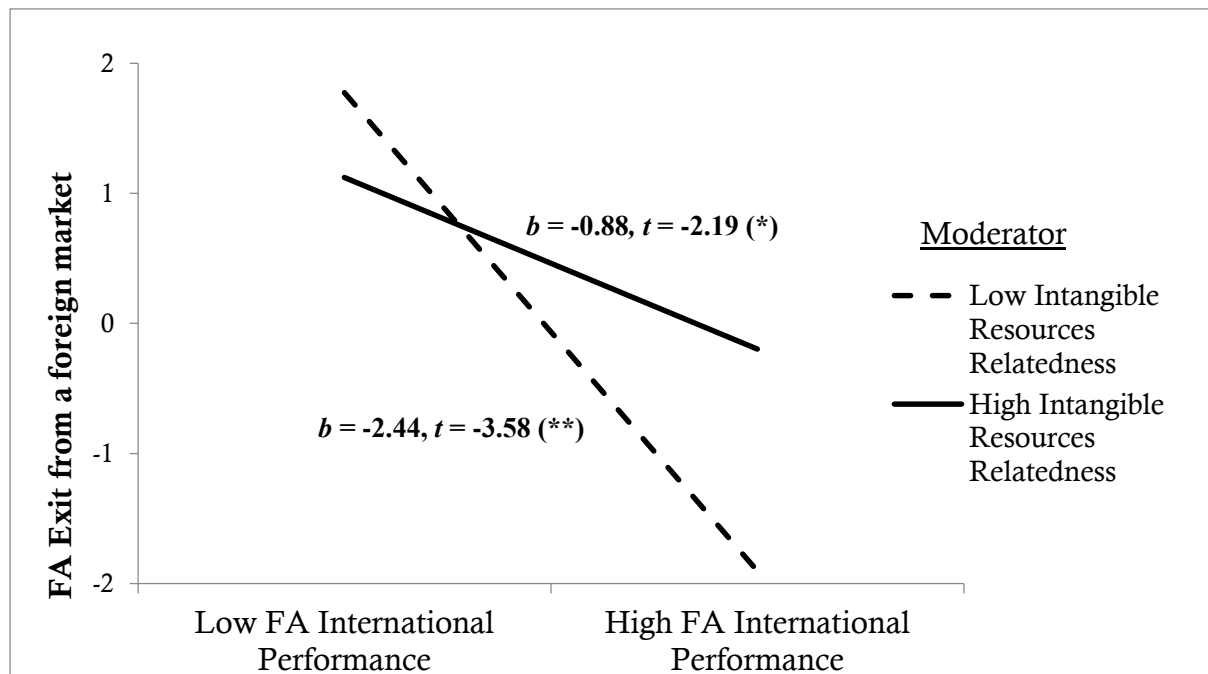


Figure 2B: Moderating Effect of Intangible Resources Relatedness on the Relationship between International Performance and Exit from the Foreign Market (H2)



Notes: Near each line are the simple slope and the corresponding *t*-value. (\*) and (\*\*) mean that the slope is statistically significant at 0.05 level and 0.01 level, respectively.

**Table 1.** Descriptive Statistics and Correlation Matrix (n=180)

	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
1. <i>PC Size<sup>l</sup></i>	3.09	0.83	1.00																						
2. <i>PC Age<sup>l</sup></i>	1.26	0.28	0.36**	1.00																					
3. <i>FA Size<sup>l</sup></i>	1.73	0.56	0.44**	0.28**	1.00																				
4. <i>FA Age</i>	7.57	5.39	0.19**	0.54**	0.25**	1.00																			
5. <i>PLC Stage: Introduction</i>	0.06	0.24	-0.17*	-0.30**	-0.22**	-0.27**	1.00																		
6. <i>PC Ownership: SOEs</i>	0.11	0.32	0.03	0.16*	-0.12	0.14	0.13	1.00																	
7. <i>International Experience<sup>l</sup></i>	1.02	0.27	0.25**	0.64**	0.26**	0.69**	-0.43**	0.08	1.00																
8. <i>FA Industry: High-tech manufacturing</i>	0.18	0.39	0.08	0.06	0.02	0.01	-0.06	0.02	0.09	1.00															
9. <i>Low-tech manufacturing</i>	0.27	0.44	-0.05	0.07	-0.11	0.07	-0.05	-0.09	0.07	-0.29**	1.00														
10. <i>Construction</i>	0.07	0.25	0.06	0.12	0.12	0.14	-0.07	0.26**	0.04	-0.13	-0.16*	1.00													
11. <i>Agriculture, forestry, husbandry &amp; fishery</i>	0.06	0.24	-0.13	-0.11	-0.09	-0.11	0.23**	0.06	-0.14	-0.12	-0.15*	-0.07	1.00												
12. <i>Mining &amp; Quarrying</i>	0.04	0.19	-0.01	-0.16*	-0.11	-0.05	0.07	0.11	-0.10	-0.10	-0.12	-0.05	-0.05	1.00											
13. <i>Other services</i>	0.38	0.26	-0.06	-0.12	-0.07	-0.05	0.02	0.04	-0.11	-0.13	-0.17*	-0.07	-0.07	-0.06	1.00										
14. <i>FA Establishment: Greenfield</i>	0.78	0.41	0.00	-0.10	-0.12	0.05	-0.09	-0.07	-0.02	-0.10	-0.05	0.03	0.02	-0.10	0.15*	1.00									
15. <i>FA Ownership: Wholly-owned</i>	0.85	0.36	0.06	-0.06	-0.03	0.01	-0.15*	-0.10	-0.05	-0.04	-0.03	-0.01	-0.02	-0.16*	0.12	0.80**	1.00								
16. <i>Political Freedom</i>	4.16	2.65	0.09	-0.02	-0.10	0.00	0.02	-0.04	-0.02	0.06	0.14	-0.14	-0.02	-0.14	0.00	-0.12	-0.01	1.00							
17. <i>Economic Stage: Developed</i>	0.83	0.37	0.01	0.00	-0.11	0.00	-0.01	-0.08	0.02	0.02	0.00	-0.06	-0.01	-0.22**	0.01	-0.09	-0.02	0.23**	1.00						
18. <i>Cultural Distance<sup>l</sup></i>	1.76	0.34	0.01	-0.14	-0.31**	-0.11	0.07	-0.09	-0.03	0.08	0.12	-0.22**	0.03	0.05	-0.12	-0.07	0.00	0.65**	-0.03	1.00					
19. <i>Market Turbulence</i>	3.58	0.81	0.08	0.19*	0.13	0.20**	-0.23**	-0.11	0.16*	-0.06	0.10	0.04	-0.15*	0.01	0.00	-0.05	0.04	0.01	-0.02	-0.02	1.00				
20. <i>Organizational Slack</i>	3.85	0.84	0.00	-0.06	-0.02	-0.07	-0.08	0.02	-0.03	0.02	-0.15*	0.06	-0.16*	0.04	0.07	0.05	0.03	-0.09	-0.03	-0.01	-0.02	1.00			
21. <i>Product Relatedness</i>	3.87	0.82	0.06	0.05	0.04	0.08	-0.03	0.03	0.06	0.05	0.11	0.06	-0.02	-0.08	-0.03	0.00	0.03	0.02	0.01	-0.05	0.04	0.32**	1.00		
22. <i>Intangible Resources Relatedness</i>	3.81	0.79	0.00	0.04	0.00	0.05	0.02	-0.01	0.01	-0.03	0.09	0.06	0.04	-0.14	-0.12	-0.07	-0.06	-0.02	0.10	-0.07	0.02	0.15*	0.33**	1.00	
23. <i>International Performance</i>	3.10	0.72	0.09	0.22**	0.14	0.03	-0.21**	0.04	0.17*	0.04	0.08	0.02	0.04	-0.09	-0.07	-0.04	-0.03	-0.16*	0.02	-0.14	-0.03	0.22**	0.19*	0.01	1.00
24. <i>Exit</i>	0.43	0.50	0.10	0.05	-0.03	0.18*	-0.18*	0.05	0.14	0.02	0.11	-0.01	-0.08	0.00	-0.03	-0.11	-0.04	0.02	0.03	0.12	0.30	-0.22**	-0.17*	0.05	-0.29**

<sup>l</sup>Variable takes its logarithmic value.

Variables in italic are control variables; \* $p < 0.05$  (two-tailed test); \*\* $p < 0.01$  (two-tailed test).

**Table 2.**

Binary logistic regression coefficients and marginal effects of model testing (Dependent variable: Exit; Number of observations: 180)

Variables	Model 1		Model 2		Model 3	
	Coefficient	Marginal Effect	Coefficient	Marginal Effect	Coefficient	Marginal Effect
	B	dy/dx	B	dy/dx	B	dy/dx
<i>PC Size</i>	0.01	0.00	0.03	0.01	0.02	0.00
<i>PC Age</i>	-0.02	-0.01	-0.02	0.00	-0.02	0.00
<i>FA Size</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>FA Age</i>	0.11*	0.03*	0.12 <sup>†</sup>	0.03 <sup>†</sup>	0.12 <sup>†</sup>	0.03 <sup>†</sup>
<i>PLC Stage: Introduction</i>	2.69*	0.36**	4.00**	0.38**	4.44**	0.36**
<i>PC Ownership: SOEs</i>	-1.08	-0.26	-1.48 <sup>†</sup>	-0.35*	-1.58*	-0.37*
<i>International Experience</i>	-0.04	-0.01	-0.03	-0.01	0.00	0.00
<i>FA Industry: High-tech manufacturing</i>	-0.14	-0.03	-0.60	-0.14	-0.47	-0.10
<i>Low-tech manufacturing</i>	-0.16	-0.04	-0.83	-0.19	-0.58	-0.13
<i>Construction</i>	0.30	0.07	0.17	0.04	0.32	0.06
<i>Agriculture, forestry, husbandry &amp; fishery</i>	0.55	0.12	-0.47	-0.11	-0.60	-0.14
<i>Mining &amp; quarrying</i>	0.98	0.19	1.34	0.22 <sup>†</sup>	1.42	0.21*
<i>Other services</i>	-0.21	-0.05	-0.47	-0.11	-0.64	-0.15
<i>FA Establishment: Greenfield</i>	1.38 <sup>†</sup>	0.33 <sup>†</sup>	1.68 <sup>†</sup>	0.39*	1.98*	0.45*
<i>FA Ownership: Wholly-owned</i>	-0.60	-0.13	-0.61	-0.12	-0.81	-0.15
<i>Political Freedom</i>	-0.23 <sup>†</sup>	-0.05 <sup>†</sup>	-0.39*	-0.09*	-0.39*	-0.08*
<i>Economic Stage: Developed</i>	-0.13	-0.03	-0.22	-0.05	-0.10	-0.02
<i>Cultural Distance</i>	0.02	0.00	0.03*	0.01*	0.03**	0.01*
<i>Market Turbulence</i>	0.85**	0.20**	0.97**	0.22**	0.92**	0.19**
<i>Organizational Slack</i>	-0.79**	-0.18**	-0.49 <sup>†</sup>	-0.11 <sup>†</sup>	-0.55*	-0.12 <sup>†</sup>
FA's International Performance			-1.38**	-0.31**	-1.66**	-0.35**
Intangible Resources Relatedness			-0.60*	-0.13*	-0.65*	-0.14*
Product Relatedness			0.30	0.07	0.35	0.07
FA's International Performance * Product Relatedness (H1)					-0.95*	-0.20*
FA's International Performance * Intangible Resources Relatedness (H2)					1.04*	0.22*
Constant	-3.43		0.75		-5.45 <sup>†</sup>	
Log Likelihood		-98.07		-83.88		-80.48
Likelihood Ratio Chi-square		50.18** (20)		78.55** (23)		85.36** (25)
Pseudo R <sup>2</sup>		0.21		0.32		0.35
Max. VIF (Mean VIF)		3.95 (1.84)		4.26 (1.84)		4.29 (1.85)

Note: Marginal effect is for discrete change of the dummy variable from 0 to 1; <sup>†</sup>  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$  (two-tailed test).

## Appendix: Construct Measurement and CFA Results

Construct	Standardized Loadings	t-Value
<b>FA International Performance (<math>\alpha^1= 0.90</math>; <math>CR^2= 0.93</math>; <math>AVE^3= 0.76</math>)</b>		
<i>Anchored by '1-Not at all satisfactory' '3-Neither satisfactory nor dissatisfactory', and '5-Extremely satisfactory'; Source: Lages et al. (2008)</i>		
1. Sales volume;	0.89	9.34
2. Sales revenue <sup>4</sup> ;		
3. Profitability rate;	0.85	7.92
4. Market share;	0.73	5.48
5. Overall performance <sup>5</sup> .	0.99	-
<b>Product Relatedness (<math>\alpha= 0.76</math>; <math>CR= 0.76</math>; <math>AVE= 0.61</math>)</b>		
<i>Anchored by "1-Very different" and "5-Very similar"; Source: Pehrsson (2010); Pehrsson (2006)</i>		
1. Product technology <sup>5</sup>	0.75	-
2. Product design <sup>4</sup>		
3. After-sale services	0.81	4.12
<b>Intangible Resource Relatedness (<math>\alpha= 0.95</math>; <math>CR= 0.96</math>; <math>AVE= 0.84</math>)</b>		
<i>Anchored by "1-Very different" and "5-Very similar"; Source: Pehrsson (2010); Pehrsson (2006)</i>		
1. Management skills	0.88	7.57
2. Technical skills	0.89	7.74
3. Marketing skills	0.98	10.60
4. Administrative skills <sup>5</sup>	0.91	-
<b>Market Turbulence (<math>\alpha= 0.88</math>; <math>CR= 0.88</math>; <math>AVE= 0.65</math>)</b>		
<i>Anchored by "1-Strongly disagree", "3-Neither agree nor disagree", and "5-Strongly agree"; Source: Sethi and Iqbal (2008)</i>		
1. It is very difficult to predict how customers' needs and requirements will evolve in our markets;	0.70	4.03
2. It is difficult to forecast competitive actions;	0.85	5.32
3. There is a great deal of uncertainty in our markets;	0.82	5.02
4. Generally, it is difficult to understand how the market will change <sup>5</sup> .	0.86	-
<b>Organizational Slack (<math>\alpha= 0.87</math>; <math>CR= 0.87</math>; <math>AVE= 0.64</math>)</b>		
<i>anchored by "1-Strongly disagree", "3-Neither agree nor disagree", and "5-Strongly agree"; Source: Tan and Peng (2003)</i>		
1. The headquarters had been operating below engineered capacity <sup>5</sup> ;	0.70	-
2. The headquarters' retained earnings have been sufficient for market expansion;	0.72	3.55
3. The headquarters had a pool of financial resources that can be used on a discretionary basis;	0.95	4.41
4. The headquarters was able to secure necessary bank loans.	0.81	3.98
<b>Model Fit Indices: (CFI= 0.90; TLI= 0.90; RMSEA= 0.07)</b>		

### Note:

<sup>1</sup> Cronbach's Alpha, a coefficient of internal consistency

<sup>2</sup> Composite Reliability

<sup>3</sup> Average Variance Extracted.

<sup>4</sup> Item is excluded as a result of scale purification procedures.

<sup>5</sup> Item is fixed to set the scale.