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Behind Emerging Market Firms’ Internationalization, Diversification, and Innovation: A Geographic Relational Approach

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The internationalization of emerging market firms (EMFs) has attracted substantial research attention. Yet, how EMFs engage in diversification and innovation during internationalization remains underexplored. Drawing insights from a geographic relational perspective, we perform a fuzzy-set qualitative comparative analysis (fsQCA) on a sample of EMFs. Our findings suggest that EMFs can choose from multiple equifinal internationalization pathways to capture growth opportunities in diversification and/or innovation. These new insights emphasize that achieving diversification or innovation requires a combination of organizational contextuality, international path dependence, and geographic practice attributes. We further develop a taxonomy of five EMFs’ geographic relational configurations for diversification and/or innovation: entrenching

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specialist, niche explorer, global adapter, transnational agent, and strategic aspirant. Overall, by unleashing the power of configurational analysis, this paper reveals what is behind the intriguing internationalization of EMFs with a focus on diversification and innovation.

Keywords: *diversification; emerging market firms; fsQCA; geographic relational perspective; innovation; internationalization*

Introduction

The internationalization of emerging market firms (EMFs) has attracted substantial research attention (Luo & Tung, 2018; Peng, Wang, Xie, & Lebedev, 2024; Ramamurti & Hillemann, 2018). Internationalization allows EMFs to acquire new knowledge and resources to enhance their capabilities and capture growth opportunities overseas (Child & Marinova, 2014; Luo, 2020). With these newly-acquired knowledge and resources, EMFs may engage in product diversification (hereafter “diversification”)¹ (Deligianni, Voudouris, & Lioukas, 2015; Xu & Meyer, 2013) and/or promote innovation (Hejazi, Tang, & Wang, 2021; Kathuria, Majumdar, & Peng, 2023; Wu & Fan, 2025). Overall, EMFs’ internationalization often drives their diversification and innovation endeavors, which, according to Penrose (1959), are the two primary modes of firm growth.

Yet, *how* EMFs take advantage of internationalization to achieve firm growth by engaging in diversification and/or innovation has remained largely underexplored (Bahl, Lahiri, & Mukherjee, 2021; Marquis & Raynard, 2015; Peng et al., 2018). To probe deeper into the intriguing internationalization of EMFs, unique contextual influences and spatial contexts that EMFs confront necessitate new theoretical perspectives and further empirical analyses (Buckley, Doh, & Benischke, 2017; Li, Fan, Kumar, & Ananthram, 2024; Luo & Tung, 2018).

To complement existing theories, Deng, Delios, and Peng (2020) propose a geographic relational perspective on EMFs’ internationalization, emphasizing contextuality, path dependence, and practice. These interconnected tenets highlight how multifaceted, situation-specific contexts shape EMFs’ operations and performance. Deng et al. (2020) extend relational economic geography into international business (IB), underscoring the causal complexity of EMFs’ international activities. Elia, Kafouros, and Buckley (2020) pioneer empirical tests of this perspective. But they focus on “how and where” EMFs should internationalize (p. 2) rather than examining the three tenets in depth. While their work makes valuable contributions, the intricate mechanisms underlying these interactions remain largely unexplored. Leveraging a configurational approach (Misangyi, Greckhamer, Furnari, Fiss, Crilly, & Aguilera, 2017), we extend the geographic relational perspective to address a critical but underexplored question: *Under which geographic relational prototypes can EMFs promote diversification and innovation during their internationalization?*

To explore potential configurations, we perform a fuzzy-set qualitative comparative analysis (fsQCA) to focus on the coexistence of multiple situations (Ragin, 2008). Different from the regression paradigm (which is adopted by Elia et al. [2020]), fsQCA is a distinct research paradigm with specific data analytical techniques (Fiss, 2011; Schneider & Wagemann, 2012). In the regression paradigm, the net independent effects of explanatory variables are expected to be isolated. In contrast, fsQCA seeks to identify the combined effects of causal

factors by the use of set-theoretic logic, which allows for multiple complex configurations to achieve the same outcome (*equifinality*) (Ragin, 1987, 2008). In this study, the effect of a condition (e.g., contextuality, path dependence, or practice) on an outcome (e.g., diversification or innovation) may vary when interacting with other coexisting conditions (*conjuncture*) (Fiss, 2011). We also acknowledge that the existence of a specific condition is associated with an outcome, which does not imply that the absence of the condition will be associated with the opposite outcome (*asymmetry*) (Ragin, 1987). Building on the geographic relational perspective (Deng et al., 2020), we apply fsQCA to examine 318 foreign direct investment (FDI) cases of 276 Chinese firms. Following prior studies (Fiss, 2011; Lewellyn & Muller-Kahle, 2022; Li et al., 2024), we first acknowledge causal conditions, relying on the prior literature. Next, we identify combinations of conditions. We further theoretically interpret configurations that lead to high levels of diversification and/or innovation (Furnari, Crilly, Misangyi, Greckhamer, Fiss, & Aguilera, 2021).

We endeavor to make three contributions. First, we offer a configurational understanding of EMF internationalization for grasping growth opportunities in diversification and/or innovation. We aspire to widen the trail blazed by earlier research on EMF growth (Luo & Tung, 2018; Peng et al., 2018; Tan, Su, Mahoney, & Kor, 2020). Our holistic assessment leverages contextual uniqueness to deepen our understanding of EMFs through relational thinking rooted in economic geography (Jones & Murphy, 2011). Thus, this study complements research on the sources of EMFs' growth through internationalization (Li et al., 2024). Second, we contribute to the geographic relational perspective of EMF internationalization (Deng et al., 2020), by examining this newly emerging theoretical lens with a configurational approach—one of the first such empirical efforts in this area. While it is widely acknowledged that EMF internationalization is embedded with multiple social, economic, and territorial contexts that constrain and enable actions (Verbeke & Kano, 2015), this study makes and substantiates the case that in isolation, each of the three key tenets—organizational contextuality, international path dependence, and geographic practice—are not sufficient to understand EMFs' pursuit of growth opportunities. Third, focusing on internationalization, we propose a new taxonomy of EMFs: *entrenching specialist*, *niche explorer*, *global adapter*, *transnational agent*, and *strategic aspirant*. Specifically, multiple distinct pathways lead to diversification outcomes while multiple others to innovation outcomes, which reflects equifinality (Fiss, 2011; Ragin, 2008). Overall, our study engenders new venues to guide further research through a configurational approach.

A Geographic Relational Perspective

Advancing the Geographic Relational Perspective to Revisit Diversification and Innovation

While previous research on internationalization has predominantly focused on strategic decisions, a geographic relational perspective adopts a problematization approach (Deng et al., 2020). In contrast to existing theories (such as the institution-based, resource-based, and internalization/OLI theories), the geographic relational perspective emphasizes three tenets: contextuality, path dependence, and practice. Distinct yet interdependent, these tenets collectively shape EMF internationalization (Deng et al., 2020). This perspective provides new insights by highlighting the interactions among these tenets, offering a process-based

explanation of contextual influences. Given the unique contextual characteristics of EMFs (Marquis & Raynard, 2015; Peng, 2012; Peng et al., 2024), the geographic relational perspective presents a valuable lens for investigating EMF internationalization and its subsequent impact (Elia et al., 2020). Embracing this theoretical perspective, we specifically investigate how EMFs can seize growth opportunities to achieve diversification and innovation via their internationalization by outlining the specific geographic relational factors involved in the three tenets.

Organizational contextuality. Contextuality emphasizes the embeddedness of EMFs in social and institutional relations (Deng et al., 2020). We examine the organizational contexts of EMFs to capture spatial, ownership, and intelligence-based dimensions of contextuality—the three fundamental aspects highlighted in this tenet proposed by Deng et al. (2020). First, a spatial dimension is linked to the spatial concentration in terms of social norms and institutions that influences EMFs' mobility (Hotho & Saka-Helmhout, 2017). Prior research on relational economic geography provides substantial evidence on the co-location decisions of firms in industrial clusters due to agglomeration (Majocchi & Presutti, 2009; Shaver & Flyer, 2000). When a focal firm is more geographically proximate to industrial clusters, such as high-tech clusters that also have concentrated FDI, it may mimic activities of those firms located in those clusters, searching for legitimacy and risk reduction (Peng et al., 2024). However, geographic proximity to clusters may also engender a spatial “lock-in” effect by isolating focal firms from external sources of information and knowledge when seeking growth opportunities (Romanelli & Khessina, 2005). As such, *agglomeration distance*, defined as the geographic distance of a focal firm to FDI and high-tech clusters in its home country, is integral in organizational contextuality.

Second, because of different levels of government influences, manifested in *state ownership*, EMFs may have different motivations to expand abroad (Marquis & Raynard, 2015). A high level of state ownership indicates the dominance of a state logic within firms, which can exert power to relocate resources (Wang, Yi, Zhang, & Peng, 2022). With state ownership, firms may have more access to privileged resources to promote diversification (He, Cui, & Meyer, 2022) or innovation (Luo & Tung, 2018). Third, because EMFs are generally nascent in international markets, the managerial cognitive aspects behind decision making are essential to understand contextual relations in complicated environments (Peng et al., 2024). Sufficient cognitive resources are thus necessary to enable effective strategic decisions, which can be largely demonstrated in *top management team (TMT) international experience* (Le & Kroll, 2017). Prior experience overseas can help executives accumulate knowledge about different cultural values and/or institutional arrangements to improve their cognitive ability and facilitate problem solving (Maitland & Sammartino, 2015). TMT international experience generally has a positive impact on firm internationalization (Cuypers, Patel, Ertug, Li, & Cuypers, 2022), which is specifically important for EMFs with limited overseas exposure (Ramamurti & Hillemann, 2018).

International path dependence. Path dependence is based on cumulative experience that can shape a firm's routines (Deng et al., 2020). We focus on EMFs' path dependence in international markets. A firm's experience in internationalization influences how managers leverage such experience for further firm growth (Chen, Cui, Li, & Rolfe, 2017; Peng et al., 2018).

EMFs' experience with international markets can be reflected in the transactional dimension (i.e., *depth of internationalization*) and structural dimension (i.e., *breadth of internationalization*) (Hitt, Tihanyi, Miller, & Connelly, 2006). In other words, both the experience of deeply embedding in a smaller number of host countries and the experience of broadly engaging across many countries contribute to EMFs' familiarity with foreign markets (Maitland & Sammartino, 2015). On the one hand, greater intensity in a specific country may facilitate deep internationalization. Such in-depth engagement and adaptation may promote diversification (Deligianni et al., 2015; Peng, Lee, & Wang, 2005) and/or innovation (Kathuria et al., 2023; Wu & Fan, 2025). On the other hand, the diversity of international experience can facilitate firms to explore various search paths and thus developing capabilities to deal with diverse environmental challenges (Li & Tallman, 2011; Luo, 2020). Such capabilities can facilitate collaboration for innovation and allow firms to enjoy beneficial knowledge spillovers (Tan et al., 2020) and improve their capabilities to diversify into other product markets (Deligianni et al., 2015; Peng et al., 2005).

Geographic practice. Practice connects the micro-processes of EMFs' internationalization with diverse macro-level contexts, such as institutions and networks (Deng et al., 2020).² We focus on geographic practice that reflects EMFs' everyday actions in those geographic contexts. While EMFs—often short of superior technological resources—seek strategic assets through international expansion, they pursue knowledge accumulation (Peng, 2012). The institutional differences between home and host countries can significantly affect EMFs' learning opportunities for firm growth (Li et al., 2024). Such differences can be reflected in both formal and informal institutional distances in EMFs' geographic practice. The larger the distance between the home and host countries, the greater the differences in regulatory, normative, and cognitive contexts (Berry, Guillén, & Zhou, 2010). In this study, following the geographic relational perspective (Deng et al., 2020), to reflect daily relational processes when interacting with local entities, we do not adopt a traditional “distance” approach to capture static institutional differences between home and host countries. Instead, we leverage a “friction” lens, which looks at actual interactions (Li, 2023; Shenkar, Luo, & Yeheskel, 2008; Wu, Chirico, Fan, Ding, & Su, 2024) and helps to build a “micro-macro link” (Jarzabkowski, Kavas, & Krull, 2021; Jones & Murphy, 2011; Rouleau & Cloutier, 2022).

A friction lens allows us to examine the actual interactions between a focal firm and its stakeholders in a host country, “who are engaged in an ongoing exchange that consists of a chain of responses and counterresponses” (Shenkar et al., 2008: 911). Friction is defined as the degree of resistance when entities rub against each other during interactions (Luo & Shenkar, 2011). Drawing from Shenkar et al. (2008), we define institutional friction as an ongoing process that involves EMFs' responses and counterresponses in their interactions with stakeholders in the host-country institutional environment, and categorize it into *formal institutional friction* (i.e., friction due to the home-host formal *institutional* differences) and *informal institutional friction* (i.e., friction due to the home-host *cultural* differences). Overall, the extent of friction is influenced not only by the institutional differences between EMFs and the host country, but also by their scope, speed, and stage of international expansion (Wu et al., 2024).

Formal and informal institutional frictions in EMFs' geographic practice may bring both advantages (Koch et al., 2016) and disadvantages (Luo & Shenkar, 2011). On the one hand,

institutional friction may bring benefits to EMFs when they operate in various markets, because the interactions with entities in local institutional environments may foster information acquisition and encourage learning (Luo & Shenkar, 2011). EMFs thus internalize accumulated knowledge obtained from different host countries and transfer it to home and other overseas locations, which allows them to engage in diversification and/or enhance technological capabilities for innovation (Kathuria et al., 2023). On the other hand, transferring knowledge to or from EMFs' subsidiaries can be arduous due to strong institutional friction (Chang, Gong, & Peng, 2012; Gaur, Delios, & Singh, 2007). The process of internationalization may become either highly costly or impossible, resulting in the failure of leveraging internationalization to grasp growth opportunities (Hejazi et al., 2021).

Configurational Interdependencies and Equifinality

The geographic relational perspective emphasizes the “distinct but intertwined relational tenets that reinforce and build upon each other over time,” which shape EMF internationalization and enable EMFs to leverage their international activities for growth opportunities (Deng et al., 2020: 58). Given the inherent limitation of testing three-way interactions in traditional correlation-based regression methods, the causally complex “intertwined relational” tenets of this perspective have not been empirically applied. As a result, although this perspective has clearly defined variables to facilitate analysis (Deng et al., 2020), it has not been thoroughly explored until this study. Complementing the only earlier empirical study that uses regression methods (Elia et al., 2020), our study adopts a configurational method to investigate the interaction of the three tenets of the geographic relational perspective and the resulting multiple pathways to secure growth opportunities (i.e., diversification and innovation) through internationalization.

Adopting a configurational approach allows us to take advantage of the fuzzy set analysis and advance this perspective by articulating its complex systems of interactions (Ragin, 2008). The focus is thus shifted from independent causal factors to “a constellation of interconnected elements” (Miller, 2018: 459), which can better explain the variance in firm outcomes than would those independent but isolated factors (Fiss, 2011). As such, our research design incorporates the interdependencies between the three tenets by exploring how their interactive influences connect with strategic actions for growth. The fuzzy-set approach also provides insights that configurations can equifinally affect outcomes (Misangyi et al., 2017), which implies that while no optimal configuration exists, different combinations of causal factors can result in the same outcome (Fiss, 2011). Overall, adopting a configurational approach into this perspective reflects the interdependency among geographic relational conditions and configurational equifinality (see online Appendix 1).

The geographic relational perspective reveals the nature of three distinct but interactive tenets: contextuality, path dependence, and practice (Deng et al., 2020). First, contextuality refers to social and institutional relations that economic agents are situated (Bathelt & Glückler, 2003). The contextuality logic elaborates on the heterogeneous organizational and institutional contexts that EMFs confront through international expansion (Clegg, Geppert, & Hollinshead, 2018). Meanwhile, EMFs have different motivations for internationalization due to various degrees of home-country government impact (Luo & Tung, 2018). Because of such complexity, contextual relations are essential to understand the process of how EMFs

learn to grow through internationalization (Peng et al., 2018). Analyses of contextuality allow us to elaborate on how decisions on international expansion is inherently connected to multiple contextual elements (Bathelt & Glückler, 2003). Organizational contextuality—as reflected in agglomeration distance, state ownership, and TMT international experience in this study—is thus important for EMF internationalization. Nevertheless, they are not sufficient to trigger diversification and/or innovation if EMFs do not recognize their past experience in international markets that they can leverage or do not interact with stakeholders in international markets (Deng et al., 2020).

Second, path dependence means that EMFs make choices that are influenced by past and relevant decisions. It is based on past experience, which has been accumulated over time to demonstrate developmental patterns and can shape EMFs' routines in decision-making (Deng et al., 2020). Probing path dependence facilitates our understanding of linkages between historical conditions and socioeconomic relations (Martin & Sunley, 2006). Both structural and transactional dimensions of internationalization, factors through which we conceptualize and capture international path dependence, can address the underlying motivations for EMF internationalization. Nevertheless, since EMFs are mostly at an early stage of internationalization and firms often lack experience with international markets (Li et al., 2024; Peng, 2012), prior international experience alone may not encourage EMFs to seek growth opportunities overseas. EMFs also tend to bring acquired superior resources back and integrate with home-country assets for upgrading their home operations (Fu, Sun, & Ghauri, 2018; Peng et al., 2024). Different local operations thus lead to diverse resources as well as respective mechanisms of international path dependence, which not only affect the current organizational contextuality, but also shape the next stage of geographic practice (Steigenberger, 2017). This suggests that international path dependence may be critical but insufficient to predict EMF activities during their internationalization.

Lastly, practice refers to everyday actions that comprise daily relational processes and are embedded in specific geographic contexts (Jones & Murphy, 2011). Practice in EMF internationalization allows new path creation and can be viewed as a dynamic process (Poulis & Poulis, 2018). Investigation of practice extends these elements to a micro level in the social and political processes (Jarzabkowski et al., 2021; Jones & Murphy, 2011; Vaara & Whittington, 2012). EMFs' various types of practice play a critical role in incorporating deeply embedded relational contextual influences and leveraging international path dependence (Deng et al., 2020). Understanding practice is crucial to comprehend the impact of high-level systems such as institutions and networks, because such impact is embedded in firms' everyday actions (Alvesson & Spicer, 2019). As such, EMFs' practice across various geographic boundaries enables the linkage of their micro-level activities with heterogeneous relational contexts and accumulated international experience. To capture growth opportunities, EMFs thus rely on their geographic practice to navigate through institutional frictions to enrich international path dependence and adjust their organizational contextual relations. Hence, rather than functioning independently, these three tenets should be combined to understand EMF internationalization (Deng et al., 2020). In summary, each of the distinct geographic relational tenets identified in this study may not be sufficient to stimulate the action of capturing growth opportunities, but *jointly* they may lead to strategic actions.

In addition to understanding the interdependency of these tenets, we endeavor to comprehend the potential equifinality of the geographic relational configurations. Specifically, how

the distinctive conditions identified jointly configure in equifinal ways, leading to the same levels of the outcome of our interest—diversification and/or innovation. Deng et al. (2020) argue that geographic relational conditions influence EMF internationalization via the distinctive contexts and relations of the actor in its home and host countries, which are asymmetrical, because different actors may be situated at different levels of salience to the same condition. Moreover, the presence and absence of specific conditions may be both present in the configurations to achieve diversification and innovation. No fixed prescription exists for a geographic relational scenario to be specifically linked with a certain outcome. The association between these conditions and their growth path (diversification and/or innovation) is possibly equifinal, rather than unique. Overall, different geographic relational configurations are likely to result in the same outcome, suggesting equifinality of these EMF internationalization pathways.

Methodology

Research Design

The fsQCA method is orientated toward a midrange theory research design between a purely deductive and a purely inductive design (Campbell, Sirmon, & Schijven, 2016; Crilly, 2011). It is well suited for our research question, because it supports a comparative analysis in revealing multiple ways of interactions (Dwivedi, Joshi, & Misangyi, 2018; Fainshmidt, Witt, Aguilera, & Verbeke, 2020; Fan, Su, & Peng, 2024). Moreover, this method affords a comprehensive and interactive analysis that performs better than regression-based analysis, which can only offer limited insights into three-way interactions (Ragin, 2008).

Furthermore, the three most prominent features of fsQCA justify the appropriateness of adopting this method. They are: (1) conjunctural causation (fsQCA can identify how firms' elements of organizational contextuality, international path dependence, and geographic practice collectively affect the diversification and innovation outcomes); (2) equifinal solutions (multiple pathways can lead to the same diversification or innovation outcome); and (3) asymmetrical conditions (the presence and absence of any particular factor may exist in equifinal solutions) (Fainshmidt et al., 2020; Fiss, 2011; Misangyi et al., 2017; Ragin, 2008).

Sample Selection and Data Collection

From the Ministry of Commerce, we obtained a list of Chinese firms conducting FDI between 2011 to 2015 (inclusive)—a critical phase of internationalization for Chinese multinationals. We deliberately commenced our analysis after 2010 to avoid the distortive effects of the 2008 Global Financial Crisis. In addition, we capped our data in 2015 to exclude the influence of geopolitical shifts towards deglobalization marked by Trump's election in 2017. This approach helps to control for endogeneity arising from domestic and global changes impacting Chinese MNEs. The sample comprises A-share-listed manufacturing firms sourced from the WIND database. These firms were cross verified with the Ministry's records. We extracted comprehensive data to form a robust database.

We excluded the following firms: firms with (1) special treatment (ST) stocks, which experience financial distress with notification to the public issued by the China Securities Regulatory Commission; (2) missing data for one or more years; (3) vague business

segments; and (4) FDI activities in tax havens (such as Cayman and British Virgin Islands); and (5) FDI activities in countries that are not included in Hofstede's (2011) culture index. These criteria led to the identification of 276 firms with 318 valid firm-year observations. To solidify our findings and minimize reverse causality concerns, we incorporated a one-year ($T + 1$) lag period between the causal conditions and the outcome variables. This approach strengthens the causal inference by providing a temporal buffer (Fuchs-Schündeln & Hassan, 2016).

Measures and Calibration

Following the best practices of fsQCA (Dwivedi et al., 2018; Fainshmidt et al., 2020; Fiss, 2011; Li et al., 2024), we adopted a direct method to calibrate the outcomes and causal conditions in "continuous" fuzzy set. We set up specified anchors to calibrate fully-in, crossover, and fully-out memberships, and then applied the calibration function of fsQCA 4.1 (Ragin, 2008). Table 1 summarizes the measurements, calibration thresholds, and descriptive analysis of causal conditions and outcomes.

Firm growth opportunities can be surrogated by *diversification* (Qian, 2002) and *innovation* (Tan et al., 2020). Diversification was measured by the entropy measure of diversification. It was calculated by the formula: $\sum P_i \times \ln(1/P_i)$, where P_i is the share of sales in product i , weighted by the logarithm of its inverse value (He et al., 2022; Sun, Peng, & Tan, 2017). Innovation performance was measured by the total number of registered successful patents the firm obtained from the State Intellectual Property Office (Wang et al., 2022). In the calibration of diversification and innovation performance at $T + 1$, we followed the distribution approach recommended by Fiss (2011). The fully-in membership is assigned to firms in the 75th percentile (1.047 for diversification; 61 for innovation). The fully-out membership was assigned to firms ranked in the 25th percentile (0.518 for diversification; 7 for innovation). The crossover points are set at the 50th percentile (0.786 for diversification; 21 for innovation).

Organizational contextuality. Given the heterogeneity of EMFs, we suggest that strategic choices and decisions in internationalization are embedded in specific organizational contexts (Maitland & Sammartino, 2015). Deng et al. (2020) suggest three aspects of contextuality: space-based, ownership-based, and intelligence-based dimensions. To proxy the three dimensions in the context of internationalization, we adopt *agglomeration distance*, *state ownership*, and *TMT international experience*. For agglomeration distance, we first measured industry concentration for high-tech industries within China's 31 provinces, and then calculated the Location Quotient (LQ) index to identify FDI high-tech clusters.³ Eight provinces having an LQ greater than 1 are: Beijing, Chongqing, Guangdong, Jiangsu, Liaoning, Shandong, Shanghai, and Zhejiang. Next, following prior research (Cainelli & Ganau, 2018), we calculated agglomeration distance using the following formula:

$$\text{Agglomeration Distance} = \sum_{i=1}^8 \text{Weight}_i \times d_i$$

where Weight_i represents the proportion of firms in the industry in province i to the total number of firms in the industry nationwide, and i indicates one of the eight provinces obtained

Table 1
Calibration of Sets

Type	Variable	Measurement and Data Source	Calibration Anchors	Measure Descriptive			
				Mean	SD	Min	Max
Outcomes	High Diversification	T + 1 entropy measure	1.047, 0.786, 0.518	0.793	0.411	0.013	1.971
	Non-High Diversification	The negation of the above	n/a	0.793	0.411	0.013	1.971
	High Innovation	T + 1 the number of patents	61, 21, 7	121.007	524.565	0	7053
	Non-High Innovation	The negation of the above	n/a	121.007	524.565	0	7053
Organizational Contextuality	Agglomeration Distance	Geographic distance to FDI high-tech clusters; clusters are identified by LQ; distance is calculated by the Haversine formula	673.133, 634.098, 485.153	649.535	222.940	433.360	2245.100
	TMT International Experience	The proportion of TMT members with international work and study experience.	0.060, 0.030, 0	0.041	0.078	0	0.500
International Path Dependence	State Ownership	State ownership percentage	50, 25, 0	12.271	20.355	0	80.310
	Depth of Internationalization (transactional dimension)	Foreign sales to total sales	25, 10, 0	15.624	23.759	0	95.540
	Breadth of Internationalization (structural dimension)	Number of foreign subsidiaries	5, 3, 1	2.135	1.785	1	13
Geographic Practice	Formal Institutional Friction	Frictions between EMFs and host-country entities due to the home-host formal institutional differences	4.444, 3.778, 2.110	4.666	5.789	0	58.921
	Informal Institutional Friction	Frictions between EMFs and host-country entities due to the home-host cultural differences	3.654, 1.133, 0.155	2.648	4.388	0	32.370

Note: n/a means not applicable, while T refers to the reported time range (e.g. year). FDI stands for foreign direct investment, LQ refers to the location quotient index, and TMT means top management team.

through LQ clustering, d_i denotes the distance between the city where the firm is located and the provincial capital of province i , calculated by the use of the Haversine formula.

State ownership was measured by the percentage of equity owned by the state relative to the firm's total shares (He et al., 2022). TMT international experience adopted a proportion-based metric to capture the presence of executives' international experience (both international work and study experience) (Reuber & Fischer, 1997).

In the calibration of the elements of organizational contextuality, fully-in membership for TMT international experience was assigned at the 75th percentile (0.060). In contrast, fully-out membership was set at the natural zero as the full non-membership of the set. The crossover point was set at the middle of the set (0.030). For the condition of agglomeration distance, the fully-in membership was set at the 75th percentile point (673.133) in the set, while the fully-out membership was anchored at 25th percentile (485.153). Based on Fiss (2011), firms at the 50th percentile were assigned as the crossover point (634.098). Nevertheless, we refer to the existing literature when calibrating state ownership. When firms have over 50% state-owned shares, the state can legally take full control of the firm, and thus such firms were set as fully-in membership. Fully-out membership was set to the score of 0, where the state does not own shares of the focal firms. The crossover point was set at the middle of the set (25%).

International path dependence. Deng et al. (2020) suggest that internationalization of EMFs occurs in historically sequential patterns. Embracing this view, we suggest that international path dependence can be demonstrated in the *depth* and *breadth of internationalization* (Hitt et al., 2006). *Depth of internationalization* was measured by the ratio of foreign sales to total sales (foreign sales ratio: FSTS) (Wu & Fan, 2025). *Breadth of internationalization* was measured by the number of foreign subsidiaries (Elia et al., 2020). In calibrating the elements of familiarity with foreign markets, we assigned the fully-in membership to firms in the 75th percentile of the set of firms with high familiarity with foreign markets (25 for the depth and 5 for the breadth). The fully-out membership was set for the natural 0 for the depth but 1 for the breadth (viz., the 25th percentile of the set). The crossover points were anchored at the 50th percentile (i.e., 10 for the depth and 3 for the breadth).

Geographic practice. Firms can learn from diverse experiences and improve technological capabilities by operating in multiple geographic markets (Barkema & Vermeulen, 1998). Given the bounded space of local knowledge and human capital, the geographic practice of EMFs determines how these firms legitimate, coordinate, and control their internationalization activities (Deng et al., 2020). Overall, a firm experiences two main types of geographic friction: *formal* and *informal institutional friction*. Following Luo and Shenkar (2011) and Wu et al. (2024), these two variables were developed to establish the micro-macro link (Jarzabkowski et al., 2021; Jones & Murphy, 2011). We first computed formal and informal institutional distance. The Euclidean method was used to calculate these distances, with formal institutional distance (ID) scores derived from the six dimensions of the Worldwide Governance Indicators (WGI) (Kaufmann & Kraay, 2018), and informal institutional (cultural) distance (CD) scores based on the five dimensions of the Hofstede cultural index (Hofstede, 2011).

Second, drawing on data from the CSMAR database, a widely recognized resource in Chinese management research (Wang et al., 2022), we calculated the internationalization

speed (V), sequence (G), and contact surface (N) for MNEs (Luo & Shenkar, 2011; Wu et al., 2024). The variable V captures the rate of the firm's expansion in a host country. G reflects the establishment order of subsidiaries, expressed as the ratio of a specific subsidiary's position to the total number of subsidiaries the firm has set up in that country ($G \in (0, 1)$). N represents the total count of foreign subsidiaries the firm operates in a given year, with e being a constant ($e=2.7183$). The calculations for geographic practices were based on Luo and Shenkar (2011):

$$\text{Formal institutional friction} = e^{V(1-G)} \times ID / 10 \times N$$

$$\text{Informal institutional friction} = e^{V(1-G)} \times CD / 10 \times N$$

To calibrate the formal and informal institutional frictions, we assigned the friction faced by firms in the 75th percentile (4.444 for the formal institutional friction and 3.654 for the informal institutional friction) as fully-in membership while assigning the 25th percentile (2.110 for the formal institutional friction and 0.155 for the informal institutional friction) as the fully-out membership of the sets. The crossover points were anchored at the 50th percentile points (3.778 and 1.133 for the formal and informal institutional frictions, respectively).

Analyses and Results

Analyses of Necessary Conditions

We tested if any factor can be considered necessary for firms that have achieved high levels of diversification and innovation. A condition is “necessary” if it consistently appears in the solutions of outcomes, indicating the solutions' lack of variance (Dwivedi et al., 2018; Ragin, 2008). In Table 2, with a suggested benchmark of 0.90 (Fiss, 2011; Ragin, 2008), none of the focal attributes was necessary for solutions for high levels of diversification and innovation. In other words, none of the causal conditions under constructs of organizational contextuality, international path dependence, and geographic practice can be individually claimed as necessary to reach high diversification or high innovation.

Sufficiency Analyses

We conducted sufficiency analyses to explore how EMFs configure the geographic relational conditions to promote diversification and innovation. Specifically, we conducted two sufficiency analyses to investigate the configurations associated with high diversification and innovation. The generally accepted minimum threshold for a solution to be accepted as reliable is a consistency of 0.75 to 0.80 (Fiss, 2011; Ragin, 2008; Schneider & Wagemann, 2012). To secure the validity and rigor of results, we set the consistency cut-off at 0.75, the frequency of cases for solutions at 2 to ensure the 80% coverage of cases (Fiss, 2011), and the minimum proportional reduction inconsistency (PRI) cut-off at 0.65 (Greckhamer, 2016).⁴ As a result, a consistency cut-off was 0.768 for high diversification and 0.816 for high innovation.

Building on Fiss (2011) and Ragin (2008), we present the configurational solutions, where black circles (●) represent the presence of a condition, and circled crosses (⊗) indicate its

Table 2
Analyses of Necessary Conditions

Causal configurational solutions	High Diversification		Non-High Diversification		High Innovation		Non-High Innovation	
	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage
Organizational Contextuality								
Agglomeration Distance	0.515	0.523	0.571	0.540	0.594	0.584	0.497	0.500
TMT International Experience	0.357	0.552	0.358	0.515	0.394	0.570	0.339	0.504
State Ownership	0.309	0.610	0.284	0.523	0.381	0.699	0.244	0.459
International Path Dependence								
Depth of Internationalization (transaction dimension)	0.463	0.611	0.382	0.469	0.405	0.519	0.439	0.577
Breadth of Internationalization (structural dimension)	0.321	0.630	0.306	0.559	0.382	0.708	0.279	0.530
Geographic Practice								
Formal Institutional Friction	0.554	0.566	0.553	0.527	0.530	0.519	0.619	0.568
Informal Institutional Friction	0.608	0.631	0.475	0.459	0.571	0.569	0.591	0.593

Note: Necessary conditions are calculated with the fsQCA 4.1 software.

absence. Large circles denote core conditions,⁵ suggesting a stronger connection with the outcome. Small ones represent peripheral conditions, indicating relatively weaker connections to the outcome (Dwivedi et al., 2018). Blank spaces signify ambiguous conditions, meaning that the causal conditions may either be present or absent and thus hold no significant impact on the solutions. Furthermore, the two model fit indicators, consistency and coverage, are provided in Table 3. Consistency scores assess how well the solution aligns with the data for each individual configuration and across all configurations (Fiss, 2011). Coverage scores indicate the overall empirical relevance of the solutions (Ragin, 2008). Our consistency and coverage scores are compatible with prior studies for medium-to-large sample sizes (over 300) (Lewellyn & Muller-Kahle, 2022). FsQCA 4.1 further identifies the cases with membership >0.5 in each solution as a representative case for each configuration.

Table 3 illustrates the results of sufficiency analyses. The fsQCA results generate three solutions for high diversification (Solutions 1, 2, and 3 in Panel I) and four solutions for high innovation (Solutions 4a, 4b, 5, 6, and 7 in Panel II), respectively. It is worth noting that the neutral permutations within Solution 4-7 (4a, 4b) further illustrate the existence of second-order, or within-type, equifinality.

Supplementary Analyses

Configurations for non-high diversification and innovation. To reduce the potential risks of simultaneous subsets, which refer to the emergence of one configurational solution that can lead to the presence and absence of a focal outcome (Ragin, 2008; Schneider & Wagemann, 2012), we took a further step to investigate the negations of two focal outcomes. Following the same step and criteria as our primary analyses (i.e., a frequency cut-off set at 2), we conducted another supplementary examination to explore configurational solutions associated with non-high levels of both diversification and innovation. From Panels III and IV (Table 4), three configurational solutions were identified for non-high diversification outcomes (consistency value: 0.870, coverage: 0.140), while two configurational solutions were discerned for non-high innovation outcomes (consistency value: 0.810, coverage: 0.149). From Panel III, we observe that EMFs characterized by limited state ownership, minimal agglomeration distance, and absence of the depth of internationalization are unable to achieve high diversification when simultaneously engaging in either high formal (Solutions 8 and 9) or informal frictional environments (Solution 10). In contrast, Panel IV reveals configurational solutions that lead to non-high innovation share common characteristics, such as high distance with high-tech cluster at home, lacking TMT international experience, and limited internationalization paths (Solutions 11 and 12).

The contingency and robustness analyses. Given the non-correlational-based mathematical foundation, adding control variables is neither required nor possible when performing fsQCA (Misangyi et al., 2017). Following Dwivedi et al. (2018), we conducted a supplementary sufficiency analysis to investigate whether adding an additional condition (i.e., a contingency) affects our main findings. We considered strategic emerging industries as an important contingency, which plays a significant role in enabling EMFs to achieve international growth (Prud'homme, 2016). *Strategic emerging industries* refers to sectors that are identified as crucial for future economic development due to their potential to drive innovation, growth, and competitiveness (NDRC, 2010). On the one hand, firms in China's

Table 3
Configurational Solutions for High Diversification and High Innovation

Configurations	Panel I High Diversification			Panel II High Innovation				
	S1	S2	S3	S4a	S4b	S5	S6	S7
Organizational Contextuality								
Agglomeration Distance	●	⊗	●	●	●	⊗	●	●
TMT International Experience	●	⊗	⊗	●	●	⊗	●	⊗
State Ownership	⊗	●	⊗		⊗	●	⊗	●
International Path Dependence								
Depth of Internationalization (transactional dimension)	●	⊗	⊗	⊗		⊗	⊗	⊗
Breadth of Internationalization (structural dimension)		⊗	⊗	●	●	●	⊗	⊗
Geographic Practice								
Formal Institutional Friction	●	●	●	⊗	⊗	⊗	⊗	⊗
Informal Institutional Friction	●		●	●	●			
Consistency	0.795	0.829	0.768	0.892	0.882	0.891	0.827	0.824
Raw Coverage	0.104	0.073	0.075	0.082	0.095	0.065	0.106	0.088
Unique Coverage	0.073	0.046	0.040	0.011	0.027	0.030	0.046	0.044
Representative EMFs	UniStrong	Hangyang	Xinzhu	Foto Motor	Lifan	Fiberhome	Noposion	CITIC
Overall Solution Consistency		0.806				0.842		
Overall Solution Coverage		0.194				0.232		

Note: Black circles indicate the presence of a condition, and circles with “X” indicate its absence. Large circles indicate core conditions, and small ones mean peripheral conditions. Blank spaces indicate “do not care.”

Table 4
Configurational Solutions for Non-High Diversification and Non-High Innovation

Configurations	Panel III Non-High Diversification			Panel IV Non-High Innovation	
	S8	S9	S10	S11	S12
Organizational Contextuality					
Agglomeration Distance		⊗	⊗	⊗	⊗
TMT International Experience	⊗	●	●	⊗	⊗
State Ownership	⊗	⊗	⊗	●	⊗
International Path Dependence					
Depth of Internationalization (transactional dimension)	⊗	⊗	⊗	⊗	⊗
Breadth of Internationalization (structural dimension)	●	⊗	⊗	⊗	⊗
Geographic Practice					
Formal Institutional Friction	●	●	⊗	⊗	●
Informal Institutional Friction	⊗	⊗	●	●	⊗
Consistency	0.873	0.836	0.855	0.824	0.816
Raw Coverage	0.087	0.057	0.058	0.049	0.126
Unique Coverage	0.058	0.021	0.025	0.023	0.100
Representative EMFs	Ye Chiu	Shanghai Jahwa	Renfu Pharmaceutical	Huayu	Huadong Heavy Machinery
Overall Solution Consistency		0.870			0.810
Overall Solution Coverage		0.140			0.149

Note: Black circles indicate the presence of a condition, and circles with “X” indicate its absence. Large circles indicate core conditions, and small ones mean peripheral conditions. Blank spaces indicate “do not care.”

strategic emerging industries may yield more growth opportunities and obtain government support (NDRC, 2010), but may face additional challenges in navigating the institutional landscape abroad. On the other hand, these industries often focus on new and disruptive technologies and products that have the potential to transform existing markets or create new ones (Prud'homme, 2016). The analytical results and interpretation are shown in online Appendix 2.

Three additional tests (e.g., alternative time lag, alternative threshold, and alternative calibration) have verified the robustness of our analyses, shown in online Appendix 3.

Discussion

Interpretation of Configurational Results and Proposition Development

Aligned with the principle of equifinality, our study identifies three distinct configurations associated with high diversification and five configurations linked to high innovation, highlighting fundamental differences between these pathways. Beyond linking our findings to the guiding theory, we ground them empirically by illustrating each prototypical configuration with real-life examples from our sample. Our analysis identifies two prototypes associated with high diversification—*entrenching specialist* and *niche explorer*—and three prototypes associated with high innovation—*global adapter*, *transnational agent*, and *strategic aspirant*.

Taxonomy Associated with a High Level of Diversification

Prototype I. Entrenching specialist. Solution 1 defines *Entrenching Specialists* as EMFs characterized by a non-state-owned identity, deep involvement in operations in a small number of foreign markets, and a strong revenue dependence on these markets. These non-state-owned EMFs thrive in foreign markets with high formal and informal institutional frictions, turning challenging environments into opportunities for growth and diversification. Without government support due to their lack of state ownership, entrenching specialists also face geographic distance from home-country high-tech and FDI clusters, limiting access to advanced learning opportunities and innovation spillovers at home. However, they compensate for these constraints by leveraging their TMTs' extensive international experience, which enables them to navigate complex institutional landscapes and adapt effectively to local conditions. By embedding themselves deeply in host-country markets, Entrenching Specialists capitalize on international path dependence, using local knowledge to strengthen their market position. Their business model typically focuses on technologically mature, mass-produced products, which provide a stable foundation for navigating diverse market conditions. This strategic approach allows them to mitigate institutional frictions and achieve substantial diversification.

An example in our data is UniStrong Science & Technology (UniStrong), a Chinese pioneer in the geospatial market. In 2013, UniStrong acquired the global navigation satellite system technology business from Hemisphere GPS for \$15 million. This move marked a key step in UniStrong's internationalization, expanding its presence in the high-tech Canadian market. The acquisition enabled UniStrong to enhance the commercial applications of China's Beidou Navigation System, and further diversify its product lines (UniStrong, 2014). By leveraging its TMT international experience and deeply embedding itself in the local

market, UniStrong successfully addressed host-country institutional challenges to foster diversification. Overall:

Proposition 1: With high agglomeration distance and high TMT international experience, a combination of high transactional international path dependence and high institutional friction in geographic practice is associated with high diversification for non-state-owned EMFs.

Prototype II. Niche explorer. Solutions 2 and 3 describe a category of EMFs known as *Niche Explorers*, characterized by limited international path dependence in both transactional and structural dimensions and an aggressive geographic practice targeting countries where EMFs face high formal and informal institutional frictions. Despite their shared approach to internationalization, these two solutions reflect distinct organizational contextuality. EMFs reflected by Solution 2 are deeply rooted in their home country, benefiting from proximity to domestic high-tech and FDI clusters and state ownership, which provide critical access to home-country resources. These firms leverage domestic technological advantages and government support to expand into challenging foreign markets. Despite limited international depth and breadth and TMT's lack of global experience, they adopt targeted strategies to navigate institutional frictions to satisfy local demands and achieve high diversification by leveraging their home-country resources. A prime example is Hangzhou Oxygen Plant Group (Hangyang), a leading supplier of air separation and cryogenic petrochemical equipment. In 2014, Hangyang invested in Germany to expand its market reach, successfully integrating its products despite facing institutional frictions by capitalizing on state ownership support and domestic technological access.

In contrast, niche explorers reflected by Solution 3 have limited access to home-market technological and managerial resources. Operating far from domestic high-tech and FDI clusters and lacking TMT international experience, these firms do not benefit from state support. Instead, they use internationalization as a strategic tool to acquire advanced technologies, knowledge, and management practices from foreign markets. Targeting advanced economies, these EMFs overcome high institutional frictions by leveraging internationalization as a springboard, transferring acquired assets back to their home operations to develop unique ownership advantages and drive diversification. A typical example is Xinzhu Corporation, a non-state-owned enterprise specializing in bridge functional components and urban rail transit equipment. In 2014, Xinzhu invested in Germany, despite having limited domestic support and no TMT international experience. Through this investment, the firm successfully absorbed market knowledge, diversifying its product offerings and enhancing its competitive position.

Both Solutions 2 and 3 focus on exploring niche markets with limited depth and breadth of internationalization, and they share a common strategy of targeting countries that may bring both high formal and informal institutional frictions in their operations. However, their approaches differ: Solution 2 firms rely on state support and proximity to domestic clusters, while Solution 3 firms use internationalization as a tool for acquiring strategic assets from advanced economies. Overall:

Proposition 2: With low TMT international experience, a combination of low international path dependence and high institutional friction in geographic practice is associated with high diversification either for state-owned EMFs with low agglomeration distance or non-state-owned EMFs with high agglomeration distance.

Taxonomies Associated with a High Level of Innovation

Prototype III. Global adapter. Solutions 4a and 4b describe a category of EMFs known as *Global Adapters*, which are distinguished by their ability to achieve high innovation through strategic internationalization (e.g., based on TMT international experience) and multiple market adaptation. Their organizational contextuality is featured by TMTs with extensive international experience and limited proximity to home-country high-tech and FDI clusters, making them less reliant on domestic innovation ecosystems and more attuned to global opportunities. Global adapters maintain a broad but shallow international presence, expanding into multiple foreign markets while keeping their engagement relatively limited in depth. They thrive in environments with low formal institutional friction, where regulatory barriers are manageable, but face high informal institutional friction, such as cultural challenges. Rather than being hindered by these frictions, global adapters strategically allocate resources to adapt to local conditions, effectively navigating differences between home and host countries. This adaptive approach fosters innovation by driving the development of unique and efficient solutions tailored to diverse market needs. The balance of manageable formal friction and high informal friction enables global adapters to focus on innovation without being overwhelmed by regulatory complexities.

An example in our data is Lifan Industry (Lifan). In 2015, Lifan invested in Russia, establishing manufacturing facilities to expand its market presence. Leveraging its TMTs' global experience, Lifan successfully navigated informal institutional frictions and adapted its products to local needs. To strengthen its international reach, Lifan also established sales subsidiaries in Brazil and other countries, managing local marketing and expansion directly. Moreover, it invested in assembly plants in Uruguay and Ethiopia, further enhancing its global production network. By 2016, Lifan had filed 269 patent applications and ranked the fourth among Chinese passenger car exporters in the domestic market with Russia as its top-performing overseas market. This strategic synchronization of resources and adaptive approach highlights how global adapters drive innovation and maintain competitiveness in culturally challenging markets. Overall:

Proposition 3: With high agglomeration distance and high TMT international experience, a combination of high structural international path dependence and high informal institutional friction in geographic practice is associated with high innovation.

Prototype IV. Transnational agent. Solution 5 identifies *Transnational Agents*, characterized by their state-owned identity, which enables them to act as government agents when needed, and a broad scope of internationalization. They benefit from proximity to domestic high-tech and FDI clusters, leveraging these ecosystems alongside substantial government resources to support global expansion. While sharing similarities with niche explorers (Solution 2) in terms of state ownership and access to technological resources, transnational agents follow a different internationalization path. Unlike niche explorers, which tend to focus on a small number of markets, transnational agents exhibit a broader global reach, entering multiple foreign markets. This expansive approach enables them to accumulate valuable international insights and market knowledge, even when their TMT lacks extensive international experience. By combining domestic strengths with international exposure, transnational agents use internationalization as a springboard, facilitating bidirectional knowledge flow between home and host markets, which in turn drives high levels of innovation. Their

strategy often involves operating in markets where they face minimal formal institutional friction, which allows for efficient knowledge transfer and resource synchronization.

A prime example is Fiberhome, a state-owned enterprise that invested in India in 2012 to capitalize on the country's rapidly growing telecom sector. With Chinese governmental backing and broad international exposure, Fiberhome successfully established operations and partnerships, tailoring its products to meet local market needs and significantly boosting innovation. This move was part of its broader strategy to synchronize resources across global markets, with subsidiaries in countries such as Brazil, Germany, Malaysia, and Poland. This extensive network enhanced Fiberhome's global operations and knowledge sharing, reinforcing its ability to innovate. As a result, Fiberhome filed 311 patent applications, ranking in the top 10% among industry peers in China. Overall:

Proposition 4: With low agglomeration distance and low TMT international experience, a combination of high structural international path dependence and low institutional friction in geographic practice is associated with high innovation for state-owned EMFs.

Prototype V. Strategic aspirant. Solutions 6 and 7 identify *Strategic Aspirants*, characterized by limited access to home-country innovation agglomerations, low international path dependence, and conservative geographic practices. Despite facing constraints, these EMFs pursue innovation through strategies tailored to their ownership structures and resource availability.

Solution 6 represents non-state-owned strategic aspirants, which operate far from domestic high-tech and FDI clusters, limiting their access to domestic innovation ecosystems. Instead, they rely on the extensive international experience of their TMTs to navigate global markets effectively. Their international path dependence is defined by a focus on a small number of markets, reflecting the absence of both depth (intensive market engagement) and breadth (extensive global presence). These firms prioritize low-friction markets, avoiding complex regulatory environments to streamline resource allocation and drive innovation efficiently. Noposion exemplifies a non-state-owned strategic aspirant in our sample, which in 2013 expanded into Ukraine, a low-friction market, with a focus on product registration and trade activities. By bypassing regulatory complexities and optimizing its resource allocation, Noposion achieved a nearly 40% increase in net profits that year, demonstrating how targeted internationalization fosters innovation and growth.

Solution 7 reflects state-owned strategic aspirants that, like their non-state-owned counterparts, lack both depth and breadth in their internationalization efforts and target markets with minimal formal institutional friction. However, their state-owned status sets them apart, enabling them to access substantial government resources, such as financial backing, policy support, and strategic guidance. State-owned strategic aspirants often face similar challenges that non-state-owned ones face (Solution 6), such as limited TMT international experience and geographic distance from high-tech and FDI clusters. To overcome these constraints, they align their innovation efforts with government priorities, fulfilling mandates such as advancing specific technologies, fostering global partnerships, or promoting national interests. CITIC Heavy Industries (CITIC) represents a state-owned Strategic Aspirant, who in 2012 acquired Spain's Gandara Censa, establishing a core manufacturing base for Europe, Africa, and the Middle East. The acquisition enabled CITIC to access advanced technologies. Following the acquisition, Gandara Censa

reported a 142% increase in new orders and a 19% increase in profit, illustrating the success of its internationalization strategy.

While both types of strategic aspirants share similarities in targeting low-friction markets and exhibiting limited international path dependence, their approaches to achieving innovation and growth differ significantly. Non-state-owned strategic aspirants (Solution 6) rely on their TMT international experience and their inherent organizational agility to navigate global markets effectively and drive innovation. In contrast, state-owned strategic aspirants (Solution 7) leverage substantial government support and align their innovation efforts with state-driven mandates to achieve success. Overall:

Proposition 5: With high agglomeration distance, a combination of low international path dependence and low institutional friction in geographic practice is associated with high innovation either for state-owned EMFs with low TMT international experience or for non-state-owned EMFs with high TMT international experience.

Online Appendix 4 summarizes the five main prototypes identified and the corresponding configurations.

To highlight the differences between configurations associated with diversification and innovation, we compared Panel I and Panel II in Table 3, which reveal distinct patterns and strategic pathways. While diversification can sometimes lead to a diversification discount, where the costs and inefficiencies of expansion outweigh its benefits (Lee, Peng, & Lee, 2008), innovation does not necessarily follow the same pattern. For instance, EMFs that achieve diversification often encounter institutional frictions, which increase the need for embedding in host-country markets, whereas EMFs pursuing high innovation typically face fewer formal frictions, enabling greater flexibility in strategy execution. Moreover, for the international path dependence tenant, diversification tends to exhibit *depth*, as EMFs build upon established foreign market presence and leverage accumulated capabilities. In contrast, innovation is more likely to emphasize *breadth*, drawing on diverse knowledge sources and cross-border linkages to foster novel solutions. These findings underscore that the growth pathways (either diversification or innovation) vary across different organizational contexts, where variations in international path dependence and geographic practices shape distinct strategic outcomes.

Building on our analysis, we further compared the configurations associated with high and non-high diversification and innovation. The comparison between high (Solutions 1 to 3) and non-high diversification (Solutions 8 to 10) underscores the importance of deep market embedding. Successfully navigating formal and informal institutional frictions enhances EMFs' understanding of local dynamics, allowing them to effectively leverage international path dependence and organizational contextuality to achieve high diversification. In contrast, the comparison between high (Solutions 4a to 7) and non-high innovation (Solutions 11 and 12) highlights the critical role of organizational and geographic conditions in driving innovation. To attain high innovation, EMFs are required to draw on either internal organizational structures, such as TMT capabilities and knowledge integration; or external geographic dependencies, including proximity to innovation hubs and diverse knowledge networks.

Theoretical Contributions

Overall, three contributions emerge. First, recognizing the importance of understanding the sources of firm growth in the context of internationalization (Li et al., 2024; Peng et al.,

2018, 2024), we extend the literature on EMFs by employing a holistic assessment to examine how their internationalization activities drive firm growth. Because EMFs are deeply embedded in home- and host-country contexts and related geographic relations, they present contextual and organizational uniqueness in their internationalization (Deng et al., 2020). Leveraging a configurational approach, we assess those unique features and classify influential factors into *organizational contextuality*, *international path dependence*, and *geographic practice* to explore their impact on diversification and innovation, whose substantial impact on firm growth has been well acknowledged prior research on EMFs (Luo & Tung, 2018; Peng et al., 2018; Tan et al., 2020). We investigate the interdependencies among these three tenets, emphasizing the role of complex geographic relations and their combinatory effects in shaping growth pathways of EMFs. This study thus enriches the literature on sources of firm growth by integrating relational thinking with the unique organizational and contextual features of EMFs.

Second, we contribute to the geographic relational perspective by disentangling EMF internationalization through a configurational lens and extending the investigation to the outcomes of such activities. Responding to recent calls for innovative theoretical perspectives (Buckley et al., 2017), we advance the geographic relational perspective (Deng et al., 2020) as an addition to the existing theoretical landscape. While causal complexity is a cornerstone of this perspective, rigorous empirical studies have been scarce. Elia et al. (2020) made a pioneering attempt by identifying internationalization factors shaping subsidiary portfolios to influence innovation performance. However, their regression-based approach limits their analysis to net effects, thereby neglecting causal complexity. In contrast, our study leverages three sets of indicators—(1) agglomeration distance, state ownership, and TMT international experience for organizational contextuality; (2) depth and breadth of internationalization for international path dependence; and (3) formal and informal institutional frictions for geographic practice. More notably, our conceptualization of institutional friction offers a more nuanced reflection of relational contexts and interactions than conventional measures such as institutional distance. By applying this perspective, our study takes an initial step toward addressing this gap, opening avenues for multidimensional and comprehensive analysis.

Third, using a configurational approach, we uncover multiple equifinal pathways for achieving firm growth through high diversification or high innovation, complementing the distinctiveness of EMFs' internationalization strategies. These findings underscore that success in international markets is not governed by a universal formula, but rather by the intricate interplay of diverse elements uniquely tailored to a firm's specific context and objectives. We extend this analysis by developing a taxonomy—comprising *entrenching specialist*, *niche explorer*, *global adapter*, *transnational agent*, and *strategic aspirant*—to illuminate pathways to growth via internationalization. In contrast with traditional typologies, which are often theory-driven, our taxonomy is empirically derived, identifying distinct modes and patterns (Hotho, 2014). Leveraging a different methodological approach, we complement Elia et al. (2020) and push geographic relational research further. Moreover, we investigate the contingent role of strategic emerging industries in China, where government support through financing, taxation incentives, technological innovation, and talent acquisition plays a crucial role in fostering EMF development (NDRC, 2010; Prud'homme, 2016). Our findings support the specific impact of this contingency. Specifically, both high product diversification and innovation can be achieved if EMFs are located in strategic

emerging industries with an innovation focus and can leverage government support in their internationalization.

Practical Implications

Some tangible implications for EMF managers emerge. Understanding EMFs' international expansion through the lens of the geographic relational perspective can equip firms to more effectively seize growth opportunities. Our research underscores specific mechanisms through which EMFs can achieve high growth via, for instance, diversification to cope with underdeveloped host-country institutions (Tan et al., 2020) and/or frugal innovation (Peng et al., 2018). Our framework can guide managers in strategically selecting approaches that best align with their firms' unique organizational contexts, international path dependence, and geographic practices. Specifically, our findings reveal that while EMFs are often nascent in international markets, the intelligence-based (e.g., TMT international experience), space-based (e.g., agglomeration distance), and ownership-based (e.g., state ownership) elements in organizational contexts are critical conditions for them to cope with institutional frictions and leverage their international exposure for diversification and/or innovation (Sun et al., 2017). Meanwhile, given EMFs' specific organizational contexts and international path dependence, firm decisions on their specific geographic practice may lead to different outcomes (diversification or innovation) through multiple pathways (Kathuria et al., 2023). This nuanced understanding allows EMF managers to tailor strategies to specific contexts internationally.

Furthermore, our study reveals that EMFs' international expansion strategies are significantly influenced by the role of strategic emerging industries (see online Appendix 2). In such industries, an alternative strategic blend of geographic practices addressing a low level of institutional friction—coupled with a focused approach to the structural dimension of international path dependence—is linked to both high diversification and high innovation for EMFs with high state ownership, low TMT international experience, and proximity to agglomeration clusters. This implies that the strategic decision-making process in these environments requires a more nuanced approach, balancing various factors to optimize outcomes.

Limitations and Future Research Agenda

This study has several limitations that present opportunities for future research. First, the generalizability of a single country study is a limitation. The internal organizational contextuality and international path dependence observed in Chinese MNEs vary significantly from those in MNEs based in other emerging economies (Peng, 2012; Ramamurti & Hillemann, 2018). Future research can greatly benefit from a cross-country comparative analysis, especially drawing on samples of EMFs from other emerging economies such as India (Li et al., 2024).

Second, the limited time span of our sample may restrict the temporal and contextual generalizability of findings. The three geographic relational tenets of EMFs are not static, they can evolve significantly over time, particularly in response to exogenous shocks such as COVID-19. However, due to the limited time span of our study, we were unable to incorporate factors representing a temporal dimension. To address these dynamic aspects and capture the temporal dimension of the geographic relational framework, future research

should consider extending the observation period to enable a more comprehensive analysis of the evolving configurations.

Third, our study delineates pathways for EMFs to pursue high-growth opportunities through internationalization, with a specific focus on diversification and innovation. Nevertheless, it is important to recognize that these are not the only avenues for growth. EMFs may also expand and enhance their growth through other channels, such as broader global expansion or improved financial performance (Penrose, 1959; Tan et al., 2020). This presents an area for further exploration. Regarding causal conditions, our study, constrained by sample limitations, does not encompass all the facets that can be illuminated by our framework. For example, entry modes of EMFs such as acquisitions, which can influence geographic practices in host countries (Peng et al., 2024), are not fully addressed in our study. We encourage future studies to explore additional influential elements within this framework.

Conclusion

While effective growth through international expansion is widely acknowledged, how EMFs achieve this remains underexplored. Addressing this gap, we apply a geographic relational perspective to examine EMFs' internationalization strategies. We argue that by strategically configuring organizational contextuality, international path dependence, and geographic practices, EMFs can pursue diverse growth pathways through diversification and/or innovation. Using fsQCA, our analysis highlights the configurational nature of international growth strategies and reveals the intricate interplay among these factors. In conclusion, this study not only extends a new theoretical approach, but also enhances our understanding of the diverse prototypes through which EMFs orchestrate internationalization to foster growth.

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Notes

1. Broadly speaking, "diversification" can entail two dimensions: geographic diversification and product diversification (Sun et al., 2017). Given that "internationalization" typically refers to geographic diversification, for the purposes of this article, "diversification" only refers to product diversification.

2. In the geographic relational perspective, practice is defined as "everyday relational processes that constitute economic action and hold communities or firms together within, and in relation to, particular geographic contexts, networks, institutional structures, power hierarchies, and/or spatial scales" (Jones & Murphy, 2011: 375). Analyses of practice in this perspective suggests a close association with the strategy-as-practice literature, focusing on practices in and around strategic management (Jones & Murphy, 2011; Vaara & Whittington, 2012). Nevertheless, this definition does not reflect the standard practice theory view, which focuses on explaining the dynamics of everyday actions and addressing how practices are generated and changed (Feldman & Orlikowski, 2011).

3. Due to the unavailability of industry employment, we were unable to compute the LQ based on employment numbers. Following prior research (Head, Ries, & Swenson, 1995; Majocchi & Presutti, 2009; Shaver & Flyer, 2000), we utilized the number of firms in the industry as a proxy to measure the degree of agglomeration and calculate the LQ. The formula utilized in this study to calculate the LQ is as follows:

$$LQ = \frac{N_{i,ME} / N_i}{N_{n,ME} / N_n} \text{ where } N_{i,ME} \text{ denotes the total number of firms in the mechatronics and equipment (ME) industry in province } i, N_i \text{ denotes the total number of firms in province } i, N_{n,ME} \text{ denotes the total number of firms in the ME industry in China, and } N_n \text{ denotes the total number of firms in China. An LQ above 1 indicates that firms of the industry in the province exceed the national average, suggesting a specialized cluster (Cook, Pandit, Lööf, \& Johansson, 2012). The number of firms in specific industries was obtained from Fan, Huang, Zhou, Gai, Zhu, and Zhang (2022).}$$

4. PRI refers to an alternative measure of consistency for fuzzy sets based on a quasi-proportional reduction in error calculation (Jiang, Zheng, Fan, Zhang, & Li, 2021; Ragin, 2008). A recommended threshold is above 0.65 (Greckhamer, 2016).

5. We indicate the distinction between core and peripheral conditions for transparency but do not differentiate between them in our theoretical interpretations. This approach aligns with Dwivedi et al. (2018: 390), who suggest that "an interpretation of core conditions as being theoretically more important than contributing conditions is only relevant when one *a priori* theorizes about such a distinction" (see also Misangyi et al., 2017).

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