



Yang, W. and Meyer, K. E. (2020) How do local and foreign firms compete? Competitive actions in an emerging economy. *International Business Review*, 29(3), 101689.

(doi: [10.1016/j.ibusrev.2020.101689](https://doi.org/10.1016/j.ibusrev.2020.101689))

This is the Author Accepted Manuscript.

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

<https://eprints.gla.ac.uk/209975/>

Deposited on: 21 February 2020

How Do Local and Foreign Firms Compete?
Competitive Actions in an Emerging Economy

Wei Yang*

Lecturer in Strategy

Adam Smith Business School, University of Glasgow

University Avenue

Glasgow, G12 8QQ, U.K.

Tel: +44 141 330 5668

E-mail: wei.yang@glasgow.ac.uk

Klaus E. Meyer

Professor of International Business

Ivey Business School, Western University

1255 Western Road

London, Ontario, N6G 0N1, Canada

Tel: +1 512 661 2111

E-mail: kmeyer@ivey.ca

* Corresponding author

Acknowledgements: We thank the participants of the 2015 Academy of Management Meeting for helpful comments. We thank our former colleagues at the China Europe International Business School (CEIBS) for various forms of support. All remaining errors are our responsibility. Financial support from the National Natural Science Foundation of China [grant number 71732004], [grant number 71532005], [grant number 71672087] and [grant number 71272180], and CEIBS Center for Emerging Market Studies is gratefully acknowledged.

How Do Local and Foreign Firms Compete?

Competitive Actions in an Emerging Economy

Abstract

When foreign and local firms compete, they face competitors acting quite differently from themselves. Specifically, their ability to engage in timely and frequent actions is influenced by, respectively, the Liability of Foreignness (LoF) and the Liability of Localness (LoL). We explore how the trade-off between LoF and LoL influences the aggressiveness of competitive actions firms take in emerging markets. Specifically, we argue that LoF results in weaker government ties that inhibit the aggressiveness of competitive actions of multinational subsidiaries, while LoL results in weaker technological capabilities that inhibit competitive aggressiveness of domestic firms. We apply structural equation modelling on Chinese survey data to test hypotheses derived from these arguments and find empirical support. Our results shed new light on competitive dynamics in an emerging economy.

Keywords: competitive aggressiveness; competitive dynamics; liability of foreignness; liability of localness; environmental volatility; China

INTRODUCTION

Strategic management concerns the design of strategy as “*a coherent set of analyses and actions in response to an important challenge*” (Rumelt, 2011, p. 77). Such actions by rivals in the market place drive the dynamics of competition (Chen, 1996; Chen and Miller, 2015). The ability to design and implement competitive actions such as introducing new products and services thus is a major source of competitive advantage (Chen, Lin, and Michel, 2010; Ferrier, 2001; Nadkarni, Chen, and Chen, 2016). This ability is grounded in firm resources (Sirmon, Gove, and Hitt, 2008). However, we lack understanding of the resources enabling competitive actions in different types of firms.

A particular resource asymmetry prevails between foreign and local firms competing in the same market (Nachum, 2010; Wu and Salomon, 2017). Their substantially different resources lead them to pursue competitive advantage through fundamentally different strategies (Chang and Park, 2012; Dau, Ayyagari, and Spencer, 2015). Specifically, foreign firms face a liability of foreignness (LoF) (i.e., competitive disadvantages that foreign firms experience relative to domestic firms when doing business in a foreign location) due to their relative lack of familiarity with local markets and institutions (Zaheer, 1995; Zhou and Guillen, 2016). In contrast, local firms tend to have superior capabilities related to sensing and analyzing local market trends, which helps them to timely design and implement competitive actions.

On the other hand, local firms have limited access to resources outside their own country, which results in a liability of localness (LoL) (Jiang and Stening, 2013; Perez-Batres and

Eden, 2008; Un, 2016). Multinational enterprises (MNEs) typically have advantages in combining knowledge resources across borders, and in transferring such resources to host economies where they compete (Narula, Asmussen, Chi, and Kundu, 2019). These resources, also known as ownership advantages (Dunning, 1977), can be deployed to compete in local markets, though they usually need to be adapted to enable competitive advantage in host contexts (Meyer, Li, and Schotter, 2020).

Difference in resources has been shown to influence firm performance (Mezias, 2002; Zaheer, 1995), but we lack theory and evidence on the mediating mechanism through which foreignness influences strategic actions (Chen et al., 2010). To fill in this gap, we integrate international business and competitive dynamics theories to analyze competitive actions.

The differences between foreign and local firms are particularly pronounced in emerging economies where markets are typically both imperfect and volatile (Khanna and Palepu, 1997; Meyer and Peng, 2016). Under such conditions, aggressive competition is particularly critical to stay ahead in the competition (Hermelo and Vassolo, 2010). Yet, the competitive dynamics literature has investigated mainly advanced economies and provides few insights into the drivers of competitive actions in emerging economies (Chen and Miller, 2012; Wright et al., 2005). We thus focus our theorizing on economies with volatile markets such as China.

We fill these gaps by exploring the link between foreignness and competitive aggressiveness, which is defined as “the propensity of a firm to directly and intensely challenge rivals in order to maintain or improve its market position” (Yu, Subramaniam, and Cannella, 2009, p. 128). Our baseline argument is that the LoF impedes the strategic agility

of foreign-owned firms and reduces their competitive aggressiveness.

We focus on two mediating effects that are important in emerging economies. First, local government ties enable strategic flexibility and therefore aggressive competition (Luo, 2003; Wang, Hong, Kafouros, and Boateng, 2012a) but foreign firms are at a disadvantage of developing such ties. Second, MNEs, especially those from advanced economies, typically have advantages in combining resources across borders, and in deploying advanced technologies to host countries (Awate, Larsen, and Mudambi, 2015; Narula et al., 2019), which strengthen their ability to engage in competitive actions (Ndofor, Sirmon, and He, 2011).

Our study contributes to several lines of international business research. *First*, we shed new light on the question of how foreignness impacts investors' strategies in a host country (Jiang and Stening, 2013; Taussig, 2017). Specifically, we show how competitive aggressiveness, a key driver of firm performance, is influenced by foreignness via two distinct mediating effects. *Second*, in response to recent calls for more research on corporate political connections in international business (Cui et al., 2018; Sun, 2019), we provide a novel argument as to mechanisms through which government ties can benefit firms.

Third, we contribute to competitive dynamics scholarship (Chen et al., 2010; Ferrier, 2001) by exploring the antecedents of a critical construct in that literature, competitive aggressiveness. Specifically, we shed new light on *how* heterogeneity of firms' resource endowments influences the aggressiveness of actions. *Finally*, we respond to the call for competitive dynamics theorizing to be applied in emerging economies (Chen and Miller,

2015) by developing theory specifically relevant to business in emerging economies.

CONCEPTUAL FRAMEWORK

Competitive aggressiveness

Firms compete by interacting with each other in the market place, each designing and implementing strategic actions that aim to enhance competitive advantages over their rivals (Sirmon, Gove, and Hitt, 2008). To be effective, such actions need to be flexible and timely in engaging competitors, and thus depend on intricate knowledge of local competition. We focus on competitive aggressiveness, defined as “the propensity of a firm to directly and intensely challenge rivals in order to maintain or improve its market position” (Yu, Subramaniam, and Cannella, 2009, p. 128). Competitive aggressiveness reflects firms’ frequency and speed of taking actions such as new product launches or new market entries (Chen et al., 2010; Ferrier, 2001). In other words, competitive aggressiveness concerns the extent to which a firm engages with its rivals through a series of timely actions in specific local markets.

By undertaking more actions (action frequency) and acting more quickly (action speed), firms can strengthen their market position (Chen and Hambrick, 1995; Derfus et al., 2008), and thereby sustain their competitive advantage (D’Aveni, Dagnino, and Smith, 2010).

Empirical evidence shows that competitive aggressiveness drives firm performance in terms of market share gains (Ferrier, 2001; Ferrier, Smith, and Grimm, 1999) and financial results (Andrevski and Ferrier, 2019; Chen et al., 2010; Ferrier et al., 2002; Nadkarni et al., 2016).

However, this literature normally analyses competition as a dyadic phenomenon in advanced economies (Chen, 1996; Chen et al., 2010).

Yet, in emerging economies, markets typically involve many competitors with fluid market structures and frequent entries and exits (Chang and Xu, 2008; Williamson and Wan, 2019; Yang and Meyer, 2019), such that it is not meaningful to assume a small, fixed set of rivals (Kumaraswamy, Mudambi, Saranga, and Tripathy, 2012). Moreover, the volatility of market structures is amplified by frequent and hard-to-predict government interventions (Hoskisson et al., 2013; Park and Luo, 2001), resulting in intensive competitive rivalry in emerging markets (Chang and Xu, 2008; Kumaraswamy et al., 2012).

With a large number of firms in an industry, it is more likely that one of the many competitors initiates attacks to gain first-mover advantages in new market segments (Lieberman and Montgomery, 1988; Ketchen, Snow, and Hoover, 2004). Similarly, initial attacks by *any* competitor could trigger a counter-attack by *at least* one other player (Chang and Xu, 2008). As any competitive action invariably affects many other players, mutual forbearance – or tacit agreement not to compete – is harder to achieve (van Reeven and Pennings, 2016; Yu et al., 2009). Even if an attacker tried to avoid attacking a powerful rival, due to the asymmetric nature of rivalry that rival may perceive an attack and thus launch a competitive response (Mas-Ruiz, Ruiz-Moreno, and Ladron de Guevara Martinez, 2014). Therefore, to make competitive dynamics relevant to emerging economies, we drop the assumption of dyadic competition, and explore markets with many players.

Liabilities of foreignness and of localness

Competition between foreign and local firms is frequently discussed in the literature with reference to the concept of liability of foreignness (LoF), which refers to the competitive

disadvantages that foreign firms experience compared to domestic firms when doing business in a foreign location (Hymer, 1976; Zaheer, 1995). LoF arises from unfamiliarity with regulatory, economic, cultural and language differences, and from a lack of market knowledge at the local level (Zaheer, 1995; Zhou and Guillen, 2016). This LoF impedes MNE subsidiaries' ability to react swiftly to changes in the local market. Moreover, foreign firms may face challenges to their legitimacy because they are locally perceived as threat to the country's industrial development (Angeli and Jaiswal, 2015; Meyer et al., 2014). These concerns about legitimacy reduce the portfolio of feasible actions as certain high-profile actions may trigger adverse stakeholder reactions.

However, foreign firms normally bring with them technological and marketing assets that they are able to transfer across borders, and that help them to overcome their LoF. These assets, known as ownership advantages (Dikova, Panibratov, and Veselova, 2019; Dunning, 1977), provide a foundation for MNEs to compete in host countries. They arise from MNE subsidiaries' access to international networks and help them to develop their resources through interaction with both MNE parents and the local context of the host country (Andersson, Forsgren, and Holm, 2001; Birkinshaw, 1996). As a key ownership advantage, the ability of MNEs to leverage technological knowledge across subsidiaries in different contexts provides them critical competitive advantages over local rivals (Cantwell and Mudambi, 2005; Ghoshal and Bartlett, 1990; Kafouros, Buckley, and Clegg, 2012).

From the perspective of local firms, MNEs' better access to global resources presents a liability of localness (LoL) (Jiang and Stening, 2013; Perez-Batres and Eden, 2008; Un,

2016). Especially in emerging economies, local firms' technological capabilities are relatively weak compared to their foreign competitors from advanced economies (Awate, et al., 2015; Thakur-Wernz, Cantwell, and Samant, 2019). To overcome these weaknesses, local firms may develop government ties that enable them to attain early information on government actions, to access resources, and to negotiate favorable treatments (Acquaah, 2007; Li, Zhou, and Shao, 2009; Zeng and Glaister, 2016). Thus, theoretically, the impact of foreignness on competitive aggressiveness in emerging markets is ambiguous. In addition to the direct effect, we argue that the negative effect – LoF – works in particular through government relations, whereas the positive effect – absence of LoL – works through technology.

HYPOTHESES

Firms' ability to engage in aggressive competition depends on their resource profile. We argue that resource profiles differ between foreign and local firms with respect to technological capabilities (foreign MNEs' advantage through leveraging global resources) and government ties (foreign MNEs' disadvantage due to lack of local networks). These differences in resources affect firms' ability to engage in competitive actions and thereby mediate the effect of foreignness on competitive aggressiveness.

Foreignness and competitive aggressiveness

LoF may directly reduce the ability of foreign firms to compete aggressively in a local market for three reasons: lack of local competences, lack of local influence in strategic decision making, and the complexity of decision making in MNEs. *First*, foreign firms have, at least at the outset, fewer competences to manage context-specific economic and institutional

conditions such as consumer behavior, suppliers, distribution channels and regulatory requirements (Hermelo and Vassolo, 2010; Khanna and Palepu, 2010; Luo, Shenkar, and Nyaw, 2002). This lack of local competences slows competitive actions (Chen, 1996; Yu and Cannella, 2007). Especially competitor intelligence is likely weak due to the absence of specialized intermediaries and reliable data in emerging markets (Zeng and Glaister, 2016). Yet, only with well-developed channels to access information, a firm can identify competitors and timely react to their actions by, for example, launching new products or entering new market segments (Chang and Xu, 2008; Zeng and Williamson, 2003).

Second, foreign firms are normally embedded in the broader organization of the MNE, which typically prioritizes globally consistent strategies (e.g., brand image) and thereby reduces subsidiaries' flexibility to engage in strategic actions in fast-changing local markets (Doz and Prahalad, 1984). Thus, conflicts between headquarters and local management often inhibit strategy development and implementation in the subsidiary (Bouquet, Birkinshaw, and Barsoux, 2016; de Jong, et al., 2015; Yamin and Andersson, 2011). With limited knowledge of fast-evolving emerging markets, headquarters executives are not well positioned to design strategies related to local products and markets to counter competitive challenges in emerging markets (Williamson and Zeng, 2009). In fact, headquarters direct involvement in subsidiary strategizing has been shown to negatively affect subsidiary performance at least in some cases (Ciabuschi, Forsgren, and Martin, 2017).

Third, the organizational structure, systems and routines of an MNE tend to entail more complex decision-making processes than those of entrepreneurial local firms with simpler

structures and shorter decision-making chains (Sethi and Judge, 2009). In consequence, leaders of MNE subsidiaries have to follow formalized processes set by higher levels of the MNE hierarchy, and usually have limited authority to allocate resources, which result in rigidity in strategic decision making (Agneli and Jaiswal, 2015) and reduce subsidiaries' agility to respond to competition in their local market (Bouquet et al., 2016; Carnes et al., 2017). Moreover, MNEs may often have better access to resources based outside the country, but the processes of transferring, adapting and deploying such resources can be complex and time-consuming (Meyer et al., 2020).

In addition, firms react more aggressively when they have more to lose from inaction. Specifically, domestic firms depend on their local market and thus are likely to respond very aggressively to perceived threats to their core market (Chang and Xu, 2008; Zaheer and Mosakowski, 1997). In contrast, foreign companies compete in many national markets. This not only diversifies risk but facilitates mutual forbearance with respect to competitors they also meet in other locations, and thus reduce the intensity of competition (van Reeve and Pennings, 2016; Yu et al., 2009).

Thus, foreign firms not only lack the local ability to respond frequently and timely to intensive competition, they also have less incentives to act aggressively. We thus predict foreignness to be negatively associated with competitive aggressiveness:

Hypothesis 1: Foreign firms compete less aggressively than local firms.

Foreignness and government ties

In emerging markets, political networks and government ties are critical to attain competitive

advantages (e.g., Cui et al., 2018; Sun et al., 2012; Zheng, Singh, and Mitchell, 2015). Such ties are especially important where government agents discretionarily intervene in markets, information asymmetry is paramount, or institutional changes are frequent and unpredictable (Frynas, Mellahi, and Pigman, 2006; Luo, 2003). Government ties help firms, for example, to understand and influence the design and enforcement of new regulations, and reduce the risk of being caught out by unanticipated regulatory change (Acquaah, 2007; Luo, 2001).

Many studies show that in emerging markets government ties can enhance firm performance (Sun, et al., 2012; Sun, 2019) and domestic growth (Tan and Meyer, 2019), and shape international expansion strategies (Li, Meyer, Zhang, and Yuan, 2018; Morck, Yeung and Zhao, 2008; Wang, Hong, Kafouros, and Wright, 2012b). Moreover, government ties help firms to negotiate favorable treatment and implement strategic actions more speedily than rivals (Frynas et al., 2006; Hermelo and Vassolo, 2010; Zeng and Glaister, 2016). For example, Boubakri, Mansi and Saffar (2013) find that firms with strong government ties engage in more risk-taking investments. In contrast, firms failing to engage with the host government can experience adversarial government interventions that slow down their response to market demand (Zeng and Glaister, 2016).

Embedded in the local environment, domestic firms have more experience interacting with and gaining resources from government agencies, securing government contracts, and lobbying to place constraints on competitors (Dean and Brown, 1995; Li, Poppo, and Zhou, 2008). In addition, managers of local firms may share experiences with governmental officials, for example through job rotation between state firms and government positions

(Brødsgaard, 2012; Zheng et al., 2015). These channels for influence and information exchange enable local firms to respond quicker to external events affecting the competitive environment.

For foreign firms, the development of government ties is more challenging because they have less tacit knowledge of the administrative rules and processes, they lack experience in dealing with and influencing political authorities, and they lack personal ties with actual decision makers (Boisot and Child, 1999). Some foreign investors aim to reduce this gap by working with local business partners using informal or equity partnerships to acquire knowledge and ties (Mohr, Wang, and Goerzen, 2016; Tseng and Lee 2010). Yet, managing these partnerships is often an arduous challenge. Even if they hire retired officials or well-connected consultants as facilitators, foreign firms cannot compensate for the long-standing and socially embedded ties between local firms and local authorities (Feldman, 2013). Moreover, foreign firms usually have to follow corporate codes of conduct, including compliance with anti-corruption procedures that may inhibit the development of close ties with host country government officials (Cleveland et al., 2009; Gordon and Miyake, 2001). Thus, foreignness likely hinders the development of ties with local government, which in turn slows strategic decision making and inhibits the ability to flexibly take strategic actions:

Hypothesis 2: Foreign firms have weaker government ties than local firms, which in turn reduces their competitive aggressiveness. Hence, the effect of foreignness on competitive aggressiveness is negatively mediated by government ties.

Foreignness and technological capabilities

The competitive dynamics literature emphasizes the association of strategic actions with technological capabilities (Haleblian et al., 2012; Lavie, 2006; Ndofor et al., 2011), which refer to firms' ability to employ technological resources such as patents, technical expertise and technical knowledge (Afuah, 2002). Their deployment enables value creation (Rothaermel and Deeds, 2004), differentiation (Afuah, 2002), and market leadership (Lieberman and Montgomery, 1988). Specifically, technological capabilities enable the introduction of new and superior products and entry into new market segments (Moorman and Slotegraaf, 1999; Toh and Polidoro, 2013), and thus facilitate frequent and timely strategic actions, especially in fast-evolving markets (Chen et al., 2010).

Similarly, international business scholars emphasize technology as foundation of ownership advantages that provide MNEs with competitive advantages in host markets (Ciabuschi et al., 2017; Dunning, 1977). In particular, firms operating internationally can embed themselves in both the local business eco-system and their global corporate value chains, and thereby enhance their cost competitiveness and product innovativeness (Kafourous et al., 2012; Saranga, Schotter, and Mudambi, 2019). Moreover, MNEs are able to transfer technologies through internal sharing of knowledge, apply their global technological knowledge to various products and market segments, and exploit their relative technological advantages over less well-connected local firms (Anand and Delios, 2002; Meyer et al., 2020). Imported technologies help MNEs to develop localized technological capabilities that in turn enable competitive actions in the local market.

In contrast, local firms typically lack access to resources from a global MNE parent and

are generally more limited in international integration (Un and Cuervo-Cazurra, 2008). Even local firms joining global value chains often find themselves in peripheral roles with limited access to shared knowledge, which is largely restricted to exclusive inter-organizational relationships because MNEs tend to be concerned about unauthorized knowledge spillovers (Halaszovich and Lundan, 2016; McDermott and Corredoira, 2010). In addition, weak intellectual property rights protection not only limits local firms' capability to innovate and upgrade technology but also inhibits international transfer of knowledge (Mertha, 2005; Smeets and Vaal, 2016). In consequence, employees of local firms have fewer opportunities to integrate knowledge from different sources and to challenge existing assumptions about their businesses and products (Un, 2016).

Technological capabilities are major enablers of competitive actions (Haleblian et al., 2012; Ndofor et al., 2011). MNE subsidiaries have relative advantages in developing such capabilities because they can better access technologies from outside the country, which in turn strengthen their ability to act aggressively in dynamic competition. Thus, we propose:

Hypothesis 3: Foreign firms have stronger technological capabilities than local firms, which enhances their competitive aggressiveness. Hence, the effect of foreignness on competitive aggressiveness is positively mediated by technological capabilities.

METHODOLOGY

Research context: China

China provides a suitable empirical field for our research because intensive competition is taking place in markets that are both volatile and inefficient (Li and Qian, 2013;

Williamson and Wan, 2019). China has an unstable regulatory environment and a high degree of political influence on businesses (Banalieva, Eddleston, and Zellweger, 2015; Sun et al., 2012). Despite institutional change since the 1980s, the Chinese government still significantly influences the development of industries (Luo, Xue, and Han, 2010), and businesses need to engage with governmental authorities at central, provincial and local levels (Chan et al., 2010). For example, a recent business confidence survey conducted by the European Union Chamber of Commerce (2019) reports ambiguous rules and regulations in China that continue to challenge foreign businesses who felt unequally treated compared to local companies.

China's economic reforms and Open Door Policy have significantly encouraged inward foreign direct investment (FDI) to develop the Chinese economy, making China a leading destination for FDI over the past two decades. According to the World Investment Report (2012), China was the world's most attractive country to MNEs for 2012. In 2012, China attracted \$121 billion of FDI, with the total value of inward FDI stock at \$830 billion at the end of 2012 (MOFCOM). Foreign invested enterprises accounted for an annual average of 30% of total national industrial output (in value terms) between 2003 and 2010 (MOFCOM). The inflow of foreign investment has intensified competition, making China a particularly interesting field to study competitive dynamics (Chen, 2009; Williamson and Wan, 2019; Yang and Meyer, 2019).

Specifically, the exceptionally large size of the Chinese market has two implications. On the one hand, it creates vast opportunities for a large number of firms to co-exist as they can

target different market segments. On the other hand, the large number of incumbents makes within- and cross-segment competition intensive as firms try to exploit opportunities across segments (Qiu, Xu, and Sun, 2009; Williamson and Zeng, 2009). Due to relatively low technological requirements and low entry barriers, local firms compete on a low-cost basis, further intensifying competition in many industries (Chang and Park, 2012). In contrast, foreign MNEs often occupy higher ends of markets due to technological superiority (Ghemawat and Hout, 2008). In addition, foreign competition has eroded margins and accelerated innovation and differentiation (Driffield and Love, 2007). In this intense competition, frequent and timely actions can be critical to beat rivals.

We constructed our sample by deliberately selecting industries with many competitors, hence avoiding industries with oligopolistic and monopolistic market structures and/or where regulatory fiat may become the dominant driver of firm performance (e.g., energy and construction). These criteria secured that there was potential for intense competition by many players in the market. Prior studies find action aggressiveness to be more strongly associated with superior performance in fast-changing, hypercompetitive industries than in slow-changing industries (Chen et al., 2010; Nadkarni et al., 2016). Also, to test the impact of technology, we included both high-tech and low-tech manufacturing industries as well as services to obtain industry variation. Based on these criteria, we selected the following industries: food and beverages, textiles, electrical machinery, medical instruments, computing machinery, motor vehicles, and retail.

Sample and data collection

Prior competitive dynamics research mostly used archival data on competitive actions, most commonly structured content analysis (Chen and Miller, 2015). However, such archival data would limit our investigation on firm capabilities and competitive actions, the main focus of this research. In particular, capabilities such as government ties are hard to measure using secondary data. Moreover, texts for content analysis likely vary in their detail of reporting on foreign and local firms, which would create biases related to our focal explanatory variable. Hence, we conducted a survey of top managers to collect primary data.

Since responses to mail surveys are typically low in China (Li and Miller, 2006), we approached firms via the participants and alumni of China Europe International Business School (CEIBS), a leading Chinese business school operating multiple campuses, which had the largest Executive MBA and Executive Education program in Asia Pacific with more than 10,000 alumni and students. The respondents were senior decision-makers of the firms. We combined online and offline surveys to ensure a reasonable response rate and a broad representation of sample companies.

We first developed the questionnaire in English. Two translators (one of them being an author of this study) independently translated it into Chinese. The translators discussed inconsistencies until they reached an agreement. Prior to the survey, we conducted a pilot test to confirm the face and construct validity of the items in the questionnaire with 10 senior and mid-level managers. Based on their feedback, we improved the wording of the items.

We contacted senior managers of 2,620 firms in the selected industries in 2012. We addressed them with a personalized cover letter which promised a complimentary summary

of the results to the respondents. As suggested by Podsakoff, MacKenzie, Lee, and Podsakoff (2003), we aimed to reduce common method variance by allowing respondents not to disclose their name, and instructed them to answer the questions relying on an immediate impression after reading the questions rather than thorough analyzing. We sent two rounds follow-up reminders every two weeks and followed up by phone calls. We compared responding and non-responding firms on firm size, age and ownership type using the t-tests and found all t-statistics to be non-significant.

We received completed questionnaires from 426 firms (one respondent from each firm). Due to missing values and unsuitable responses,¹ we obtained 297 usable observations to form our research sample. We compared the 129 firms, which were excluded from our sample due to missing values and unsuitable responses, with our sample firms. No significant differences were found for firm age, firm size, and industry. Among the 297 respondents (240 Chinese, 13 other Asians, 31 Europeans, 12 Americans and 1 Australian), 135 held CEO, president or chairman positions, and 162 were in other senior management positions of Vice President, Chief Finance Officer (CFO), Chief Operation Officer (COO), board member, or founder. The average work experience of those in non-CEO/president/chairman positions was more than 10 years, which indicates that they were credible respondents with ample knowledge of the firm.

¹ 17 companies were headquartered in Hong Kong, Taiwan, Macau, Cayman Island and Singapore. As these firms may have Chinese ultimate parent and potentially confound our results, we excluded these observations from the analysis. As a robustness test, we included these 17 firms in Chinese firms (i.e., Greater China firms), which do not substantially alter our results.

Of the 297 firms, 62 percent had more than 500 employees, 68 percent were Chinese firms, and 32 percent were foreign firms. The foreign firms included 47 firms headquartered in Continental Europe, 39 in the USA/Canada, 5 in the United Kingdom, 2 in Australia/New Zealand, 1 in Japan, and 1 in Brazil (see Table 1). According to the OECD industry categorization, 45 firms in our sample were low-tech manufacturing (such as food and beverages, and textiles); 35 firms were medium-low tech manufacturing (such as building of ships, metal products and plastics products); 104 firms were medium-high tech manufacturing (such as electrical machinery, motor vehicles and transport equipment); 54 firms were high-tech manufacturing (such as pharmaceuticals, medical instruments, and computing machinery); 59 firms were services (such as retail and education) (Table 1). These industries represent dynamic and competitive industries in which firms engage in more frequent and fast competitive actions. The majority of our sample firms were located in Beijing, Shanghai, East Coast and South Coast of China where markets in general were more developed than the other parts of the country (Table 1). The sample provides a cross-section of businesses in China, with a good representation of medium to large firms.

INSERT TABLE 1 ABOUT HERE

Dependent variables

Following Ferrier, Smith, and Grimm (1999), we asked the respondents to aggregate each type of firm action of the given year (2011) to enable us to conduct the analysis on a firm-year level of analysis. This is appropriate because firms may pursue a set of interconnected actions over a certain period. Our dependent variable, *competitive*

aggressiveness, has been derived from a previously validated questionnaire instrument by Chen, Lin, and Michel (2010). Accordingly, competitive aggressiveness is composed of action speed and frequency for each of three types of actions: introducing new product, introducing new service, and market entry or market expansion (see Appendix 1). Action frequency captures the number of actions initiated by a firm, and action speed captures the speed of actions the firm takes in a given year (Andrevski, Brass, and Ferrier, 2016; Chen et al., 2010; Durfus et al., 2008; Nadkarni et al., 2016; Yu and Cannella, 2007). Competitive aggressiveness thus reflects the number of actions and the speed of conducting these actions within a year (Chen et al., 2010). Responses were obtained on a 7-point Likert scale (1 = “far slower than competitor”, 7 = “far faster than competitor”) for each type of actions. The correlation coefficient between action speed and action frequency is 0.79.²

The factor analysis of these six items using varimax rotation generated a single factor for competitive aggressiveness, suggesting a very close association between action speed and action frequency in our empirical field (see Appendix 1). Further tests discussed below confirm that action speed and frequency should be treated as a single construct as separate constructs for each would lack discriminant validity.

Independent variables

We employ previously validated measurement items to capture capability-based variables and some of the control variables (Appendix 1). The two types of capabilities are derived from the survey questionnaire. *Technological capabilities* are measured by respondent’s

² This is similar to Chen et al. (2010) who find a correlation coefficient is 0.84.

assessment of their underlying tacit knowledge base for capability in technology. We adopt from Zhou and Wu (2010) a four-item variable to measure firms' technological capabilities vis-à-vis their major competitors in the industry. Responses are obtained on a 7-point Likert scale (1 = "much worse than competitors", 7 = "much better than competitors"). *Government ties* capture the senior managers' connections with government authorities such as political governments, industrial departments, and other regulatory or support institutions such as tax bureaus, banks, and commercial administration bureaus. It is measured by three items adopted from Luo (2001). Responses were obtained on the same 7-point Likert scale.

Our hypotheses concern foreignness. LoF and LoL empirically can be measured by the reverse of one dummy variable (foreign versus local firm). Thus, we use a dummy variable to measure *foreignness*, with 1 for a foreign firm, and 0 for a local firm (Mezias, 2002) based on the ownership reported in the survey.³ As a majority ownership usually provides dominant decision making power, we define a firm as a local firm if at least 50% of the equity is owned by Chinese, and as a foreign firm if more than 50% of the equity is owned by foreigners.⁴

Control variables

We include firm-level control variables suggested in earlier literature (Ferrier et al., 2002; Zhou and Wu, 2010); these were constructed from data self-reported by survey respondents.

We measure *firm age* by the natural logarithm of the number of years since the year of

³ An alternative specification of LoF is explored as a robustness test.

⁴ No 50:50 joint ventures were in the sample. For the purpose of this research, all foreign firms were well established in China and provided products to Chinese customers rather than merely own manufacturing facilities to take advantage of the low cost in China.

establishment. *Firm size* is measured by the natural logarithm of the firm's total number of employees in 2011. *Industry* is controlled using the OECD industry scheme, including five categories: low-tech manufacturing, medium-low tech manufacturing, medium-high manufacturing, high-tech manufacturing, and services.⁵ Finally, firms' actions may differ depending on their *export orientation*, because the extent to which firms export may influence their behavior in local markets. We measure export orientation by the extent to which the company's total output is exported (1 = "0-5%", 2 = "6-25%", 3 = "26-50%", 4 = "51-100%"). We also control for market growth, using a three-item scale adapted from Zhou and Wu (2010) that measures the rate of growth of the industry in which the firm is operating. Responses were obtained on a 7-point Likert scale (1 = "strongly disagree", 7 = "strongly agree").

Structural equation method

We use AMOS 22.0 to perform a structural equation model (SEM) analysis, which, by definition, is a hybrid of factor and path analysis. SEM is particularly useful for analyses involving latent and observable variables, and where factors may variably be either regressors or regressands. In addition, SEM is useful for complex mediation analysis, wherein variables

⁵ This selection of industry is relevant to the measurement of the two types of capabilities – technological capabilities and government ties. We believe the selection of (medium) high-tech manufacturing, (medium) low-tech manufacturing, and services is important as both types of capabilities are equally important for our main arguments. By including all industry categories, we can better generalise our results. High-tech industries may seem more important than low-tech industries for technological capabilities. However, note that technological capabilities are measured as relative values, not absolute values (see Appendix 1). Thus, our empirical measure captures to what extent a specific firm is stronger or weaker relative to major competitors in terms of technological capabilities. The differences between high-tech and low-tech industries are captured by industry dummies.

are inter-linked. To implement the model, we followed the two-stage procedure recommended by Anderson and Gerbing (1988). Specifically, in the first stage we use confirmatory factor analysis (CFA) to test whether the variables selected to measure each construct show convergent validity (i.e., whether items are highly correlated with one another) and discriminant validity (i.e., whether variables clearly measured different constructs). In the second stage, we compute the structural model to test our hypotheses, based on the measurement model obtained in the first stage.

Overall model fit was assessed by major fit indexes – the comparative fit index (CFI; Bentler, 1990) and the incremental fit index (IFI, Bollen, 1989) – which were evaluated with the traditional cutoff value of 0.90 (Anderson and Gerbing, 1988). In addition, the root mean square error of approximation (RMSEA; Browne and Cudeck, 1992) was used to assess model fit; RMSEA of 0.05 or less indicate good models.⁶

RESULTS

Measurement model analyses

Table 2 reports basic statistics and correlations. Since our main independent variable, foreignness, captures factual rather than perceptual information, it is unlikely to be affected by common method variance (CMV) (Chang, van Witteloostuijn, and Eden, 2010). The

⁶ The CFI is used in describing comparative model fit as it corrects for small sample size by subtracting the degrees of freedom from their corresponding χ^2 values (Bentler, 1990). The IFI is used in describing incremental model fit and it also corrects for small sample size (Bollen, 1989). The RMSEA incorporates both model complexity (expressed in the degrees of freedom) and sample size in an analysis, and it is thus suggested for analyses relying on maximum likelihood (Browne and Cudeck, 1992) with smaller samples.

questions for competitive aggressiveness are also more fact-based items, hence reducing CMV.

INSERT TABLE 2 ABOUT HERE

Further, we have undertaken the following measures to minimize the chance of CMV and assess construct validity (Podsakoff et al., 2003). We adopt the two-step approach suggested by Anderson and Gerbing (1988) to estimate measurement models. First, we use CFA to assess the psychometric properties of the multiple-item scales used to measure these constructs. We estimate a four-factor (technological capabilities, government ties, action aggressiveness, and market growth) confirmatory measurement model. The model has a satisfactory fit to the data (overall model fit $\chi^2/df [91] = 1.49$, comparative fit index [CFI] = 0.98, incremental fit index [IFI] = 0.98, root mean square error of approximation [RMSEA] = 0.04). Then, we test a one factor model that represents the alternate conceptualization of this construct (overall model fit $\chi^2/df [97] = 12.18$, CFI = 0.57, IFI = 0.57, RMSEA = 0.19). Results indicate that the four-factor model provides a better fit. All factor loadings exceed 0.60 ($p < 0.05$), with all t -values greater than 6.61, providing evidence of convergent validity among our measures.

Moreover, we assess the discriminant validity of the measures in two ways. First, we calculate the shared variance between all possible pairs of constructs and compare it with the average variance extracted (AVE) of each construct. The results show that for each construct, the AVE is much higher than the highest shared variance, indicating discriminant validity.

Second, we assess discriminant validity using CFA models involving each possible pair of

constructs, with the correlation between the two constructs first fixed as 1 and then freely estimated. All χ^2 values of the freely estimated model are significantly lower than those of the restricted model, which supports discriminant validity (Anderson and Gerbing, 1988). The composite reliabilities of all constructs range from 0.80 to 0.92 (see Appendix 1). Overall, these results suggest that our constructs possess adequate measurement properties.

Table 3 presents summary statistics for all models estimated in both stages as well as difference statistics for all tests of one model against another. This measurement model reproduced the observed covariance matrix with a significant χ^2 statistic. Many researchers use the informal criterion that the model may be acceptable if the χ^2 value is less than twice the degrees of freedom (Bentler, 1990; Mesquita and Lazzarini, 2008). As our χ^2 of 135.12 is less than twice the degrees of freedom of 91, and all other goodness-of-fit index values are within expected ranges, we are confident that our model is strong and valid.

INSERT TABLES 2 and 3 ABOUT HERE

Structural model analyses

The second stage of our analysis focuses on path analyses with the latent and observed variables resulting from the measurement model obtained in the first stage. We examined modification indexes to see if any unspecified path could be added to improve model fit. Here, we found it necessary to add a covariance path between technological capabilities and the error term of government ties. In addition, we found that several elements in our model were correlated and that adding covariance paths among them would help ensure that our findings were robust. We thus added covariance paths between our main factors (technological

capabilities, government ties, foreignness), several control variables (i.e., market growth, firm age, and firm size), and the industry dummies. The best fit model identified is model 2 (Table 3), which represents the best theoretically sound and empirically strong model. It is thus depicted in Figure 1 and serves as basis for our hypothesis tests. As the path analyses results remain mostly unchanged whether our best model includes or excludes the single-item control variables (i.e., firm size, firm age, industry (dummies), export orientation), in the following, we only report the results without these control variables.

INSERT FIGURES 1 and 2 ABOUT HERE

Turning to hypothesis tests, in model 2, also depicted in Figure 1, foreignness has a negative direct impact on action aggressiveness that is significant ($\beta = -0.125$, S.E. = 0.130, $p = 0.046$); that is, foreign firms are less likely to act aggressively than local firms, supporting Hypothesis 1.

We tested for mediation using a bootstrapping approach.⁷ We find that the *indirect* effect of foreignness on action aggressiveness mediated through government ties is significant at 7.5% level ($\beta = -0.085$, $p = 0.075$).⁸ In other words, government ties mediate the relationship between foreignness and action aggressiveness.⁹ Together with the significant *direct* effect of

⁷ Bootstrapping is performed under 5000 bootstrap samples and 95% bias-corrected confidence level.

⁸ Note that the reported statistics on the mediation path are indirect effects, which are different from statistics of the direct effects in Figure 1. Also, we did not use the conventional cut-off levels of p-value of 0.05 or above as our benchmark. Instead, we used p-value of 0.1 for examining statistical significance for the mediation effects. We deem the effect size lies within reasonable range for a relatively small sample size like ours.

⁹ Following Haynes (2009), we hold that a direct effect between foreignness and action aggressiveness does not have to be present to establish a mediation effect. As long as the indirect effect of foreignness and action aggressiveness through the mediator, government ties, is present, we take that there is mediation effect.

foreignness on action aggressiveness in the model with government ties as a mediator ($\beta = -0.237, p = 0.080$), we infer that the effect of foreignness on action aggressiveness is partially mediated by government ties. Thus, Hypothesis 2 is marginally supported.

We use the same bootstrapping approach to test the *indirect* effect of foreignness on action aggressiveness mediated by technological capabilities. We find it significant at 6.5% level ($\beta = 0.084, p = 0.065$), and thus infer that technological capabilities mediate between foreignness and action aggressiveness.¹⁰ Together with the significant *direct* effect of foreignness on aggressiveness with technological capabilities as a mediator ($\beta = -0.255, p = 0.061$), this suggests that the effect of foreignness on action aggressiveness is partially mediated by technological capabilities. Thus, Hypothesis 3 is marginally supported.

Testing alternative models

As SEM provides information regarding the fit of a proposed model but cannot determine if that model is the “correct” one, we examined three theoretically plausible alternative models for foreignness (Table 3). The deployment of technology creates risks by showing new technologies to competitors, which may allow them to copy ideas and cause unauthorized diffusion of IP, known as technology leakage (Lamin and Ramos, 2016; Oxley, 1999). Due to foreign firms’ lack of experience in protecting their technology in the local environment, they are often more reluctant than domestic firms to apply advanced technology in countries where IP protection is weak (Mertha, 2005). This suggests a possible moderation effect of

¹⁰ Note that the reported statistics on the mediation path are indirect effects, which are different from statistics of the direct effects in Figure 1.

foreignness on the relationship between technological capabilities and aggressiveness instead of our hypothesized mediation.

The best fit model (Model 2, Table 3) was evaluated against a first alternative model (Model 3, Table 3) that includes a path from the interaction effect of foreignness and technological capabilities onto action aggressiveness and excludes the direct path from foreignness to technological capabilities. The second alternative model (Model 4, Table 3) includes a path from the interaction of foreignness and government ties onto action aggressiveness, and excludes the direct path from foreignness to government ties. This interaction suggests that domestic and foreign firms may differ in their utilization of government ties. The third alternative model (Model 5, Table 3) includes an interaction between foreignness and government ties affecting action aggressiveness instead of the mediation effect.

We use the Akaike information criterion (AIC), and the Browne-Cudeck criterion (BCC)¹¹ to compare our best models with the alternative models – one accepts the model with the lowest values (Akaike, 1987; Browne and Cudeck, 1992). As shown in Table 3, our best model is superior to the alternative models across all the indexes.

Additional robustness tests

In distinguishing foreign and local firms, one concern is the classification of joint ventures. In

¹¹ The AIC can be said to represent an operational way of trading off the complexity of an estimated model against how well the model fits the data (Akaike, 1987). Another measure with a similar intent, the BCC, is known to impose a slightly greater penalty for model complexity than does the AIC (Browne and Cudeck, 1992).

our main tests we divided firms by majority ownership. In a robustness test, we excluded all 29 foreign-local joint ventures, and ran the models with a subsample of firms that were either 100% Chinese or 100% foreign owned. We found that the effects do not vary substantially. We also considered different ownership types of Chinese firms (state-owned enterprises/SOEs, private firms, and other types such as joint ventures and collectives). The domestic firms include 147 private firms, 36 SOEs, 15 others, and 2 missing data. In a robustness test, we ran the models with a subsample of Chinese firms that were private together with all foreign firms. However, we found the effects do not vary substantially.

Some authors have argued that LoF may be stronger at early stages of foreign entry and decline over time as foreign firms accumulate local experience, networks and knowledge (e.g. Zaheer and Mosakowski, 1997). Hence, we developed an alternative measure of LoF, which captures the degree of foreignness. This measure is based on the inverse of 1 plus the number of years that a foreign firm has been operating in China (i.e. $1/(1 + \text{years of operation})$), and 0 for Chinese firms. We chose this functional form because it secures that with longer experience the value asymptotically approaches the value of local Chinese firms. Results of this robustness test show that some of the predicted effects are statistically not significant. The direct effect has the predicted negative direct effect on action aggressiveness, but is not significant ($\beta = -0.020, p = 0.776$). Thus, we are unable to find an association between the degree of foreignness and competitive aggressiveness. In terms of mediating effect, the impact of foreign firms' experience on local government ties and competitive aggressiveness shows the predicted positive mediated effect ($\beta = -1.269, p = 0.003$), whereas the mediation via technology is not statistically significant. The challenge of the robustness test is that two

thirds of our sample were local firms, and our sample of foreign firms was too small for detailed analysis of variations among these foreign firms. However, we take the results of the robustness test that foreign firms disadvantaged in developing government ties may be diminishing over time during their local presence.

A critical assumption underlying our construct of competitive aggressiveness is that it is an important driver of firm performance. To test this assumption and thus to enhance the external validity of our construct, we have regressed aggressiveness on firm performance (revenue growth). As secondary performance data was not available to all our sample firms, we used a subsample ($n = 106$) of firms, and found that aggressiveness has a significant positive effect on revenue growth ($p = 0.04$), confirming our assumption.

DISCUSSION

Contributions

Our study contributes to several lines of international business research. *First*, we explore how a key construct, foreignness (Jiang and Stening, 2013; Zaheer, 1995), impacts foreign investors' competitive strategies. Specifically, we argue that, through the interplay of LoF and LoL, foreignness reduces competitive aggressiveness (direct effect), a key driver of performance. However, the impact of foreignness on competitive aggressiveness is more complex than the direct effect. It also affects competitive aggressiveness through firm resources (mediation effects): on the one hand, foreignness weakens local government ties and thereby reduces foreign firms' competitive aggressiveness. On the other hand, foreignness is associated with stronger firm-specific technological capabilities, which enable

foreign firms to compete more aggressively. This suggests that technology-based ownership advantages support MNEs' performance abroad by enabling more aggressive competition.

Prior research has examined LoF and LoL separately (exceptions include Jiang and Stening, 2013; Un, 2016) and looked at them as two different constructs (e.g., Sethi and Judge, 2009). We argue that though the mechanisms through which LoF and LoL influence firms differ, they often occur simultaneously and have contrarian effects on firms: the disadvantages experienced by foreign firms can be the advantages of local firms, and vice versa. Thus, it is necessary to examine LoF and LoL and their impact together. By studying their opposing mediating effects, we go beyond the prior literature and contribute to our understanding on the relationship between foreignness, firm resources and competitive actions.

Second, we contribute to the literature on political ties in international business (Cui et al, 2018; Sun, 2019; Zheng et al., 2015) by analyzing their mediating role between foreignness and competitive aggressiveness. Specifically, our theoretical model suggests that the lack of government ties reduce foreign firms' ability to act speedily and frequently in dynamic competitive settings. The broader implication of this is that competitive dynamics are an important process through which government ties matter in emerging economies. In volatile markets, timely responses to new regulations or opening up of new market segments can provide critical first mover advantages, and such advantages may be facilitated by government ties (Frynas et al., 2006; Hermelo and Vassolo, 2010; Tan and Meyer, 2019). More agile responses to changing government policies in turn help local firms compensate

some of the resource disadvantages they have vis-à-vis globally operating MNEs.

Third, we contribute to the competitive dynamics perspective (Chen et al., 2010; Ferrier, 2001) by exploring the antecedents of a critical construct in that literature, competitive aggressiveness. Competitive dynamics research has largely been restricted to settings in which ‘relatively homogenous markets and competitors’ are presumed (Yu and Cannella, 2007, p. 663). Thus, we shed new light on how heterogeneity of firms’ resources influences the aggressiveness of actions they undertake – foreign firms are structurally different from local firms, allowing them to compete differently within the same context. Our study investigates the mechanism that underlines competitive behavior through the deployment of key resources – technology and government ties.

Finally, we contribute to strategy research in emerging markets (Meyer and Grosse, 2019; Wright et al., 2005) by applying competitive dynamics theorizing to the context of an emerging economy, where to date this perspective has rarely been applied (Chen and Miller, 2015). Strategizing in emerging economies needs to account for, among other influences, the role of government (Cui et al., 2018; Kafourous et al., 2012; Li et al., 2009), high market volatility (Li and Qian, 2013), and the fluidity of competitive markets with many players (Chang and Xu, 2008; Saranga, et al., 2019; Williamson and Wan, 2019). In addition to incorporating government ties, we contextualize theory to emerging markets by broadening the scope of market structures as dyadic competition (the primary focus of prior competitive dynamics literature) is rare in countries such as India and China (Yang and Meyer, 2019). Emerging economies are competitive with many new and established competitors, and low

barriers to entry, such that a dyadic study design cannot capture the essence of competitive dynamics in most industries (Chang and Xu, 2008). Building on Chen et al. (2010), we argue that emerging markets provide a hypercompetitive context which permits the examination of competition with many actual and/or potential rivals. This consideration of contexts with multiple competitors expands the scope of competitive dynamics research to encompass competition more broadly.

Limitations and future research

How far can we generalize our findings to other contexts? As the majority of our sample firms were located in relatively more developed areas within China, we propose that the empirical findings would be similar in other emerging economies with similar characteristics. In less volatile and more efficient markets, we would expect the same relationships, but their effect sizes would likely be smaller. For example, foreignness in most contexts reduces a firm's access to government authorities, but this is likely to be less critical in more efficient markets (Hermelo and Vassolo, 2010). Foreign firms building local expertise likely converge with local firms' resource portfolios and competitive strategies. This convergence, we propose, will happen faster under better developed market-supporting institutions, such as the rule of law. In summary, by examining a context with relatively inefficient markets, we highlight the context-bound nature of some of the drivers of competitive dynamics. However, these arguments merit empirical testing in other markets.

Limitations in our empirical study suggest avenues for future research. Our study focuses on industries where firms face multiple competitors in their product markets. This study

design is essential to make our analysis relevant to emerging economies. Yet, it limits direct comparability with studies of dyadic competition. We propose that future competitive dynamics research looks beyond dyads to examine more complex competitive settings.

We have been privileged to have access to a large pool of senior executives in China, specifically the participants and alumni of the EMBA and Executive Education programs of CEIBS. The school's enrollment reflects a broad section of senior leaders from a wide spectrum of businesses including private and state-owned firms and foreign-invested enterprises. However, this approach entails the possibility of selection bias, oversampling for example more successful firms as they would be more likely to send their executives to a top business school. As the school had three campuses in Beijing, Shanghai and Shenzhen, the executives were more likely to work in firms in these or nearby cities. Hence, there is also the possibility to oversample firms in relatively more developed areas in China.

Our study improves on previous studies by using survey data to directly measure concepts of interest such as technological capabilities. However, we did not include other important ownership advantages such as brand name in our survey, and our survey data is cross-sectional which does not allow examining competitive dynamics over time. Future research can utilize longitudinal data by collecting multiple surveys and combining survey data with secondary data to examine more fine-grained types of resources and their impact on competitive actions and corporate performance.

A particularly important question for both practice and theory concerns the role and characteristics of the MNE subsidiary (Meyer, et al., 2020). Structural characteristics of the

MNE-subsidary relationship, e.g. subsidiary autonomy, are known to affect subsidiary strategy and performance (Ambos, Asakawa, and Ambos, 2011; Geleilate, Andrews, and Fainshmidt, 2019). Moreover, individual characteristics and leadership styles of subsidiary managers play an important yet poorly understood role in shaping MNE subsidiaries' interactions with their local environment (e.g. Sarabi, Froese, Chng, and Meyer, 2020). Thus, future research ought to take a deeper look inside MNE subsidiaries to explain how they compete in host markets, perhaps taking a microfoundational approach that links micro-level processes such as managerial decision making to organization level outcomes such as subsidiary performance (Meyer, et al., 2020).

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Foreign investors face competitive advantages and disadvantages in host countries. The concepts of liability of foreignness (LoF) and liability of localness (LoL) help to explain these tensions. Specifically, we argue that, first, LoF weakens government ties, which are resources that foreign firms lack, and which in turn reduce their ability to act aggressively. Second, LoL weakens technological capabilities, which local firms are typically in a weaker position to develop, and which prevent them from competing aggressively.

For management practice, our study suggests that leaders of foreign firms in emerging markets ought to be aware that local firms can at times compete very aggressively despite their apparent weaknesses. Thus, foreign firms have to work on enhancing their strategic agility, and hence the ability to engage in strategic actions, or they have to pursue market segments where frequent and timely strategic actions are less critical. In contrast, local firms

need to be aware that foreign firms can also compete aggressively with the backing of the firm-specific advantages of the MNE parent. Hence, to further strengthen their domestic competitiveness, local firms may, for example, upgrade within their industry's global value chain or invest in various advanced economies to acquire technological capabilities.

References:

- Acquaah, M. (2007). Managerial social capital, strategic orientation, and organizational performance in an emerging economy. *Strategic Management Journal*, 28, 1235-1255.
- Afuah, A. (2002). Mapping technological capabilities into product markets and competitive advantage: The case of cholesterol drugs. *Strategic Management Journal* 23,171-179.
- Akaike, H. (1987). Factor analysis and AIC. *Psychometrika*, 52, 317-332.
- Ambos, B., Asakawa, K., & Ambos, T. C. (2011). A dynamic perspective on subsidiary autonomy. *Global Strategy Journal*, 1(3-4): 301-316.
- Anand, J., & Delios, A. (2002). Absolute and relative resources as determinants of international acquisitions. *Strategic Management Journal*, 23(2), 119-134.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two step approach. *Psychological Bulletin*, 103(3), 411-423.
- Andersson, U., Forsgren, M., & Holm, U. 2001. Subsidiary embeddedness and competence development in MNCs a multi-level analysis. *Organization Studies*, 22(6), 1013-1034.
- Andrevski, G., Brass, D. J., & Ferrier, W. J. (2016). Alliance portfolio configurations and competitive action frequency. *Journal of Management*, 42(4), 811-837.
- Andrevski, G., & Ferrier, W. J. (2019). Does it pay to compete aggressively? Contingent roles of internal and external resources. *Journal of Management*, 45(2), 620-644.
- Angeli, F., & Jaiswal, A.K. (2015). Competitive dynamics between MNCs and domestic companies at the base of the pyramid: An institutional perspective. *Long Range Planning*, 48, 182-199.
- Awate, S., Larsen, M. M., & Mudambi, R. (2015). Accessing vs sourcing knowledge: A comparative study of R&D internationalization between emerging and advanced economy firms. *Journal of International Business Studies*, 46(1), 63-86.
- Banalieva, E. R., Eddleston, K. A., & Zellweger, T. M. (2015). When do family firms have an advantage in transitioning economies? Toward a dynamic institution-based view. *Strategic Management Journal*, 36(9), 1358-1377.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246.
- Birkinshaw, J. M. (1996). How subsidiary mandates are gained and lost. *Journal of International Business Studies*, 27(3), 467-496.
- Boisot, M., & Child, J. (1999). Organizations as adaptive systems in complex environments: The case of China. *Organization Science*, 10, 237-252.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Boubakri, N., Mansi, S.A., & Saffar, W. (2013). Political institutions, connectedness, and corporate risk-taking. *Journal of International Business Studies*, 44, 195-215.
- Bouquet, C., Birkinshaw, J., & Barsoux, J. L. (2016). Fighting the headquarters knows best syndrome. *Sloan Management Review*, 57(2), 59-66.
- Brødsgaard, K. E. (2012). Politics and business group formation in China: The party in control? *China Quarterly*, 211, 624-648.
- Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods and Research*, 21(2), 230-258.

-
- Cantwell, J., & Mudambi, R. (2005). MNE competence-creating subsidiary mandates. *Strategic Management Journal*, 26, 1109-1128.
- Carnes, C. M., Chirico, F., Hitt, M. A., Huh, D. W., & Pisano, V. (2017). Resource orchestration for innovation: Structuring and bundling resources in growth- and maturity-state firms. *Long Range Planning*, 50, 472-486.
- Chang, S. J., & Park, S. H. (2012). Winning strategies in China. *Long Range Planning*, 45, 1-15.
- Chang, S. J., van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies*, 41(2), 178-184.
- Chang, S. J., & Xu, D. (2008). Spillovers and competition among foreign and local firms in China. *Strategic Management Journal*, 29, 495-518.
- Chen, M. J. (1996). Competitor analysis and interfirm rivalry: Toward a theoretical integration. *Academy of Management Review*, 21(1), 100-134.
- Chen, M. J. (2009). Competitive dynamics research: An insider's odyssey. *Asia Pacific Journal of Management*, 26, 5-25.
- Chen, M. J., & Hambrick, D. C. (1995). Speed, stealth, and selective attack: How small firms differ from large firms in competitive behavior. *Academy of Management Journal*, 38, 453-482.
- Chen, M. J., Lin, H. C., & Michel, J. G. (2010). Navigating in a hypercompetitive environment: The roles of action aggressiveness and TMT integration. *Strategic Management Journal*, 31, 1410-1430.
- Chen, M. J., & Miller, D. (2012). Competitive dynamics: Themes, trends, and a prospective research platform. *Academy of Management Annals*, 6(1), 135-210.
- Chen, M. J., & Miller, D. (2015). Reconceptualizing competitive dynamics: A multidimensional framework. *Strategic Management Journal*, 36(5), 758-775.
- Ciabuschi, F., Forsgren, M., & Martin, O. M. (2017). Value creation at the subsidiary level: Testing the MNC headquarters parenting advantage logic. *Long Range Planning*, 50, 48-62.
- Cleveland, M., Favo, C. M., Frecka, T. J., & Owens, C. L. (2009). Trends in the international fight against bribery and corruption. *Journal of Business Ethics*, 90(2), 199-244.
- Cui, L., Hu, H. W., Li, S., & Meyer, K. E., 2018. Corporate political connections in global strategy. *Global Strategy Journal*, 8(3), 379-398.
- Dau, L.A., Ayyagari, M., & Spencer, J. (2015). Strategic responses to FDI in emerging markets: Are core members more responsive than peripheral members of business groups? *Academy of Management Journal*, 58(6), 1869-1894.
- D'Aveni, R. A., Dagnino, G. B., & Smith, K. G. (2010). The age of temporary advantage. *Strategic Management Journal*, 31, 1371-1385.
- Dean, T., & Brown, R. (1995). Pollution regulation as a barrier to new firms entry: Initial evidence and implications for future research. *Academy of Management Journal*, 38, 288-303.
- Derfus, P. J., Maggitti, P. G., Grimm, C. M., & Smith, K. G. (2008). The red queen effect: Competitive actions and firm performance. *Academy of Management Journal*, 51(1), 61-80.

-
- De Jong, G., van Dut, V., Jindra, B., & Markek, P. (2015). Does country context distance determine subsidiary decision-making autonomy? Theory and evidence from European transition economies, *International Business Review*, 24(5), 874-889.
- Dikova, D., Panibratov, A. & Veselova, A. 2019. Investment motives, ownership advantages and institutional distance: An examination of Russian cross-border acquisitions, *International Business Review*, 28(4): 625-637.
- Doz, Y., & Prahalad, C. K. (1984). Patterns of strategic control within multinational corporations. *Journal of International Business Studies*, 15, 55–72.
- Driffield, N., & Love, J. H. (2007). Linking FDI motivation and host economy productivity effects: Conceptual and empirical analysis. *Journal of International Business Studies*, 38(3), 460-473.
- Dunning, J. H. (1977). *Trade, location of economic activity and the MNE: A search for an eclectic approach. The international allocation of economic activity*. London: Palgrave Macmillan, 395-418.
- European Union Chamber of Commerce. (2019). Business Confidence Survey 2019. www.europeanchamber.com.cn.
- Feldman, S. P. (2013). *Trouble in the middle: American Chinese business relations: Culture, conflict, and ethics*. London: Routledge.
- Ferrier, W. J. (2001). Navigating the competitive landscape: The drivers and consequences of competitive aggressiveness. *Academy of Management Journal*, 44(4), 858-877.
- Ferrier, W. J., Mac Fhionnlaoich, C., Smith, K. G., & Grimm, C. M. (2002). The impact of performance distress on aggressive competitive behavior: A reconciliation of competing views. *Managerial and Decision Economics*, 23(4-5), 301-316.
- Ferrier, W. J., Smith, K. G., & Grimm, C. M. (1999). The role of competitive action in market share erosion and industry dethronement: A study of industry leaders and challengers. *Academy of Management Journal*, 42(4), 372–388.
- Frynas, J. G., Mellahi, K., & Pigman, G. A. (2006). First mover advantages in international business and firm-specific political resources. *Strategic Management Journal*, 27, 321-345.
- Geleilate, J. M. G., Andrews, D. S., & Fainshmidt, S. (2019). Subsidiary autonomy and subsidiary performance: A meta-analysis. *Journal of World Business*, advance online publication November 29. <https://doi.org/10.1016/j.jwb.2019.101049>.
- Ghemawat, P., & Hout, T. (2008). Tomorrow's global giants: Not the usual suspects. *Harvard Business Review*, November, 80-88.
- Ghoshal, S., & Bartlett, C. A. (1990). The multinational corporation as an interorganizational network. *Academy of Management Review*, 15, 603-625.
- Gordon, K., & Miyake, M. (2001). Business approaches to combating bribery: A study of codes of conduct. *Journal of Business Ethics*, 34(3/4), 161-173.
- Halaszovich, T. F., & Lundan, S. M. (2016). The moderating role of local embeddedness on the performance of foreign and domestic firms in emerging markets. *International Business Review*, 25(5), 1136-1148.
- Haleblian, J., McNamara, G., Kolev, K., & Dykes, B. J. (2012). Exploring firm characteristics that differentiate leaders from followers in industry merger waves: A competitive dynamics perspective. *Strategic Management Journal*, 33, 1037-1052.

-
- Haynes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408-420.
- Hermelo, F. D., & Vassolo, R. (2010). Institutional development and hypercompetition in emerging economies. *Strategic Management Journal*, 31, 1457-1473.
- Hoskisson, R. E., Wright, M., Filatotchev, I., & Peng, M. W. (2013). Emerging multinationals from mid-range economies: The influence of institutions and factor markets. *Journal of Management Studies*, 50(7), 1295-1321.
- Hymer, S. H. (1976). *The international operations of national firms: A study of foreign direct investment*. Cambridge, MA: MIT Press.
- Jiang, F., & Stening, B. W. (2013). Do indigenous firms incur a liability of localness when operating in their home market? The case of China. *Journal of World Business*, 48(4), 478-489.
- Kafourous, M., Buckley, P. J., & Clegg, J. (2012). The effects of global knowledge reservoirs on the productivity of multinational enterprise: The role of international depth and breadth. *Research Policy*, 41(5), 848-861.
- Ketchen, D. J., Snow, C. C., & Hoover, V. L. (2004). Research on competitive dynamics: Recent accomplishments and future challenges. *Journal of Management*, 30(6), 779-804.
- Khanna, T., & Palepu, K. (1997). Why focused strategies may be wrong for emerging markets. *Harvard Business Review*, 75(4), 41-50.
- Khanna, T., & Palepu, K. (2010). *Winning in emerging markets: A road map for strategy and execution*. Boston, MA: Harvard Business School Press.
- Kumaraswamy, A., Mudambi, R., Saranga, H., & Tripathy, A. (2012). Catch-up strategies in the Indian auto components industry: Domestic firms' responses to market liberalization. *Journal of International Business Studies*, 43, 368-395.
- Lamin, A., & Ramos, M. A. (2016). R&D investment dynamics in agglomerations under weak appropriability regimes: Evidence from Indian R&D labs. *Strategic Management Journal*, 37(3), 604-621.
- Lavie, D. (2006). Capability reconfiguration: An analysis of incumbent responses to technological change. *Academy of Management Review*, 31(1), 153-174.
- Li, H., & Miller, T. (2006). New ventures in emerging markets: Comprehensive review and future directions. In H. Li (Ed.). *Growth of new technology ventures in China's emerging market* (pp. 11-24). Northampton, MA: Edward Elgar Publishing.
- Li, J., Meyer, K. E., Zhang, H., & Ding, Y. (2018). Diplomatic and corporate networks: Bridges to foreign locations. *Journal of International Business Studies*, 49(6), 659-683.
- Li, J. J., Poppo, L., & Zhou, K. Z. (2008). Do managerial ties in China always produce value? Competition, uncertainty, and domestic vs. foreign firms. *Strategic Management Journal*, 29(4), 383-400.
- Li, J. J., Zhou, K. Z., & Shao, A. T. (2009). Competitive position, managerial ties, and profitability of foreign firms in China: An interactive perspective. *Journal of International Business Studies*, 40, 339-352.
- Li, J. T., & Qian, C. L. (2013). Principal-principal conflicts under weak institutions: A study of corporate takeovers in China. *Strategic Management Journal*, 34, 498-508.
- Lieberman, M., & Montgomery, D. B. (1988). First-mover advantages. *Strategic Management Journal Summer Special Issue* 9, 41-58.

-
- Luo, Y. (2001). Toward a cooperative view of MNC-host government relations: Building blocks and performance implications. *Journal of International Business Studies*, 32(3), 401-419.
- Luo, Y. (2003). Industrial dynamics and managerial networking in an emerging market: The case of China. *Strategic Management Journal*, 24, 1315-1327.
- Luo, Y., Shenkar, O., & Nyaw, M.-K. (2002). Mitigating liabilities of foreignness: Defensive versus offensive approaches. *Journal of International Management*, 8, 283-300.
- Luo, Y., Xue, Q., & Han, B. (2010). How emerging market governments promote outward FDI: Experience from China. *Journal of World Business*, 45(1), 68-79.
- Mas-Ruiz, F. J., Ruiz-Moreno, F., & Ladron de Guevara Martinez, A. (2014). Asymmetric rivalry within and between strategic groups. *Strategic Management Journal*, 35(3), 419-439.
- McDermott, G. A., & Corredoira, R. A. (2010). Network composition, collaborative ties, and upgrading in emerging-market firms: Lessons from the Argentine auto parts sector. *Journal of International Business Studies*, 41(2), 308-329.
- Mertha, A. C. (2005). *The politics of piracy: Intellectual property in contemporary China*. Cornell University Press.
- Mesquita, L. F., & Lazzarini, S. G. (2008). Horizontal and vertical relationships in developing economies: Implications for SMEs' access to global markets. *Academy of Management Journal*, 51(2), 359-380.
- Meyer, K. E., Ding, Y., Li, J., & Zhang, H. (2014). Overcoming distrust: How state-owned enterprises adapt their foreign entries to institutional pressures abroad. *Journal of International Business Studies*, 45(8), 1005-1028.
- Meyer, K. E., & Grosse, R. (2019). Introduction to managing in emerging markets. In R. Grosse, & K. E. Meyer (Eds.) *The Oxford handbook of management in emerging markets* (pp. 3-34). New York: Oxford University Press.
- Meyer, K.E., Li, C. & Schotter, A.S. (2020). Managing the MNE subsidiary: Towards a multi-level and dynamic research agenda. *Journal of International Business Studies*, forthcoming.
- Meyer, K. E., & Peng, M. W. (2016). Theoretical foundations of emerging economy research. *Journal of International Business Studies*, 47(1), 3-22.
- Mezias, J. M. (2002). Identifying liabilities of foreignness and strategies to minimize their effects. *Strategic Management Journal*, 23(3), 229-244.
- MOFCOM (Ministry of Commerce People's Republic of China). www.fdi.gov.cn.
- Mohr, A., Wang, C., & Goerzen, A. (2016). The impact of partner diversity within multiparty international joint ventures. *International Business Review*, 25(4), 883-894.
- Moorman, C., & Slotegraaf, R. J. (1999). The contingency value of complementary capabilities in product development. *Journal of Marketing Research*, 36(2), 239-257.
- Morck, R., Yeung, B., & Zhao, M. (2008). Perspectives on China's outward foreign direct investment. *Journal of International Business Studies*, 39, 337-350.
- Nachum, L. (2010). When is foreignness an asset or a liability? Explaining the performance differential between foreign and local firms. *Journal of Management*, 36(3), 714-739.
- Nadkarni, S., Chen, C., & Chen, J. (2016). The clock is tickling! Executive temporal depth, industry velocity, and competitive aggressiveness. *Strategic Management Journal*, 37(6),

1132-1153.

- Narula, R., Asmussen, C. G., Chi, T. & Kundu, S. K. (2019). Applying and advancing internalization theory: The multinational enterprise in the 21st century. *Journal of International Business Studies*, 50: 1231-1252.
- Ndofor, H. A., Sirmon, D. G., & He, X. (2011). Firm resources, competitive actions and performance: Investigating a mediated model with evidence from the in-vitro diagnostics industry. *Strategic Management Journal*, 32, 640-657.
- Oxley, J. E. (1999). Institutional environment and the mechanisms of governance: The impact of intellectual property protection on the structure of inter-firm alliances. *Journal of Economic Behavior & Organization*, 38(3), 283-309.
- Park, S. H., & Luo, Y. (2001). Guanxi and organizational dynamics: Organizational networking in Chinese firms. *Strategic Management Journal*, 22, 455-477.
- Perez-Batres, L.A., & Eden, L., (2008). Is there a liability of localness? How emerging market firms respond to regulatory punctuations. *Journal of International Management* 14(3), 232-251.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903.
- Qiu, G., Xu, L., & Sun, X., (2009). Assessment of Chinese companies' competitiveness. SERI Quarterly July: 40-51. <http://www.seriworld.org>.
- Rothaermel, F. T., & Deeds, D. L. (2004). Exploration and exploitation alliances in biotechnology: A system of new product development. *Strategic Management Journal*, 25(3), 201-221.
- Rumelt, R. (2011). *Good strategy, bad strategy*. London: Profile Books.
- Sarabi, A., Froese, F. J., Chng, D. H. M. & Meyer, K. E. (2020). Entrepreneurial leadership and MNE subsidiary performance: The moderating role of subsidiary context. *International Business Review*, forthcoming.
- Saranga, H., Schotter, A. P. J., & Mudambi, R. (2019). The double helix effect: Catch-up and local-foreign co-evolution in the Indian and Chinese automotive industries. *International Business Review*, 28(5): 101495.
- Sethi, D., & Judge, W. (2009). Reappraising liabilities of foreignness within an integrated perspective of the costs and benefits of doing business abroad. *International Business Review*, 18, 404-416.
- Sirmon, D. G., Gove, S., & Hitt, M. A. (2008). Resource management in dyadic competitive rivalry: The effects of resource building and deployment. *Academy of Management Journal*, 51(5), 919-935.
- Sun, P. (2019). Corporate political ties in emerging markets. In R. Grosse, & K. E. Meyer (Eds.) *The Oxford handbook of management in emerging markets* (pp. 291-308). New York: Oxford University Press.
- Sun, P., Mellahi, K., & Wright, M. (2012). The contingent value of corporate political ties. *Academy of Management Perspectives*, 26(3), 68-82.
- Tan, D. & Meyer, K. E. (2019). Context-bridging and context-embedded experience: Growth drivers of emerging economy business groups. *Asia Pacific Journal of Management*, advance online, June 8, 2019.

-
- Taussig, M. (2017). Foreignness as both a global asset and a local liability: How host country idiosyncrasies and business activities matter. *Journal of International Business Studies*, 48(4), 498-522.
- Thakur-Wernz, P., Cantwell, J., & Samant, S. (2019). Impact of international entry choices on the nature and type of innovation: Evidence from emerging economy firms from the Indian bio-pharmaceutical industry. *International Business Review*, 28(6), access online.
- Toh, P. K., & Polidoro, F. (2013). A competition-based explanation of collaborative invention within the firm. *Strategic Management Journal*, 34, 1186-1208.
- Tseng, C. H., & Lee, R. P. (2010). Host environmental uncertainty and equity-based entry mode dilemma: The role of market linking capability. *International Business Review*, 19(4), 407-418.
- Un, C. A. (2016). The liability of localness in innovation. *Journal of International Business Studies*, 47(1): 44-67.
- Un, C.A., & Cuervo-Cazurra, A. (2008). Do subsidiaries of foreign MNEs invest more in R&D than domestic firms? *Research Policy*, 37, 1812-1828.
- van Reeven, P. & Pennings, E. (2016). On the relation between multimarket contact and service quality: Mutual forbearance or network coordination? *Strategic Management Journal*, 37, 2121-2134.
- Wang, C., Hong, J., Kafouros, M., & Boateng, A. (2012a). What drives outward FDI of Chinese firms? Testing the explanatory power of three theoretical frameworks. *International Business Review*, 21, 425-438.
- Wang, C., Hong, J., Kafouros, M., & Wright, M. (2012b). Exploring the role of government involvement in outward FDI from emerging economies. *Journal of International Business Studies*, 43(7), 655-676.
- Williamson, P. J., & Wan, F. (2019). How real are the opportunities for multinationals in China? In R. Grosse, & K. E. Meyer (Eds.) *The Oxford handbook of management in emerging markets* (pp. 745-762). New York: Oxford University Press.
- Williamson, P. J., & Zeng, M. (2009). Value-for-money strategies for recessionary times. *Harvard Business Review*, March, 66-74.
- World Investment Report. (2012). UNCTAD.
https://unctad.org/en/PublicationsLibrary/wir2012overview_en.pdf
- Wright, M., Filatotchev, I., Hoskisson, R. E., & Peng, M. W. (2005). Strategy research in emerging economies: Challenging the conventional wisdom. *Journal of Management Studies*, 41(1), 1-33.
- Wu, Z., & Salomon, R. (2017). Deconstructing the liability of foreignness: Regulatory enforcement actions against foreign banks. *Journal of International Business Studies*, 48, 837-861.
- Yamin, M., & Andersson, U. (2011). Subsidiary importance in the MNC: What role does internal embeddedness play? *International Business Review*, 20(2), 151-162.
- Yang, W., & Meyer, K. E. (2019). How does ownership influence business growth? A competitive dynamics perspective. *International Business Review*, 28(5), #101482.
- Yu, T., & Cannella, A. A. (2007). Rivalry between multinational enterprises: An event history approach. *Academy of Management Journal*, 50(3), 663-684.
- Yu, T., Subramaniam, M., & Cannella, A. A. (2009). Rivalry deterrence in international

-
- markets: Contingencies governing the mutual forbearance hypothesis. *Academy of Management Journal*, 52(1), 127-147.
- Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2), 341-363.
- Zaheer, S., & Mosakowski, E. (1997). The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic Management Journal*, 18(6), 439-464.
- Zeng, J., & Glaister, K. W. (2016). Competitive dynamics between multinational enterprises and local internet platform companies in the virtual market in China. *British Journal of Management*, 27, 479-496.
- Zeng, M., & Williamson, P. J. (2003). The hidden dragons. *Harvard Business Review*, 81(10), 92-97.
- Zheng, W., Singh, K., & Mitchell, W. (2015). Buffering and enabling: The impact of interlocking political ties on firm survival and sales growth. *Strategic Management Journal*, 36(11), 1615-1636.
- Zhou, K. Z., & Wu, F. (2010). Technological capability, strategic flexibility, product innovation. *Strategic Management Journal*, 31, 547-561.
- Zhou, N., & Guillen, M. F. (2016). Categorizing the liability of foreignness: Ownership, location, and internalization-specific dimensions. *Global Strategy Journal*, 6, 309-329.

Table 1. Structure of the sample firms by location in China, industry, and country of origin

Location in China	Number of firms
Beijing	34
Shanghai	107
North East of China	5
East Coast of China	70
South Coast of China	47
Central China	13
West of China	15
Missing data	6
Country of origin	
China (domestic firms)	202
Continental Europe	47
USA/Canada	39
United Kingdom	5
Other	4
Industry	
High-tech manufacturing	54
Medium-high tech manufacturing	104
Medium-low tech manufacturing	35
Low-tech manufacturing	45
Services	59
Total	297

Table 2. Basic statistics and correlations

<i>Variables</i>	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	12	13
1 Firm age (log.)	1.10	0.36												
2 Firm size (log.)	2.99	0.88	0.49											
3 Industry: high-tech manuf.	0.18	0.39	-0.10	-0.01										
4 Industry: medium-high tech manuf.	0.35	0.48	0.11	0.06	-0.35									
5 Industry: medium-low tech manuf.	0.12	0.32	0.00	-0.04	-0.17	-0.27								
6 Industry: low-tech manuf.	0.15	0.36	0.12	-0.01	-0.20	-0.31	-0.15							
7 Industry: services	0.20	0.40	-0.15	-0.02	-0.23	-0.37	-0.18	-0.21						
8 Export orientation	1.94	1.12	0.02	-0.01	0.11	0.10	0.04	-0.05	-0.21					
9 Market growth	5.19	1.22	-0.04	0.00	-0.06	-0.06	-0.04	0.03	0.13	-0.17				
10 Foreignness (foreign firm = 1)	0.32	0.47	-0.07	-0.14	0.01	0.09	0.01	0.01	-0.13	0.17	0.02			
12 Technological capabilities	5.20	0.99	-0.02	0.10	-0.09	0.00	0.06	0.07	-0.02	0.03	0.21	0.11		
13 Government ties	4.62	1.40	0.25	0.36	-0.09	-0.07	0.06	0.03	0.10	-0.15	0.15	-0.36	0.17	
14 Action aggressiveness	4.70	1.03	0.03	0.17	-0.05	-0.07	0.07	0.02	0.05	0.15	0.23	-0.14	0.39	0.27

Notes: N = 297.

Table 3. Model statistics and testing sequence for the relationship of foreignness, technological capabilities, government ties and action aggressiveness ^a

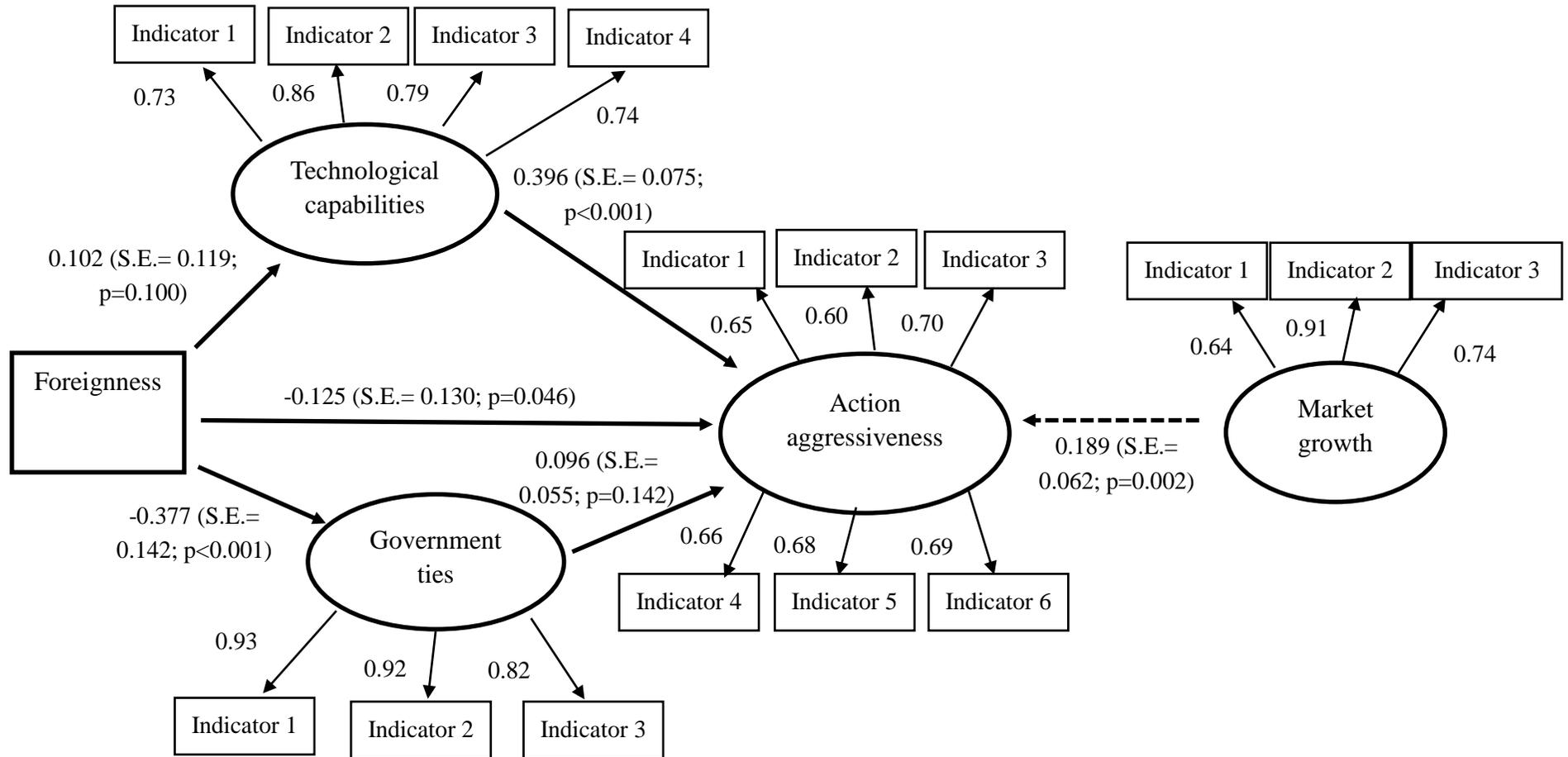
(a) Statistics									
Models	χ^2	<i>df</i>	Proba bility	NFI	CFI	IFI	RM SEA	AIC	BCC
Model 1. Measurement	135.12	91	0.002	0.95	0.98	0.98	0.04	257.12	264.55
Model 2. Best model for foreignness	162.28	106	0.000	0.94	0.98	0.98	0.04	290.28	298.57
Model 3. Alternative model 1	182.51	122	0.000	0.93	0.98	0.98	0.04	316.51	325.70
Model 4. Alternative model 2	178.93	120	0.000	0.94	0.98	0.98	0.04	316.93	326.40
Model 5. Alternative model 3	203.11	137	0.000	0.93	0.98	0.98	0.04	347.11	357.55

(b) Testing sequence and difference tests

Comparison	$\Delta\chi^2$	Δdf	ΔAIC	ΔBCC
Model 2 vs. 3	20.23	16	26.23	27.13
Model 2 vs. 4	16.65	14	26.65	27.83
Model 2 vs. 5	40.83	31	56.83	58.98

^a Results are based on maximum likelihood (ML) estimation, which tends to produce unbiased estimators under assumptions of normality (Browne and Cudeck, 1993). Critics argue, however, that ML estimators rely heavily on the assumption of normal distribution and have proposed that small-sample analyses should rely instead on generalized least squares (GLS). For comparison, GLS estimates for model 2 are as follows: CFI = 0.94, IFI = 0.95, RMSEA = 0.03. We are thus confident our data set does not severely depart from normality.

Figure 1. Results of the SEM model with foreignness



$n = 297$. Ellipses are latent factors; rectangles are observed variables. Standardized factor loadings and path coefficients are presented. Standard errors and p-values are in brackets. Solid lines represent direct effects and dotted lines, control paths with latent variables.

Appendix 1: Measures and questionnaire items

Variables and items	SFL
Technological capabilities: Please rate your company, <i>relative to</i> your major competitors in terms of its technological capabilities in the following areas. Circle a number for each capability (1 = much worse than competitors, 7 = much better than competitors). CR = 0.86	
1. Acquiring important technology information	0.73
2. Identifying new technology opportunities	0.86
3. Responding to technology changes	0.79
4. Practising continuous innovation	0.74
Government ties: Please rate your company, <i>relative to</i> your major competitors in terms of whether your senior management team has established and maintained managerial or personal ties and connections with <u>officials</u> at each of the following government authorities and institutions (1 = much worse than competitors, 7 = much better than competitors). CR = 0.92	
1. Political leaders in various levels of the government	0.93
2. Officials in industrial bureaus	0.92
3. Officials in regulatory or support institutions such as tax bureaus, banks, and commercial administration	0.82
Action aggressiveness: For each of the strategic actions listed below, has your company initiated the action in the last 12 months, and how speedily/how often has it been doing that, <i>relative to</i> the major competitor? CR = 0.86	
1. Action Speed - Introducing brand new product	0.65
2. Action Speed - Introducing new service	0.60
3. Action Speed - Entering new market or market expansion	0.70
4. Action Frequency - Introducing brand new product	0.66
5. Action Frequency - Introducing new service	0.68
6. Action Frequency - Entering new market or market expansion	0.69
Market growth: To what extent do you agree with the following statements regarding market growth of your main business activity in China? (1 = strongly disagree, 7 = strongly agree) CR = 0.80	
1. The growth rate of this industry in the past three years was high.	0.64
2. Market demand in this industry is growing rapidly.	0.91
3. The many potential customers in this industry provide major opportunities for my company.	0.74

Notes: CR = construct reliability; SFL = standardized factor loading.