

The Role of Foreignness in the Relationship between Disruptive Innovation and MNE Performance

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ABSTRACT

The innovation-performance literature has failed to make a distinction between the effects of incremental and disruptive innovation on multinational enterprise (MNE) performance. The understanding of the role of foreignness has overemphasized the negative side. From the institutional anomie theory perspective, this study investigates how foreignness, which consists of national culture, industrial competition, and innovative national capacity, affects the relationship between disruptive innovation and MNE performance. We illustrate the distinctiveness between incremental and disruptive innovation and then build a conceptual model to show the moderating role of foreignness on the innovation-performance link. The model suggests that foreignness provides contextual conditions under which the relationship between disruptive innovation and MNE performance is either strengthened or impeded. Also, firm-level cultural intelligence (CQ) can help MNEs to overcome the negative effects of foreignness, as well as enhance its positive effects. Propositions are discussed for further research.

KEYWORDS

Innovation, MNEs, performance, competitive advantage, foreignness, cultural distance, national innovative capacity

INTRODUCTION

Airbnb, a company that provides an online marketplace and hospitality service, has grown extremely rapidly and is now selling millions of room nights globally every year. The company, who describes itself as “a trusted community marketplace for people to list, discover, and book unique accommodations around the world, introduces a “new-to-the-world” model to the travel industry and outperforms the key competitors such as Expedia, Hotels.com, Orbitz, and Priceline in terms of market share and financial returns. The innovation model espoused by Airbnb can be viewed through the lens of disruptive innovation, which is introduced by Schumpeter (1942). In general, a disruptive innovation transforms a market, and the companies that own the disruptive innovation are more likely to outperform rivals.

Current studies have demonstrated that innovation improves MNE performance. As a key for value creation and sustainability, innovation is an essential type of knowledge-generating capability, and MNEs have long been at the forefront of the pursuit of positive performance generated by innovation (Han, Kim, & Srivastava, 1998; Laursen & Salter, 2006). However, previous studies have overemphasized the influence of incremental innovation on performance and ignore the impact of disruptive innovation.

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Under globalization, competing in culturally distant countries is a challenge for MNEs due to the liability of foreignness (See Dunlap, Parente, & Geleilate, 2016; Eden & Miller, 2004; Edman, 2016; Hsu, Lien, & Chen, 2015), which has long been seen as an obstacle for MNE's international market entry (Chen, Griffith, & Hu, 2006) and post-entry performance (Qian, Li, & Rugman, 2013). Due to the cultural paradox (Brouthers & Brouthers, 2001), the results of studies on the role of foreignness on MNEs' strategies and performance are mixed. For example, recent studies suggested that foreignness as a double-edged sword and may bring benefits for MNEs (Tung & Verbeke, 2010; Un, 2011). Take Airbnb as an example, the "disruptive" service model helps the firm to acquire market share by changing the industrial landscape in foreign countries, such as French, China, Japan, and Thailand. Thus, the role of foreignness in the innovation-performance relationship needs a more comprehensive scrutinize. In the existing literature, the prevalent "distance" metaphor suggests that the cross-cultural differences on national culture (Chua, Roth, & Lemoine, 2015), religion, education, firms' absorptive capability (Kostopoulos, Papalexandris, Papachroni, & Ioannou, 2011), institutional environment (Bylund & McCaffrey, 2017), and economic/technology development hinder the potential benefits of innovation due to the increased transaction costs and uncertainties. However, another stream of the study argues that the IB field needs to have a more balanced treatment on the "distances" (Tung & Verbeke, 2010). In some circumstances, the "distances" can bring positive outcomes for firms (Un, 2011). Shed lights on the previous studies, we argue that foreignness can play different roles in the relationship between disruptive innovation and MNE performance. Thus, we introduce a conceptual model to explore the relationship between disruptive innovation and MNE performance in a global context and argues that MNEs can benefit from foreignness to acquire a competitive advantage.

LITERATURE REVIEW

Incremental and Disruptive Innovation

There are two types of innovation, which are traditional (incremental) innovation and disruptive. Incremental innovation helps firms to achieve and sustain competitive advantages. As Teece (2007) suggested, the productivity of an enterprise's R&D functions as the foundation of its success. The R&D helps the enterprise to acquire new product introductions, adopt best practices, and deliver quality products to end-users. Thus, firms need to enhance the capabilities of intellectual development to generate and implement innovations and to achieve and sustain competitiveness. Firms relying on incremental innovation use path-dependent routines, assets, and strategies developed to cope with existing technologies, and are handicapped in making or adopting radical, competency-destroying, non-cumulative innovation (Nelson & Winter, 1982; Tushman & Anderson, 1986; Henderson & Clark, 1990). Incremental innovation can bring stability and may help the firm to maintain its market share and competitiveness. But the benefits of disruptive innovation should not be ignored. When the competition is intense, the ability of incremental innovation to increase the attractiveness of products or services is limited, firms can invest in disruptive innovation to "create" a new market and change the competitive structure in the market, which helps them to outperform rivals.

The term disruptive innovation originates from the concept of creative destruction, which refers to innovations in the manufacturing process that increase productivity (Schumpeter, 1942). He also mentioned that creative destruction is the overall process of change and adaptation of actual industries to novelties (Schumpeter, 1942). As a workable mechanism that brings creative destruction to reality, Christensen (1997) defines disruptive innovation as a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up the

market, eventually displacing established competitors. Christensen's (1997) theory viewed disruptive innovation as the inner development of creative destruction and emphasized on its impacts on competition. As disruptive innovation is a powerful means of broadening and developing new markets and providing new functionality that may disrupt existing market structures, we argue that it can be a source of competitive advantage for MNEs operating culturally distant countries where innovations are more closely associated with performance (Azar & Drogendijk, 2014, 2016). Surprisingly, the impact of disruptive innovation in performance has been limited. We believe that disruptive innovation is critical to clarify how disruptive innovation casts an influence on MNE performance under different socio-cultural conditions across countries. One of the key findings of Christensen's work is that disruptive technological innovations eventually grow to dominate the market. Christensen and Raynor (2003, p. 69) stated that "... disruption is a process and not an event... it might take decades for the forces to work their way through the industry, but [they] are always at work." Therefore, we argue that incremental innovation and disruptive innovation have different influences on MNE performance. Incremental innovation is a continuous progress of competency improvement and product development of a company, which happens within the boundaries of the existing market and technology or process of an organization (Assink, 2006). This type of innovation often carries a low level of uncertainty and is accompanied by lower financial and market-acceptance risks. Disruptive innovation, also known as 'breakthrough innovation,' is a revolutionary process of broadening and developing new markets and providing new functionality by introducing groundbreaking new products, technologies or business models that transform existing markets or industries, or even create new ones (Yu & Hang, 2010). Disruptive innovation undermines the competences of existing competitors and disturbs prevailing consumer habits and behaviors in a major way (Markides, 2006). Compared with incremental innovation, disruptive innovation carries a high level of uncertainty and risks. The distinctiveness between incremental and disruptive innovation is shown in *Table 1*.

Table 1. The comparison of incremental and disruptive innovation.

	Disruptive Innovation	Incremental Innovation
Firm Type	<i>A smaller company with fewer resources</i>	<i>Established incumbent business</i>
Feature	<i>Groundbreaking, breakthrough</i>	<i>Sustainable, continuous</i>
Impact on Market	<i>Transform existing markets or industry</i>	<i>Within the boundaries of the existing market or technology or process of an organization</i>
Risk	<i>High level of uncertainty and risks</i>	<i>Low level of uncertainty and risks</i>
Competition	<i>Undermine the competence of existing competitors</i>	<i>Competence of existing competitors is irrelevant</i>
Product Type	<i>"Good-enough" products or services that feed into the need of neglected segments of the market</i>	<i>Higher-quality products or services that satisfy the high end of the market</i>

Target Market	<i>With a lower price, target at the lower end of the market, overlooked segments, niche market, new market</i>	<i>With the higher price, target at the higher end of the market, most demanding or most profitable segments, mainstream market</i>
Imitability	<i>Difficult</i>	<i>Easy</i>

There is no “good” or “bad” innovation. A company should adopt different innovations considering both internal factors, such as resources, corporate structure, and external factors, such as economic, social, and political environment (Assink, 2006). We highlight the advantages of disruptive innovation as follows. First, disruptive innovation makes resource utilization more efficiently and generates higher potential returns. Disruptive innovation helps the firm expand the market through innovation with a new product or service (Schumpeter, 1942). It also helps departments within the firm coordinate and collaborates more efficiently through organizational and structural innovation. In culturally distant countries, consumers may have established preferences and habits, and they may show ethnocentric attitudes. MNEs may not be able to meet the expectations of these consumers by modifying the existing business model and products. Under the pressure, using disruptive innovation enable MNEs to introduce a new product or service that is dissimilar to any of the existing alternatives, and makes the resource configuration faster and more efficient. Second, disruptive innovation can improve financial performance by targeting a new segment and reduce the number of competitors. Third, disruptive innovation could change the competitive environment and create a new path to restructure the industrial landscape. As Govindarajan and Kopalle (2006) stated, a disruptive innovation restructures the combination of resources within an organization and offers new features and performance attributes relative to the existing products, usually at a lower cost. However, a new customer segment (or the more price-sensitive mainstream market) sees value in the innovation's new attributes and lower prices. Thus, disruptive innovation can create a long-term competitive advantage for MNEs.

Disruptive Innovation and Performance

Innovation has been one of the key forces that drive the development of a firm and even an industry. Over the years, scholars had different understandings and classifications of innovation. Schumpeter (1942) proposed five manifestations of innovation supporting his definition of innovation as “the driving force for development”: first, creation of new products or qualitative improvements in existing products; second, use of a new industrial process; third, new market openings; fourth, development of new raw-material sources or other new inputs; and fifth, new forms of industrial organizations. Later, the Oslo Manual (OECD and Eurostat, 2005) identifies four types of innovation, which are product, process, organization, and marketing innovations. Product innovation is the introduction of a good or service that is new or significantly improved concerning its characteristics or intended uses, which includes significant improvements in technical specifications, components, and materials, incorporated software, user-friendliness, or other functional characteristics. Process innovation is the implementation of a new or significantly improved production or delivery method (e.g., Amazon Prime 2-day delivery). Marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion, or pricing. Marketing innovations are aimed at better addressing customer needs, opening up new markets, or newly positioning a firm's product on the market, to increase the firm's sales. Organizational

innovation is the implementation of a new organizational method in the firm's business practices, firm organization, or external relations. Organizational innovations can be intended to increase a firm's performance by reducing administrative costs or transaction costs, improving workplace satisfaction (and thus labor productivity), gaining access to non-tradable assets (such as non-codified external knowledge), or reducing costs of supplies. We argue that disruptive innovation can apply to one or more types of them. MNEs can introduce a new product or service, apply a new business model, or use an untraditional way for promotion. The impacts of innovation on performance in the global setting has drawn much attention from both international business and strategy scholars. According to Amin and Cohendet (2004), innovation requires two processes: search (the discovery of new knowledge) and transfer (the movement of the knowledge to the point of use). Mainstream research on innovation has focused much more attention on transfer processes (Cano-Kollmann, Cantwell, Hannigan, Mudambi, & Song, 2016).

Before developing the conceptual model, we conducted an extensive literature review by searching for articles published on international business, strategy, and entrepreneurship journals published in the past ten years to investigate the relationship between innovation and MNE performance. In those articles, the performance was measured in multiple ways, including competitiveness, market share, and financial indicators. Previous studies showed the positive effects of innovation. In Schumpeter's work (1934), he argued that innovative new products, when first introduced to the market, face limited direct competition and, as a result, allow firms to enjoy relatively high profits, which is a kind of competitive advantage. Tellis, Prambhu, and Chandy (2009) documented the positive relationship of innovation deployment with a firm's performance. Beyond that, innovation also has a beneficial effect on a country's economic growth (Fagerberg, Srholec, & Verspagen, 2010). Roberts (1999) found that product innovation leads to sustained superior profitability. More importantly, Cho and Pucik (2005) suggested that innovativeness mediates the relationship between quality and growth. As Varis and Littunen (2010) suggested, firms engage in innovation activities to improve firm performance and success. In the global context, the relationship between innovation and performance is constrained by several boundary conditions, such as liability of foreignness (Un, 2011), institutional uncertainty (Bylund & McCaffrey, 2017), cultural distance (Chua, Roth, & Lemoine, 2015), absorptive capacity (Kostopoulos, Papalexandris, Papachroni, & Ioannou, 2011), and the degree of competition (Kwasnicki & Kwasnicka, 1992). However, prior innovation-performance studies have ignored the positive impacts of foreignness on the relationship between innovation and performance (Shaffer, Chastagner, & Umesh, 2016). Romer (1986) observed that the processes of innovative activity affecting economic growth differ among countries because the catch-up level of all economies was not the same. Entrepreneurial activity and innovation can be subject to countries' different social and cultural elements (Cohran, 1960; Soltow, 1968; Shane, 1992, 1993). Wu, Wang, Hong, Piperopoulos, and Zhuo (2016) argued that previous studies have focused on the gains accrued at the subsidiary level and little about whether and how host-country institutional development affects the innovation performance of the parent of the internationalizing emerging market enterprise (EMEs). Innovation doesn't always lead to success. However, innovation is one of the key factors for firm survival and success (Wolfe, 1994), and sustainable competitive advantage (Bartel & Garud, 2009).

Innovation is a complex process that facilitates changes in processes whereby firms seek to acquire and build upon their distinctive technological competence and transform by innovative capabilities (Therrien, Doloreux, & Chamberlin, 2011). Different kinds of innovation have various effects on MNE performance. Specifically, incremental innovation is crucial to sustainable company development. Teece (2007) suggested the dynamic capabilities framework, which represents a strong break with the Five Force model (Porter, 1990). This framework recognizes that innovation and its supporting

infrastructure have major impacts on competition. Adner (2002) identified that a critical reason for the consumers' brand-switching behaviors from sustaining to disruptive innovation was the decreasing marginal utility from the performance improvements in major dimensions. Disruptive innovation can be "competence enhancing" or "competence-destroying," and the radical alternation on patterns of industrial competition can bring new market opportunities to MNE operating in foreign markets (Tushman & Anderson, 1986; Anderson & Tushman, 1990).

Although products or services developed from disruptive technology could only serve a smaller consumer segment due to the low awareness at the introduction stage, the continuous developments can satisfy mainstream customers based on the proven functionality and efficiency. Thus, we argue that disruptive innovation can generate a potential competitive advantage for MNEs in three ways: first, disruptive innovation helps MNEs to overcome the liability of foreignness by creating new needs for consumers, which in turn releases the tensions of competition and market uncertainties; second, foreignness can be an advantage for MNEs to open a new market as consumers adjust their expectations on foreign businesses and are more likely to try "new" things from a "new" company. Different from the traditional view that considers foreignness as a liability, we believe that foreignness can be a double-edged sword.

THEORY: INSTITUTIONAL ANOMIE THEORY

This study draws on the institutional anomie theory (IAT) and aims to develop a conceptual model outlining the relationship between disruptive innovation, foreignness, and MNE. Durkheim's (1897) sociological theory of anomie suggested that institutional and cultural movements lead to a decline in traditional norms. Anomie emerges when social change weakens the norms that regulate the activities of societal members (Durkheim, 1897). The institutional anomie theory (IAT) assumes that some societal institutions, including religion, culture, education, market context, and governmental policy, can intensify societal preoccupation with material success (Messner & Rosenfeld, 1997). Those institutions would intensify the pursuit of material wealth and provide motivations to societal members to engage in "illegitimate" and "destructive" activities. Specifically, IAT states that both the social institutions and the cultural values that affect rates of deviant behavior, and the cultural and institutional systems empower the separation from traditional social rules and norms, and promotes the willingness to reject the status-quo (Rosenfeld & Messner, 1997). IAT has been used in several disciplines, such as sociology, anthropology, and management (Ben-Yehuda, 1990; Wolf & Zuckerman, 2012). For example, Cullen, Parboteeah, and Hoegl (2004) developed a model to analyze the effects of national cultural variables and social institutions, on managers' willingness to rejudge and justify attitudes toward ethical suspect behaviors. However, cross-national differences are still one of the major obstacles for the international expansion of MNEs. For example, the liability of foreignness occurs when the MNEs encounter with political and commercial risks due to unfamiliarity with the foreign environment. Studies found that liability of foreignness affects the performance negatively in international diversification (Zaheer, 1995; Zaheer & Mosakowski, 1997). According to IAT, the foreignness is a form of negative deviance that may impede MNEs' strategic choices and market performance. However, we believe that disruptive innovation can also function as a positive deviation when new business models, product concepts, and service platforms successfully lead to changes in a competitive environment. Those changes can generate opportunities for MNEs to succeed in the foreign market. In this study, we argue that disruptive innovation leverages the positive deviances from the micro-level (individual) to the meso-level (firm).

THE MODEL

Disruptive Innovation. Markides (2006) introduced two specific types of disruptive innovation, which are business-model innovations and product innovations. He argued that these two types of disruptive innovation have different competitive effects and produce different kinds of markets (Markides, 2006). Business-model innovation can increase a firm's existing market share and strengthen competitiveness by attracting new customers into the market or encouraging existing customers to buy more. Product innovation introduces new products and value propositions that disturb prevailing consumer habits and behaviors in a major way. Product innovation also undermines competences and complementary assets on which existing competitors have built their access. Hence, disruptive innovation can provide tangible and intangible assets to the firm.

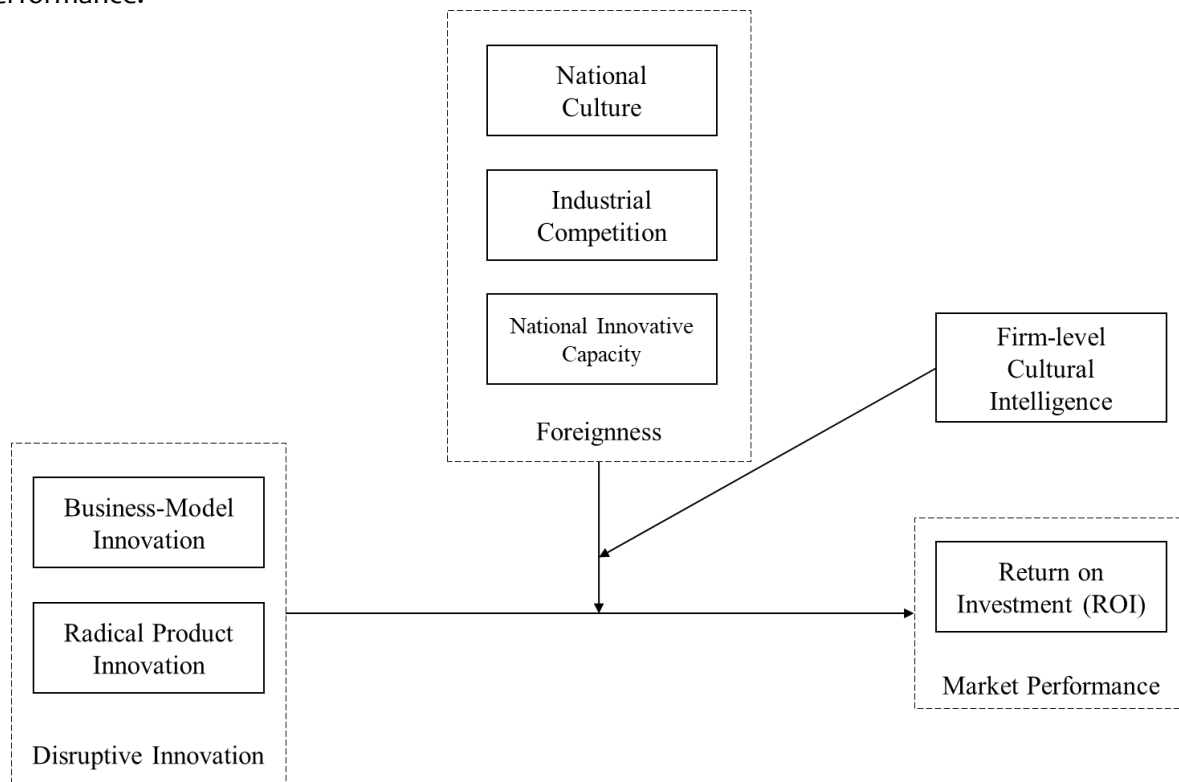
Foreignness. MNEs operating in culturally distant countries encounter with different levels of foreignness. Cano-Kollmann, Cantwell, Hannigan, Mudambi, and Song (2016) discussed the importance of the interactions between MNEs and locations and recognized that locations are host to increasingly "fine-sliced" activities whose composition are continuously changed by the innovation procedures driven by MNEs. From a dialectic perspective, they argued that locations and firms influence and coevolve with each other, and MNEs combine the specialized resources acquired in locations with their capabilities to orchestrate strategies and activities to create complex knowledge networks (Cano-Kollmann et al., 2016). Contrary to the traditional view, the cultural paradox (Brouthers, 2001) has attracted much attention. Scholars recognized the imbalance between negative and positive considerations of foreignness (Brannen, 2004; Edman, 2009; Tung & Verbeke, 2010). The overemphasis on the negative consequences inhibits our understanding of conditions under which MNEs' can benefit from international market entry and expansion. An increasing number of studies have paid attention to the positive outcomes of foreignness. For example, Meirovich (2010) found that cultural differences are positively associated with the performance of global alliances and joint ventures. According to Tung (2008), examining the positive side of differences is not only intellectually beneficial in terms of filling the gap in the literature, but is also crucial for the practice. Therefore, we consider foreignness as a double-edged sword and argue that MNEs have opportunities to benefit from the differences in national culture, industrial competition, and governmental policy. We treat foreignness as a multi-dimensional construct. These dimensions are national culture, industrial competition, and national innovative capacity (NIC). Figure 1 shows the conceptual model.

National culture. According to Kluckhohn (1951)'s definition, culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (e.g., historically derived and selected) ideas and especially their attached values. Later, Kroeber and Parsons (1958) defined culture as transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behavior and the artifact produced through behavior. Hofstede (2001) defined culture as the collective programming of the mind that distinguishes the members of one group or category of people from another.

Culture is a multilevel construct. Sewell (1999) considered culture as a dialectic of system and practice, which is a dimension of social life autonomous from other such dimensions both in its logic and in its spatial configuration. He also stated that culture is a system of symbols possessing a real but thin coherence (Sewell, 1999). Erez and Gati (2004) proposed a multi-level model of culture, consisting of structural and dynamic characteristics that explain the interplay between various levels of culture. In their model, the dynamic nature of culture conveys the top-down–bottom-up processes where one

cultural level affects changes in other levels of culture (Erez & Gati, 2004). In terms of globalization, Erez, and Gati (2004) proposed that dynamic, rather than stable, models of culture should serve to understand the changing work environment in response to globalization.

Figure 1. The conceptual model of the relationship between disruptive innovation and MNE performance.



The dynamic property of the multi-level model of culture consists of top-down and bottom-up processes (Erez & Gati, 2004). Top-down processes stimulate a process of adaptation and change in lower levels of culture. Reciprocally, behavioral changes at the individual level, through bottom-up processes of interaction and sharing, emerge into behavioral norms and cultural characteristics of the higher-level entity. Also, the interplay between the structural and dynamic dimensions of the multi-level model of culture determines the boundaries in which bottom-up processes can emerge into a higher-level construct. In this study, we focus on the culture at meso-level, which is organizational culture. Moreover, we identify the potential factors that can drive the dynamics of organizational culture change and investigate the theoretical evidence for each factor. To explain the differences among nations, we focus on the role of national culture on the relationship between disruptive innovation and MNEs' market performance. Thus, we propose that

Proposition 1: National cultural distance negatively moderates the relationship between disruptive innovation and MNE's return on investment (ROI).

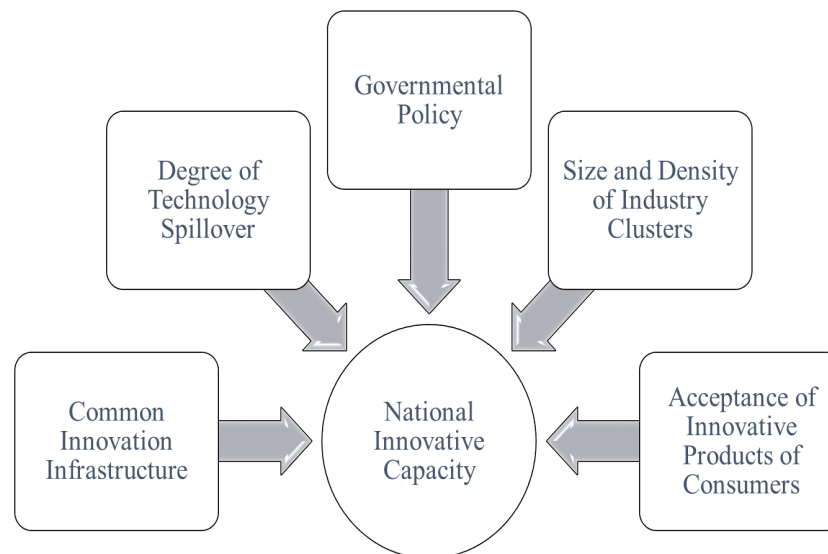
Competition level. The link between competition and innovation has drawn much attention from scholars. Theories of the industrial organization suggest that innovation is negatively associated with competition (Schumpeter, 1942). In increasingly complex global competition under the process of

globalization, MNEs have engaged in the process of international sourcing of markets, consumers to maintain their competitiveness and financial returns. The results of previous studies on the relationship between competition and innovation are mixed. Aghion, Bloom, Blundell, Griffiths, and Howitt (2005) found an inverted-U relationship between innovation and competition. They argued that competition might increase the incremental profit from innovation, which refers to the “escape-competition effect,” but competition may also reduce innovation incentives for laggards, which refers to the “Schumpeterian effect” (Aghion et al., 2005). In the global context, competition is more intense, and MNEs are forced to innovate new business models, products, or services. Competing with a large number of strong competitors in the foreign market is even more challenging, and MNEs are more likely to reconfigure the existing resource portfolios in order to change the competitive environment. Disruptive innovation provides MNEs with a way to create new consumer segments and seize competitive advantage. Thus, we propose that

Proposition 2: The competition positively moderates the relationship between disruptive innovation and MNE’s return on investment (ROI).

National innovative capacity. Innovative technologies vary in quantity and quality across countries. Although MNEs’ invest and operate R&D centers in different countries, the development and commercialization of “new-to-the-world” technologies have been concentrated in relatively a small number of locations due to the environmental factors, such as the national innovative capacity. National innovative capacity (NIC) refers to the ability of a country to develop, produce, and commercialize a flow of new-to-the-world technologies over the long term (Furman, Porter, & Stern, 2002). It is not the realized level of innovative output per se. The heterogeneity of NIC at the country-level is reflected by several fundamental determinants of the innovation process, which are variation in economic geography (e.g., the level of transfers and spillovers of technology between local firms), and cross-country differences in innovation policy (e.g., the level of public support for basic research or legal protection for intellectual property rights (IPR)).

In this study, we construct the NIC with five major attributes as follows (see Figure 2):



First, common innovation infrastructure lays the foundation for all types of R&D activities. According to Furman, Porter, and Stern (2002), the infrastructure includes cross-cutting factors contributing to innovativeness, which are a country's overall science and technology policy environment, the supporting mechanisms for basic research and higher education, and the accumulated "stock" of technological knowledge upon which new technologies and concepts are developed and commercialized. In this study, we argue that disruptive innovation is more likely to be accepted and profit-generating in countries with a better established innovation infrastructure. Thus, we propose that

Proposition 3: Disruptive innovation is more likely to generate a positive return on investment (ROI) in countries where the innovation infrastructure is well established.

Second, technology spillover influences the interaction between MNEs and the location. Technology spillover refers to "the unintentional technological benefits to firms that come from the research and development efforts of other firms without the costs being shared" (Sun & Fan, 2017), which is expected to be particularly strong from leading firms coming from advanced economies to firms in emerging economies. According to Sun and Fan (2017), Technology spillover is a form of social process modulated by the geographical and cultural context when it takes place. Related to the coevolutionary perspective of the global value chain (Cano-Kollmann et al., 2016), there is a two-way interaction between leading MNEs from advanced economies who own innovations and the receiving countries. Thus, technology spillover is ultimately a learning experience for both sides. Linked to the current study, we believe that disruptive innovation is more likely to generate short-term positive market performance in countries with a high technology spillover because the local firms are more willing to build a cooperative relationship with the MNEs for learning purposes. However, in the long run, technology spillover will cause the decreased competitiveness of disruptive innovation and shorten the profit-generating period for MNEs. Thus, we propose that

Proposition 4(a): Disruptive innovation is more likely to generate a **short-term** positive return on investment (ROI) in countries where the degree of technology spillover is **high**.

Proposition 4(b): Disruptive innovation is more likely to generate a **long-term** positive return on investment (ROI) in countries where the degree of technology spillover is **low**.

Third, government policies related to innovation and market regulation determine the environment for MNEs to use and protect their innovations. Government policy affects the environment for innovative activity by protecting the intellectual property, the relative stringency of the country's antitrust policies, and the relative openness of a country to international trade and competition (Furman, Porter, & Stern, 2002). In countries where intellectual property rights are not protected by an established policy, disruptive innovation cannot improve MNE performance efficiently because competitors can imitate the business models, products, and services. On the other hand, disruptive innovation can improve MNE performance when the intellectual rights are protected and the market is regulated by government policies. Thus, we propose that

Proposition 5(a): Disruptive innovation is more likely to generate a positive return on investment (ROI) in countries where the strength of intellectual property protection is high.

Proposition 5(b): Disruptive innovation is more likely to generate a positive return on investment (ROI) in countries where the antitrust regulations are strictly implemented.

Fourth, the size and density of industrial clusters also indicate the development of a country's innovation infrastructure. According to the cluster-based theory of national industrial competitive advantage (Porter, 1990), the microeconomic underpinnings of innovation in national industrial clusters, such as the interaction between input supply and local demand conditions and the presence of related and supporting industries, are beneficial for the development of supporting innovative infrastructure and knowledge stock. Although disruptive innovation aims to develop a new business model and create "uncharted" markets, MNEs need to establish a supportive network in a foreign location. Thus, we propose that

Proposition 6: Disruptive innovation is more likely to generate a positive return on investment (ROI) in countries where the network of industrial clusters is well established.

Fifth, the likelihood of consumers' acceptance of "new-to-world" innovative products directly influence MNE performance. If targeted customers can accept innovative products, they are more likely to accept, try, and buy. With proper management and development of the product according to the customers' demand, it's highly likely that there will be great potential profit in the future. Disruptive innovation can make a positive financial impact in countries where consumers are more open to new products. Thus, we propose that

Proposition 7: Disruptive innovation is more likely to generate a positive return on investment (ROI) in countries where consumers are more likely to accept innovative products or services.

Firm-level Cultural Intelligence

Globalization not only offers opportunities but also leads to potential problems. Consumers can be ethnocentric and have biased preferences in some cultures over others. Studies on animosity (Huang, Phau, & Lin, 2010; Klein & Ettensoe, 1999; Riefler & Diamantopoulos, 2007) and ethnocentrism (Shimp & Sharma, 1987; Shankarmahesh, 2006) have found an increasing number of cultural conflicts in international business activities, such as cultural misunderstanding, tensions, and intolerance. Under this situation, some people are doing better than others, and the reason can be explained by the differences in cultural intelligence (CQ). Likewise, MNEs need to aware of cross-cultural differences, such as religion, values, attitudes, rituals, etc.

CQ refers to the capability to function effectively in intercultural contact (Earley & Ang, 2003), is a key successor for MNEs in the global setting. CQ is a multifaceted construct, which includes four major dimensions. Metacognitive CQ refers to an individual's mental capability to acquire and understand cultural knowledge. Cognitive CQ is the individual's knowledge about cultures and cultural differences. Related to people's decision-making processes and behaviors, motivational CQ refers to the capability of individuals to direct and sustain efforts towards functioning in intercultural situations. The last dimension is behavioral CQ, which is an individual's capability for behavioral flexibility in cross-cultural interactions. In sum, CQ consists of people's knowledge about a foreign culture, intentions to learn and accept different cultural values, and the ability to behave effectively, flexibly, and sustainably. In the traditional view, CQ measures the capability at the individual level. However, Ramsey, Abi Aad, Jiang, Barakat, and Drummond (2016) argue that CQ can emerge at the business-unit level and provide more insights when analyzing its impacts on leadership, human resources, and other relationship dependent outcomes. When an MNE notices the need for unit-level performance, a program to select individuals high in CQ can increase the effectiveness and functionality as a whole. In this study, we

argue that firm-level CQ can increase the ability of the MNEs to deal with the complex intercultural competitive environment. Thus, we propose that

Proposition 8(a): Firm-level cultural intelligence (CQ) neutralizes the negative effects of foreignness on MNEs' return on investment (ROI).

Proposition 8(b): Firm-level cultural intelligence (CQ) enhances the positive effects of foreignness on MNEs' return on investment (ROI).

DISCUSSION

Previous studies demonstrated that the link between innovation and MNE performance (See Azar & Drogendijk, 2014, 2016; Teece, 2007; Yu & Hang, 2010). However, little attention has been paid to the different types of innovation on MNE performance, which are incremental (traditional) innovation and disruptive innovation. To fill the gap, this study develops a conceptual model to extend the understanding of the role of disruptive innovation on MNE performance in culturally distant countries, where MNEs encounter with a more complex competitive environment. Existing literature suggests that foreignness can provide MNEs with a larger variety of knowledge and facilitate global knowledge transfer (Scott-Kennel & Giroud, 2015) and enable them to configure the resource combination for competition. Also, foreignness facilitates the emergence of firm-level CQ by developing multicultural mindsets via job rotation, design, and training (Un, 2011). In this study, we extend the existing literature by developing a conceptual model of the moderating role of foreignness, which consists of cultural distance, industrial competition, and national innovation capacity. From the institutional anomie theory (IAT) perspective, we argue that both social and cultural institutions can influence the firm-level activities and performance in an intercultural context. Specifically, national cultural distance negatively affects the potential benefits of disruptive innovation, but industrial competition positively moderates the role of disruptive innovation on MNE performance.

This study contributes to the innovation-performance literature in several ways. First, existing literature has focused on the role of incremental innovation in MNE performance but ignored the impact of disruptive innovation. As disruptive innovation can increase the functionality of products and change the industrial landscape to a greater extent (Christensen & Raynor, 2015), we suggest paying more attention to its impact on performance, especially in an international context. Differing from incremental innovation that focuses on continually making existing products or services more competitive by focusing on reducing costs and improving or adding features, disruptive innovation significantly transform the demand and needs of an existing market and disrupts its former key players (Lettice & Thomond, 2002). The distinctiveness is also important. Second, this study argues that foreignness can be a source of competitive advantage for MNEs competing in foreign markets. The degree of competition is an important factor when developing a market entry strategy for MNEs that sell products with constant incremental innovation. Besides, the negative impact of competition is likely to be eliminated when MNEs use disruptive innovation to significantly change the competitive landscape and reduce the number of competitors. Second, we introduce the first model to specify the moderating role of foreignness on the relationship between disruptive innovation and MNE performance. The three dimensions of foreignness, including national culture, industrial competition, and national innovative capacity, explain the boundary conditions under which disruptive innovation can lead to competitive advantage and improved performance in culturally distant countries. Although existing studies consider foreignness as a liability and focused on its negative effect on the international expansion (Dunlap, Parente, & Geleilate, 2016; Eden & Miller, 2004; Edman, 2016; Hsu,

Lien, & Chen, 2015; Schmidt & Sofka, 2009; Sokfa, 2006), recent studies argued that MNEs could benefit from foreignness by enhancing the global knowledge transfer and developing multicultural mindsets among employees (Un, 2011). By investigating the moderating role of foreignness, this study answers the call of Stahl and Tung (2015), we emphasize on the positive and negative sides of the macro-level sociocultural institutions. Second, this study differentiates the incremental and disruptive innovation.

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