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RESEARCH NOTE

The pace of MNEs' sequential entries: Cumulative entry experience and the dynamic process

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Abstract
This study examines the pace with which multinational enterprises undertake sequential entries in a foreign market. We focus on learning effects from cumulative entry experience of different modes within a host market. Moreover, we investigate the dynamic process of entry mode switch, and how cumulative entry experience reduces the expansion constraint. Using a dataset of sequential entries by US firms in China during 1979–2002, we find that the impact of cumulative entry experience on the pace of sequential entries varies across different modes. Further, firms with more cumulative entry experience can cope with the constraint of entry mode switch.
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Keywords: pace of sequential entries; learning; cumulative entry experience; mode switch

INTRODUCTION

How multinational enterprises (MNEs) expand overseas operations has long been an important issue. MNEs have strong motivations to expand business quickly in foreign markets to reap the possible benefits from the exploitation of firm-specific advantage and the exploration of new knowledge (Madhok, 1997). Prior studies have reported MNEs' accelerated pace of expansion in the context of global competition, further reinforcing the importance of understanding the pace of international market entries (Barkema, Baum, & Mannix, 2002). Although the literature implicitly suggests that firms' optimal pace of expansion keeps constant, the recent study by Nadolska and Barkema (2007) shows that firms often develop cognitive routines through learning, and eventually can increase the pace of expansion. As firms can learn from multiple sources and different types of experience (Chang & Rosenzweig, 2001; Huber, 1991), it is imperative to investigate the dynamic process of foreign market entry and the impact of different types of experience on the pace of international expansion. A growing stream of research has examined firms' sequential entry activities in foreign markets by adopting a process-based view on the evolutionary pattern of entries (Chang, 1995; Chang & Rosenzweig, 2001; Delios & Henisz, 2003a, 2003b; Guillén, 2002, 2003; Kogut & Chang, 1996). Yet little research has been

devoted to the pace and dynamics of firms' sequential entries. Moreover, previous studies have called for the inclusion of non-equity-based modes to examine the whole establishment chain in foreign markets and thus provide a more complete picture of the sequential entry process of MNEs (Delios & Henisz, 2003a; Nadolska & Barkema, 2007).

In this research note we focus on MNEs' foreign market expansion activities. Specifically, we address two major questions:

(1) Does learning from cumulative entry experience in a host market affect the pace of MNEs' sequential entries?
(2) Can MNEs with more cumulative entry experience reduce constraints of expansion?

First, we examine different types of cumulative entry experience, and test the impact on the pace of sequential entries. To address uncertainty and constraints in foreign markets, firms need to acquire and accumulate knowledge (Johanson & Vahlne, 1977, 1990). Learning from firms' own experience is a major source to accumulate knowledge in foreign markets (Chang, 1995; Johanson & Vahlne, 1977). We examine three types of cumulative entry experience: contractual arrangement experience, equity joint venture experience, and wholly owned subsidiary experience. Thus we can test the specific effects of different types of cumulative entry experience more accurately. Second, we address the dynamic process of MNEs' within-market expansion, which has been largely neglected in the literature. During the sequence of entries in a foreign market, MNEs can experience entry mode switch after initial entries. We investigate the dynamic changes of entry mode switch within the host market, and explore how learning from cumulative entry experience helps firms conquer expansion constraints during the process of sequential entries.

THEORY AND HYPOTHESES

MNEs enjoy a monopolistic advantage through possessing proprietary resources and skills, and their subsidiaries can be efficient agents for transferring knowledge across borders. Previous studies have indicated that, beyond the exploitation of firm-specific advantage, international operations provide considerable benefits through exploring new knowledge and acquiring strategic assets (Barkema & Vermeulen, 1998; March, 1991). Moreover, the speed with which MNEs expand their operations can directly relate to whether they can take the growth opportunities and enhance profitability in foreign markets. Therefore, the pace of MNEs' sequential entries is of critical importance in today's global competition. However, international expansion is not without costs. Firms face liability of foreignness, as well as a high level of uncertainty that stems from the general costs of doing business overseas, and different cultural and institutional settings (Zaheer, 1995). Furthermore, firms possess limited absorptive ability to recognize, assimilate, and apply external information (Cohen & Levinthal, 1990); consequently, their ability to implement new foreign entries is limited at a given point of time (Vermeulen & Barkema, 2002). Thus MNEs face significant expansion constraints in foreign markets.

Learning in foreign markets enables firms to obtain the knowledge needed to engage in faster market expansion. Researchers generally regard organizational learning as a process of developing new knowledge or insights that influence organization behavior (Fiol & Lyles, 1985; Sinkula, 1994). Firms can develop and expand their routines based on past experience, and apply successful ones in new situations (Levitt & March, 1988). Firms learn from different sources, among which learning from their own experience represents the major process to accumulate knowledge (Huber, 1991). The learning-by-doing process plays an especially salient role for firms' expansion activities in foreign markets, because of limited information and high levels of uncertainty (Johanson & Vahlne, 1977, 1990). Firms' international expansion is inhibited by their lack of knowledge about foreign markets. Active learning is essential for accumulating knowledge about foreign markets, and experiential learning plays a central role in building the knowledge base during the incremental commitment process (Johanson & Vahlne, 1977, 1990).

Foreign entries of different modes are repositories of embedded knowledge in foreign markets, acting as learning agents for firms, accumulating knowledge, and transferring across different subsidiaries (Barkema & Vermeulen, 1998; Foss & Pedersen, 2002; Shaver, Mitchell, & Yeung, 1997). Consequently, various types of cumulative entry experience of firms in foreign markets lead to different levels of learning (Chang & Rosenzweig, 2001; Delios & Henisz, 2003b). Moreover, the sequence of sequential entries represents a dynamic process of exploring new knowledge, and firms have strong motivations to adopt high-commitment entry

modes. Learning from cumulative experience not only helps firms obtain the knowledge needed to engage in faster market expansion, but also enables them to conquer expansion constraints. In this research note we focus on the effects of three types of cumulative entry experience, and further investigate entry mode switch in a unifying learning framework.

Cumulative Entry Experience

Cumulative entry experience comes from engaging in entry-specific activities. Firms penetrating foreign markets need knowledge development because of a knowledge gap that they face (Peterson, Pederson, & Lyles, 2008). Firms obtain specific knowledge on how to enter and operate in a foreign market through their entry experience in foreign markets (Johanson & Vahlne, 1977). Previous studies empirically record that learning from entry experience increases MNEs' subsequent entry rates (Chang, 1995; Kogut & Chang, 1996), and enhances the chances of survival in foreign markets (Shaver et al., 1997). We incorporate three types of modes of contractual arrangements, equity joint ventures, and wholly owned subsidiaries, and examine the impact of three types of cumulative entry experience.

Firms can gradually acquire first-hand experience from ongoing operations. Through their sequential entries, MNEs develop entry experience about how to operate in a foreign market. With their better understanding of the local environment, experienced firms can cope with the liability of foreignness and perceive less uncertainty in foreign markets. In addition, they achieve greater capabilities by accumulating more entry experience about foreign markets, and thus face fewer operational difficulties in subsequent entries (Chang, 1995; Delios & Beamish, 2001; Gao, Pan, Lu, & Tao, 2008). Therefore, we expect that cumulative entry experience positively influences how fast MNEs expand over a series of entries.

Hypothesis 1a: Cumulative entry experience speeds up the pace of sequential entries of MNEs in a foreign market.

Entries into foreign markets can be non-equity based or equity based. The level of resource commitment, control, and risk is the lowest for contractual arrangements, moderate for equity joint ventures, and the highest for wholly owned subsidiaries (Pan & Tse, 2000). The choice of an appropriate entry mode is of great strategic importance for firms (Chang & Rosenzweig, 2001). Moreover, firms acquire knowledge through their own foreign operations of different entry modes, owing to the tacit nature of knowledge (Chang, 1995; Hoang & Rothaermel, 2005; Makino, Lau, & Yeh, 2002; Zollo, Reuer, & Singh, 2002). Each entry mode brings a different level and type of knowledge. We posit that the learning effects from cumulative entry experience vary across entry modes.

Non-equity-based entries such as contractual arrangements specify rights, obligations, the sharing of risks, and the manner of operation in contracts. Foreign firms have a low level of resource commitment and operation involvement. Therefore, learning from contractual arrangement experience is limited. Without deep involvement in operations, firms cannot generate much in-house knowledge to apply to subsequent entries. Equity-based entries (equity joint ventures and wholly owned subsidiaries) involve higher levels of control and operation involvement than contractual arrangements (Pan & Tse, 2000). Firms can learn more directly from the learning-by-doing process and their task-specific experience (Foss & Pedersen, 2002). Consequently, knowledge derived from equity-based entry experience plays a more important role in guiding future entry activities in foreign markets. Therefore, we further propose that equity joint venture and wholly owned subsidiary experience have stronger effects on the pace of sequential entries of MNEs than contractual arrangement experience.

Hypothesis 1b: Equity joint venture and wholly owned subsidiary experience have stronger effects on speeding up the pace of sequential entries of MNEs than contractual arrangement experience.

Entry Mode Switch

Johanson and Vahlne (1977) propose that firms follow an incremental expansion process of both geographic proximity and resource commitment in foreign markets. Geographic expansion begins from proximate countries and extends to increasingly distant countries, whereas resource commitment starts with exports, followed by a selling or distribution subsidiary, and finally a production subsidiary, such as a joint venture or a wholly owned subsidiary. Firms will shift from low- to high-commitment entry modes because they have accumulated "experiential knowledge" over time

and learned across different entry modes (Guillén, 2003; Johanson & Vahlne, 1977, 1990). At higher levels of resource commitment firms are exposed to more risks and uncertainty, and need to mobilize more resources. Moreover, firms often need time to acquire the experience to operate in higher resource commitment modes (Guillén, 2003). Switching from a low- to a high-commitment mode represents a resource commitment upgrade that requires firms to conduct a thorough and potentially lengthy deliberation. In contrast, sticking to and repeating the same entry mode as used before is a comparatively easier task. Therefore, firms will engage in a slower pace when they switch from low to high resource commitment modes in a foreign market.

Hypothesis 2a: Switching from low to high resource commitment modes slows the pace of sequential entries of MNEs in a foreign market.

Switching from low- to high-commitment entry modes is challenging, and requires a longer period of time and more thorough deliberation, but firms can reduce the time by accumulating cumulative entry experience. First, with a better understanding of the local environment through cumulative entry experience, firms perceive the same market environment as less uncertain (Delios & Henisz, 2003b), and they will be more prepared to assume resource commitments and adopt higher-commitment entry modes in that market (Chang & Rosenzweig, 2001). Second, with more cumulative entry experience in a foreign market, firms have developed the capability to operate in that market, and become more capable of dealing with resource upgrade. Thus they can engage in subsequent entries at a faster pace. We therefore expect that, with more cumulative entry experience, firms can reduce the length of time needed to switch from low to high resource commitment modes.

Hypothesis 2b: The deterring effect of mode switch on the pace of sequential entries can be reduced as MNEs acquire more cumulative entry experience.

METHOD

Sample

Our sample comprises the market entry activities of large US firms in China. The entry activities of foreign firms in China were documented in a trade magazine, the *China Business Review*, published bimonthly by the US-China Business Council. Each issue of the magazine details major business activities of foreign firms in China, and therefore offers a reliable source of foreign entry activities. The *China Business Review* provides information on the time of entry, entry type, location, business partners, and nature of products. We selected US firms that either appeared on the list of 1990 (first issue) or 2002 and uncovered a total of 314 US firms. We went through the *China Business Review* to trace the entry activities of our sample US firms over the 24-year study period (1979–2002). Of the 314 US firms, 150 entered China during the study period through a total of 730 entries. These entries included 291 contractual arrangements, 380 equity joint ventures, and 59 wholly owned subsidiaries. The maximum number of entries by a single firm in this group was 32, and the mean number was 5 entries. Sequential entries include both new additional entries and changes in ownership for incumbent entries.

Dependent Variable

We aim to examine the pace of sequential entries after MNEs make their initial entries in the host market, and consequently the dependent variable is the time interval between consecutive entries of firms, that is, the number of months between two entries. Shorter intervals between consecutive entries indicate a faster pace of sequential entries. The pace of firms' entry activities can be determined by the average number of foreign entries per year, or by how long it takes a firm to obtain the current number of foreign entries (Vermeulen & Barkema, 2002). We measured the pace by how long it takes a firm to make the next entry after initial entries.

Independent Variables

Cumulative entry experience. We operationalized cumulative entry experience as the cumulative number of entries a firm engages in prior to the point of time in question (Chang, 1995). We disaggregated cumulative entry experience into multiple categories of experience: contractual arrangement experience, equity joint venture experience, and wholly owned experience. Contractual arrangements include contractual joint ventures, licensing, franchise, technology transfers, cooperation agreement, and R&D contracts. The measures reflect the extent of learning that a firm acquires from engaging in market entries in China. Operating in multiple and different entry modes increases the variety of events and ideas for MNEs,

which will lead to a more diversified and extensive knowledge base (Huber, 1991).

Entry mode switch. We compared each entry with the most recent one, and coded a "mode move up" as 1 when a firm moves from a low- to a high-commitment entry mode and 0 otherwise; three kinds of switch may refer to a mode move up.

Control Variables

We accounted for the overall operation experience in China by *duration in the host country*, measured by the time a firm had been in the China market since its first entry activity (Hennart & Reddy, 1997). We measured *international geographic scope* by the number of countries in which firms had established subsidiaries to control the effects of experience in the global market (Tallman & Li, 1996). We obtained the information from the *Directory of American Firms Operating in Foreign Countries*. We controlled firm size and R&D intensity using information from Compustat (North America) database. We measured firm size using firm assets with a logarithm transformation, with a 1-year lag for a specific entry. We measured R&D intensity with R&D expenditures as a percentage of total sales at time $t-1$ of entry at the industries of four-digit Standard Industrial Classification (Chang, 1995). We also controlled the impact of competitors' entries, as firms often refer to competitors' behavior in a foreign country, and tend to agglomerate with competitors in foreign markets, owing to the agglomeration economies (Chan, Makino, & Isobe, 2006; Chang & Park, 2005; Chung & Song, 2004; Lu, 2002).We measured competitors' entries by the number of entry activities made by competing companies in product sectors distinguished by the three-digit Chinese Industrial Classification (CIC) Code. We calculated the average time (the number of days) it took for a foreign firm to get officially registered with the Chinese government from a national census dataset of the China Statistical Bureau. We used this variable as a proxy for the degree of regulation bureaucracy (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002). Finally, we also controlled the impact of market growth as the industry growth potential that can drive firms' entry behavior (Hennart & Park, 1994). We used the information from the China Industrial Census data and the *China Statistical Yearbooks*. We obtained the investment amount for each product sector (measured by two-digit CIC) and measured

Table 1 Means, standard deviations, and correlations

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1. Contractual arrangement experience	1.00											
2. Equity joint venture experience	0.38**	1.00										
3. Wholly owned subsidiary experience	0.28**	0.38**	1.00									
4. Mode move up	0.01	−0.12**	−0.16**	1.00								
5. Duration in the host country	0.39**	0.48**	0.22**	−0.01	1.00							
6. Internal geographic scope	0.42**	0.33**	0.19**	−0.03	0.23**	1.00						
7. Firm size	0.28**	0.36**	0.22**	−0.02	0.34**	0.35**	1.00					
8. R&D intensity	0.12**	0.01	0.04	0.03	−0.07	0.07	−0.05	1.00				
9. Competitors' entries	0.03	0.07	0.06	−0.05	−0.01	−0.02	0.07	0.03	1.00			
10. Government regulation	−0.17**	−0.32**	−0.27**	0.00	−0.43**	−0.09*	−0.30**	−0.13**	−0.04	1.00		
11. Market growth rate	0.15**	0.02	0.15**	0.03	0.06	0.13**	0.07	0.27**	0.06	−0.21**	1.00	
12. Interval between entries	−0.23**	−0.30**	−0.25**	0.14**	−0.12**	−0.15**	−0.10*	−0.14**	−0.10*	0.07	0.07	1.00
Mean	2.62	2.58	0.40	0.23	10.40	29.46	9.90	0.07	0.61	23.85	0.39	22.28
Standard deviation	2.97	2.95	0.69	0.42	6.13	19.77	1.26	0.09	1.48	9.06	0.73	30.28

**$p<0.01$; *$p<0.05$ (two-tailed test).

market growth by the rate of investment growth as a proxy. Table 1 reports the descriptive statistics and variable correlations.

Generalized Estimating Equations Analysis

Because the sample consists of repeated observations of single firms over time, we employed generalized estimating equations (GEEs) analysis to cope with panel data with serial correlations to produce efficient and unbiased estimates. The GEE method represents a generalization of the generalized linear model that can handle repeated measures data, such as panel or cluster data, in a convenient and flexible way (Allison, 1999; Liang & Zeger, 1986).

We focused on unlocking the sequential entry process after firms' initial entries in the host market. Of the 150 firms that entered China during our sample period, 115 engaged in more than one entry. Therefore, we have 580 time intervals between consecutive entries for these 115 firms, although because of missing values our total number of observations for the analysis is 433. We conducted the analysis with different sets of independent variables, as shown in Table 2. In model 1 we tested the effects of control variables. Model 2 includes firms' learning from cumulative entry experience and entry mode switch, and model 3 is the complete model with the interaction items. We included industry fixed effects in the model estimation. We also checked the variance inflation factors and found that the highest value was 2.13, which indicates that multicollinearity is not a concern.

Findings

In Hypothesis 1a we hypothesize that increased cumulative entry experience is related to a faster pace of sequential entries. The results suggest that all three types of entry experience have significantly negative effects on time intervals between consecutive entries. This finding suggests that organizational learning from entry activities strengthens MNEs' capabilities and speeds up their expansion process, supporting Hypothesis 1a.

We propose in Hypothesis 1b that the relative importance of three types of cumulative entry experience is different. The effect sizes measured by partial eta-squared (η_p^2) for contractual arrangement, equity joint venture, and wholly owned subsidiary experience are 0.01, 0.05, and 0.08 (Cohen, 1988), respectively. We also employed *t*-tests to check the differences of the three coefficients. The effect of contractual arrangement experience is significantly lower than effects of equity joint venture and wholly owned subsidiary experience (t=2.02, $p<0.05$ and t=2.60, $p<0.01$, respectively), whereas there is no significant difference between equity joint venture and wholly owned subsidiary experience (t=0.51, $p=0.61$). Thus the findings of effect sizes and *t*-tests are consistent, and provide strong support for Hypothesis 1b.

Entry mode switch from low to high commitment slows the pace of sequential entries, in support of Hypothesis 2a. Specifically, when a firm switches from low- to high-commitment entry modes, the time interval between its consecutive entries lengthens by 6.02 months. Moreover, the interaction between entry mode switch and contractual arrangement experience is negative and significant, which indicates that experience gained from each additional contractual arrangement reduces the deterring effect of an entry mode switch by 2.99 months. Meanwhile, equity joint venture experience also reduces the effect of an entry mode switch by 1.01 months. The moderating effect of wholly owned subsidiary experience for entry mode switch is not significant. Thus Hypothesis 2b is partially supported.

The results indicate that duration in the host country has a significant effect on the pace of sequential entries. MNEs with a longer time of local operation can accumulate more knowledge. Firms from industries with high R&D intensity move more quickly in sequential entry activities, and competitors' entries speed up the pace. Market growth rate has a marginally significant effect on the pace, confirming that MNEs expand faster in response to a high market growth potential. International geographic scope, firm size, and the degree of regulation bureaucracy have no significant effects.

Additional Analysis

We conducted additional robustness checks for our models. First, we collected information from the *Direction of Foreign Direct Investment in China*, provided by the Ministry of Commerce. We checked whether foreign entries were prevented from being either wholly owned or owning more than 50% in a specific industry. We eliminated observations in our sample that belonged to such industries, and got robust results. Second, the Chinese government has issued restriction policies on the amount of foreign direct investment in different industries. From the same data source of the Ministry of Commerce we coded the number of products in which the government imposes restrictions on foreign direct investment in each two-digit CIC sector. The number of restricted items indicates

Table 2 Determinants of the pace of sequential entries

	Generalized estimating equations		
	Model 1	*Model 2*	*Model 3*
Independent variables			
Intercept	76.26***	49.37***	48.49***
	(14.94)	(13.55)	(13.39)
Contractual arrangement experience (CAE)	—	−1.81*	−2.04***
		(0.86)	(0.75)
Equity joint venture experience (EJVE)	—	−4.06***	−4.03***
		(0.69)	(0.68)
Wholly owned subsidiary experience (WOSE)	—	−5.73**	−5.75*
		(2.36)	(2.57)
Mode move up (MMU)	—	5.19†	6.02*
		(3.37)	(3.35)
CAE × MMU	—	—	−2.99**
			(1.08)
EJVE × MMU	—	—	−1.01†
			(0.74)
WOSE × MMU	—	—	3.57
			(5.25)
Control variables			
Duration in the host county	−1.97***	−1.82***	−1.81***
	(0.32)	(0.40)	(0.36)
International geographic scope	−0.02	0.01	0.02
	(0.09)	(0.08)	(0.08)
Firm size	−2.55	−1.93	−1.79
	(1.84)	(1.44)	(1.43)
R&D intensity	−0.55*	−0.44*	−0.44*
	(0.22)	(0.20)	(0.19)
Competitors' entries	−1.74**	−1.11†	−1.11†
	(0.67)	(0.68)	(0.69)
Government regulation	0.06	0.22	0.23
	(0.18)	(0.16)	(0.15)
Market growth rate	−3.69*	−2.00†	−2.29†
	(1.47)	(1.27)	(1.25)
Model indices			
Number of observations	433	433	433
Log likelihood	−2047.12	−2012.04	−2008.36
	(401 d.f.)	(397 d.f.)	(394 d.f.)

Note: numbers in parentheses are standard errors; tests of hypothesized effects are one-tailed; industry fixed effects are included and not shown.
***$p<0.001$; **$p<0.01$; * $p<0.05$; †$p<0.10$.

the level of government restriction and protection. We incorporated the variable into our model, and it exhibits no significant effect. All our findings stay robust. Third, we tested the relationship between entry pace and different time periods, and found that the average intervals between consecutive entries do not relate to the time, suggesting that the pace of sequential entries has not changed significantly during the study period. Including year dummies does not change significant effects.

DISCUSSION

Contributions

In this study, we aim to contribute to the literature on sequential entries by investigating the dynamic process of within-market expansion of MNEs. The sample of large US firms that have invested in China during a 24-year period between 1979 and 2002 enables us to study firms' learning from different types of experience in the host market,

as well as the process of dynamic changes during the period. We offer two noteworthy contributions to the literature.

First, we extend the literature on sequential entries through focusing on the effects of learning from different types of cumulative entry experience on the pace of sequential entries. We investigate the learning effects of three types of cumulative entry experience: contractual arrangement experience, equity joint venture experience, and wholly owned experience. The results suggest that while the three types of cumulative entry experience speed up the pace of sequential entries, their relative importance varies across different modes. Therefore it is necessary to disaggregate firms' experience into different types to identify specific effects on subsequent entries (Delios & Henisz, 2003b; Hoang & Rothaermel, 2005; Zollo et al., 2002). As suggested by Chang and Rosenzweig (2001), pinpointing the specific type of experiences sheds new light on the precise mechanism by which firms leverage their knowledge in foreign markets.

Second, we investigate the dynamic process of within-market expansion of MNEs. During a sequence of entries in a foreign market, MNEs experience entry mode switch from their initial entries to gather new knowledge and pursue more opportunities. The pace of sequential entries slows when firms switch from low to high resource commitment modes. Moreover, firms can offset the lengthy process of within-market expansion by accumulating more entry experience. Organizational learning and added knowledge help firms overcome constraints on their expansion (Chang, 1995). Thus firms can deal with these changes and realize the benefits of expansion more easily. The findings provide insights into not only whether learning from cumulative entry experience affects firms' sequential entries, but also how experience enables firms to deal with constraints through looking into the dynamic process of subsequent expansion. These findings enrich our understanding of the evolution process of MNEs' within-market expansion.

Limitations and Future Research

We acknowledge several limitations of our study that should be addressed through further research. First, the strategic motives could have significant effects on firms' entry decisions (Chung & Song, 2004). Our sample is based on archival data, and we cannot address MNEs' strategic motivations. We cannot explore why firms make sequential entries instead of investing more in existing subsidiaries. Second, while we disaggregate cumulative entry experience into different types, the data prevent us from capturing the underlying differences of the investment in local capabilities. Future research should move a step further to differentiate various types of experience that MNEs accumulate by investing in local capabilities (Song, 2002). Third, our investigation of the learning process is limited by using historic secondary data as proxies. We acknowledge that the learning effect from successful and failed entries may be different. Moreover, measures of cumulative entry experience should take into account the size of each entry. However, entry size is not available for the majority of observations in the data. Future studies can use more detailed data to tackle these challenges.

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