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The Co-Evolution of Global Legitimation and Technology Upgrading: The Case of Huawei

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The Co-Evolution of Global Legitimation and Technology Upgrading: The Case of Huawei

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ABSTRACT

This study explores the underlying relationship between acquisition of global legitimacy and the search for technology upgrading by Chinese multinational enterprises (MNEs). Using Huawei's investment in Russia, Kenya, the United Kingdom and Canada as an in-depth case study, we observe that through corporate social responsibility (CSR) activities in foreign markets and engaging with local community, Chinese MNEs can acquire global legitimacy and gradually catch up with industry leaders. However, the process of global legitimation and innovation continues to evolve. We find that, together with engaging in CSR activities, acquisition of sophisticated knowledge and creation of innovation bring more legitimacy challenges to these firms. Thus, we suggest that Chinese MNEs' global legitimation and innovation processes are closely coupled and mutually influential, resulting in co-evolution.

KEYWORDS

Corporate Social Responsibility (CSR), Co-Evolution, Technology Upgrading, Legitimation, Chinese MNEs, Huawei

INTRODUCTION

How do Chinese multinationals acquire global legitimacy while achieving technology upgrading? In the past 20 years, not only has China become a pivotal player in international business (IB) value chains, but Chinese multinationals' (MNEs) active expansion into the global market has also pushed them to forefront of public attention (Haley & Haley, 2013; Ramamurti & Hillemann, 2018; Witt, 2019). A Chinese MNE refers to a company headquartered in China that actively invests abroad through any foreign direct investment modes (e.g., subsidiaries, joint ventures, or M&As) (Ramamurti & Hillemann, 2018). The burgeoning literature claims that Chinese MNEs are a distinctive group because they are infant MNEs with competitive disadvantages (Ramamurti & Hillemann, 2018) and originated from a country that is perceived as having governments that “play significant and visible roles in markets” (Haley & Haley, 2013: 28). One remarkable challenge facing these firms is related to whether they are able to gain sufficient legitimacy in foreign countries. In the literature, an MNE viewed as legitimate is one that conforms to the social norms, values and expectations of its target country (Ashforth & Gibbs, 1990; Kostova & Zaheer, 1999). Yet it is not easy to gain legitimacy in a foreign market, because social norms are often contradictory to expectations and they evolve over time (Ashforth & Gibbs, 1990). As global market newcomers, Chinese firms are required to expend more effort in legitimation—a dynamic process by which a firm conducts activities to seek legitimacy and gain public acceptance (Ashforth & Gibbs, 1990; Dobrev, 2001; Rathert, 2016).

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Legitimacy challenges are intrinsically linked with diverse types of liabilities experienced by Chinese MNEs, including liability of origin, newness, foreignness, and combinations of these (Ramamurti & Hillemann, 2018; Williamson, Symeou, & Zyglidopoulos, 2021). Such challenges are magnified by a variety of constraints on a Chinese firm that undertakes business activities in a foreign country (Williamson *et al.*, 2021). As a result, scholars observe, Chinese MNEs frequently adopt non-market strategies, such as corporate social responsibility (CSR), to shield themselves from legitimacy challenges (Haley & Schuler, 2011; Tashman, Marano, & Kostova, 2019; Witt, 2019). When a firm allocates more resources to foreign market CSR, it may be taken for granted that the firm will have fewer resources for innovation. However, according to data provided by Refinitiv Eikon on CSR scores and innovation of China's large MNEs (listed in the Fortune Global 500), we see that these firms have shown a 42.30% increase rate in their mean environmental, social and governance scores (ESG) in the past five years, from 41.04 in 2014 to 58.40 in 2019. Simultaneously, the innovation scores of these Chinese MNEs also show a positive upward trend, increasing from 14.92 in 2014 to 40.26 in 2019 (see Appendix 1). The dual-upward trends of CSR engagement and innovation performance of Chinese MNEs further trigger our interest in exploring the linkage between global legitimation and technology upgrading.

We address the opening research question by analyzing the case of the internationalization process of Huawei, a leading Chinese telecommunications MNE and a global ICT provider. There are three reasons why Huawei is an appropriate representative case for Chinese MNEs. First, founded in 1987 in Shenzhen, China, Huawei operates in a strategic high-tech industry which drives economic growth, and thus is more likely to attract public attention and concern around its global business (Fu *et al.*, 2018; Li *et al.*, 2018; Witt, 2019). This concern has been reinforced since the announcement of the 'Made in China 2025' initiative, which led to increased geopolitical tensions between China and the West, because it indicates that China is seeking global leadership in strategic high-tech industries (Witt, 2019). Second, although Huawei is ostensibly a private Chinese firm, it enjoys government support, such as "a \$10 billion low-interest credit line from the China Development Bank" (Haley & Haley, 2013: 57). Because of concerns about potential political goals, Huawei indeed faces a high threshold for legitimation in many countries around the globe (Li *et al.*, 2018; Witt, 2019). Third, Huawei provides a great opportunity to investigate the link between global legitimation and innovation, because it seeks to learn new knowledge overseas while paying close attention to policies and rules in foreign markets, and its extensive efforts in international CSR have made it one of the best-researched subjects in this domain (cf. Fu, Sun, & Ghauri, 2018; Liefner, Si & Schäfer, 2019).

This research unpacks the relationship between global legitimation and technology upgrading of Chinese MNEs using the co-evolution lens. Although recent studies have increasingly documented theoretical and empirical evidence to explain the underlying mechanism of CSR strategies, what remain less explored are CSR activities undertaken by Chinese MNEs (Miska *et al.*, 2016; Stanwick & Stanwick, 1998; Yang *et al.*, 2020). The extant literature generally employs a static lens, which is insufficient to address the dynamic changes of CSR and firm innovation over time. In this study, we aim to fill such research voids through a case study focusing on Huawei's experience. We find that Huawei's foreign-market CSR efforts through embedding and interacting with local agencies help it, to a large extent, to access strategic resources for innovation (Fu *et al.*, 2018; Schaefer, 2020). However, the innovation achievements yielded during the CSR process create in their turn more legitimacy challenges for international expansion. Hence, we suggest that a co-evolution lens should be adopted to reveal the mutual influences and the time-variant relationship between global legitimation and innovation of Chinese MNEs. Our research framework is illustrated in Figure 1.

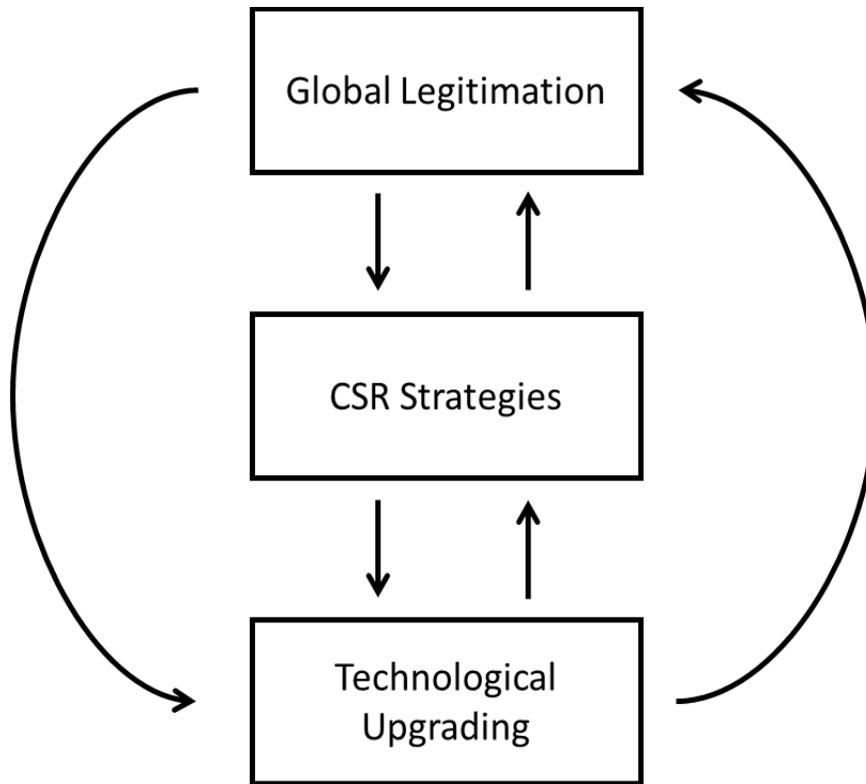


Figure 1. Research Framework

The present study contributes to the literature in three ways. First, we leverage Huawei's case to depict the intertwined mechanism between global legitimation and innovation of Chinese MNEs and argue that the two can co-exist and co-evolve over time to jointly affect these firms' decision-making in the global market (Bocquet *et al.*, 2017; Rao, Chandy, & Prabhu, 2008). Our study adds new insights to the co-evolution perspective by incorporating it into the Chinese MNEs research field. Second, we enrich global business ethics research by delineating the goals and features of CSR practices by Chinese MNEs. We highlight that CSR research targeting Chinese MNEs needs to explore the complexity of different types of CSR activities and the connectivity with their innovative capability and outputs (Bikard, 2020; Bocquet *et al.*, 2017; Rao *et al.*, 2008). Third, this study brings a geopolitical consideration to innovation research by considering how Chinese MNEs' innovation affects country-level geopolitical tensions. We also offer evidence to inform global market latecomers about dealing with the co-evolution obstacle and we point to directions for researchers to explore this topic in the future.

RESEARCH BACKGROUND AND LITERATURE REVIEW

GLOBAL LEGITIMACY CHALLENGES FOR CHINESE MNEs

The rapid economic growth and opening-up in China in the past 30 years have facilitated Chinese firms' active engagement in global competition and seeking opportunities overseas (Buckley *et al.*, 2007; Miska *et al.*, 2016). In the literature, Chinese MNEs are regarded as infant rather than mature MNEs, because they generally lack firm-specific advantages (FSAs), such as know-how, advanced technologies, brands, and managerial expertise (Ramamurti & Hillemann, 2018). Compared with their

developed-country counterparts, Chinese firms face higher legitimacy requirements and come under strict scrutiny by global societal and regulatory stakeholders (Tashman *et al.*, 2019; Zheng, Luo, & Maksimov, 2015). Such severe legitimacy challenges have been indicated in existing studies.

Since economic reform began in 1978, China's transition into a market economy has involved intensive international trade and massive foreign exchange reserves to drive growth (Ramamurti & Hillemann, 2018). With an increase in global bargaining power, Chinese firms have gradually exhibited a strong tendency to pursue strategic assets sourced overseas and to "go out to bring in" (Ramamurti & Hillemann, 2018: 41). Their active participation and success in the global market, according to research, are mainly attributed to home-government support (Luo, Xue, & Han, 2010). Yet these advantages can cause Chinese MNEs to face increased liability of foreignness and legitimacy difficulties (Ramamurti & Hillemann, 2018). Hu *et al.* (2019) suggest that government intervention in strategic decisions has largely contributed to stereotypes about Chinese MNEs. Haley and Haley (2013: 199) also point out that, because firms' indigenous operations may involve "ties to the Chinese government's procurement", even though some such firms are not state-owned, they may be perceived by foreign countries as vehicles for political purposes.

Although Huawei is a private-owned enterprise, it obtains low-interest loans and subsidies from the Chinese state-owned bank, which makes the government potentially be a key stakeholder of the firm (Haley & Haley, 2013). As the state-business relationship remains controversial in the strategic literature, and often leads to an increase of liability of foreignness and high costs for firms building global business networks (Cui & Jiang, 2012; Gu, 2003; Hu *et al.*, 2019), executives of Chinese MNEs are more cautious about disclosing their political relations. In recent decades, with the transformation of institutions and the government's efforts in introducing new practices to neutralize stereotypes around Chinese MNEs, the state-business relationship has been evolving (Musacchio *et al.*, 2015; Shi *et al.*, 2014). Thus, the global legitimization of Chinese MNEs remains a complex research issue that deserves further exploration.

THE CO-EVOLUTION OF LEGITIMATION AND INNOVATION

The mainstream literature has acknowledged the influence of CSR engagement on financial performance, suggesting that a firm may enjoy fruitful business opportunities and build competitive advantages through social progress (Bocquet *et al.*, 2017). However, the relationship between CSR practices and innovation performance remains much debated. While some studies propose that CSR-driven innovation indicates that a firm may seek to improve the design of products and productivity in the value chain so as to meet societal expectations (Miles, Munilla, & Covin, 2004; Rao *et al.*, 2008), it has also been stated that "CSR behavior is only costly, and firms do not expect any direct return" (Bocquet *et al.*, 2017: 243).

In the IB context, an MNE's innovation not only plays a role in its global image but also exerts an influence on geopolitical relations between countries (Abdelal, 2015; Schaefer, 2020). In this study, we observe that the innovation success of Huawei, together with the rapid rise of China as a global power is causing increased legitimacy pressures on Huawei's internationalization (Witt, 2019). That is, increasing geopolitical risks have heightened Huawei's legitimacy obstacles, despite its impressive CSR efforts and technological innovations, particularly in those countries with a strong sense of international competitiveness such as Australia, the US, the UK, Canada, etc. Hence Huawei's international strategies may be co-driven by seeking to gain legitimacy and the need to improve innovation.

The co-evolution perspective has proven to be a powerful tool for studying the behavior of MNEs. It posits that environments and opportunities do not exist independently or distinctly (Cantwell *et al.*, 2010; Koza & Lewin, 1998). Instead, they coexist and coevolve over time and jointly influence MNEs'

decision-making and learning motivation (Luo & Rui, 2009; Tan & Tan, 2005). The process of co-evolution refers to firms' efforts in adapting their strategies to fit foreign environments (Tan & Tan, 2005). Drawing on this perspective, two requisites are necessary for co-evolution to occur (Luo & Rui, 2009). First, firms need to adapt to business standards required by foreign countries, thereby changing their governance structures, strategies and resource distribution through evolution (Cantwell *et al.*, 2010; Tan & Tan, 2005). Second, firms develop new capabilities because they need to seek new practical solutions and apply new technologies to resolve their evolution barriers. As a result, their practices, in turn, affect the host-country environment and change their image in such countries (Cantwell *et al.*, 2010).

Therefore, a co-evolution view offers a dynamic approach to examining how Chinese MNEs evolve to respond to global legitimacy challenges and geopolitical risks, and how their evolution outcomes and technology upgrading affect the host-country environment (cf. Cantwell *et al.*, 2010). On the one hand, Chinese MNEs take part in foreign-market CSR in order to work around the impacts of geopolitical tensions and country-of-origin effects by actively contributing to the host-country's environmental and societal benefits (Miska *et al.*, 2016; Witt, 2019). They also leverage CSR practices to embed in foreign countries to secure access to advanced know-how, obtain key resources for production, and achieve strategic catch-up goals (Arevalo & Aravind, 2017; El Ghoul *et al.*, 2017). According to Levinthal and Myatt (1994), serving host-market stakeholders can be a catalyst for firms' learning about advanced skills and emerging technologies. Hence Chinese MNEs' global CSR can enhance their technological competence. On the other, along with engagement in CSR, firms also have the potential to affect host-country institutions, because "strategic and environmental changes are bidirectional, interactional, and mutually influencing and evolving" (Regnér & Edman, 2014: 56). Accordingly, the innovation of Chinese MNEs may affect geopolitical relations between China and the host country, which then revise their legitimacy challenges in host countries (Abdelal, 2015; Schaefer, 2020). In this vein, we adopt a co-evolution perspective to describe the relationship between global legitimation and innovation of Chinese MNEs in our case study of Huawei.

METHODS

RESEARCH DESIGN

We adopt an inductive approach to investigate the co-evolution of global legitimation and technology upgrading of Chinese MNEs. The inductive approach is a predominant approach in business and management research: "it is the way science itself operates and progresses" (Arthur, 1994: 407). The approach utilizes observed information and evidence to see, recognize or match patterns and behaviors of a business (Sabherwal & King, 1991). It aims to simplify problems using observed patterns and behaviors to construct temporary internal models or propositions, thus moving from specific findings from a case to broad generalizations (Arthur, 1994; Sabherwal & King, 1991). Researchers adopting this approach need to measure the characteristics of a specific phenomenon in as wide a range of situations as possible. In so doing, we can deal with complications and ill-defined definitions (Sabherwal & King, 1991). To achieve an in-depth analysis of co-evolution between legitimation and innovation, we focus on Huawei, a controversial but representative Chinese high-technology firm in the rapid internationalization process of Chinese firms in the past two decades. Together with seeking advanced knowledge and markets overseas, this type of Chinese high-tech firm is facing severe legitimacy challenges in foreign markets (Sun, 2009; Rathert, 2016; Witt, 2019).

Huawei's expansion trajectory is extensive and involves more than 100 countries around the world. As of 2020, statistics show that Huawei has established more than 180 subsidiaries in 102 countries (see Figure 2). The target countries, although globally dispersed, can be categorized into two main

country groups: developed and developing countries (Dedrick, Kraemer, & Shih, 2013; Niebel, 2018). Based on Huawei's different stages of internationalization, we selected four target countries (Russia, Kenya, the UK, and Canada) for our case study in order to comprehensively consider Huawei's legitimation and innovation characteristics in different types of countries and at its different stages of international growth. The countries differ significantly in their GDP/GNI per capita, ICT development, and diversity of geographical location (Dedrick *et al.*, 2013; Niebel, 2018). For instance, of the two developing countries, Russia spans both Europe and Asia and Kenya is located in Africa (see Figure 2). The two developed countries have relatively larger GDP per capita and ICT rate; and the UK is located in Europe and Canada is in North America. The four countries have been Huawei's strategic priorities at different stages of its internationalization. For example, in the infancy stage (1995-1999), Huawei first entered the Russian market (Sun, 2009). With accumulated experience, it gradually entered geographically distant countries such as Kenya (in the childhood stage: 2000-2005), then expanded to culturally distant countries such as the UK (in the adolescence stage: 2006-2010) and Canada (in the adulthood stage: 2011-present) (Fu *et al.*, 2018; Sun, 2009). Hence the four countries represent foreign locations with different economic, institutional, geographic and strategic foci, and this enables us to conduct an in-depth analysis of Huawei's experience.

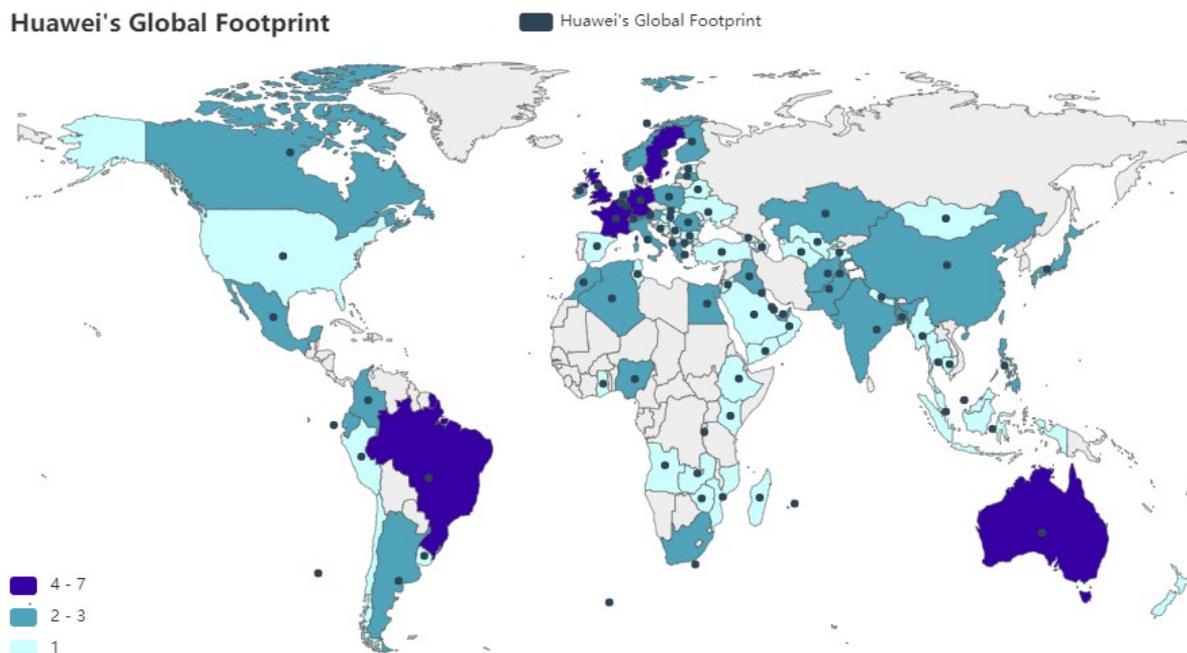


Figure 2. Huawei's Global Footprint

Note: Black dots represent Huawei's subsidiaries; Light blue means Huawei only has 1 subsidiary in a country; Cadet blue means that Huawei has 2 to 3 subsidiaries in a country; Blue means Huawei has 4 or more subsidiaries in a country.

DATA COLLECTION

We undertook a keyword search to collect archival data of Huawei's global CSR practices and innovation outcomes from multiple sources, including its annual reports, CSR reports, official websites, newspapers, commentaries, and interview records with executive-level (C-suite) members on social media platforms, etc. We also examined the environmental contexts of Huawei's target countries, including their cultural and institutional distance, and economic gaps between China and the target countries. Archival data about the environmental contexts were sourced and matched from

multiple reliable origins, such as World Bank databases, UNCTAD, the CIA World Factbook, Refinitiv Eikon, and Hofstede Insights. Table 1 provides the data codes and an overview of sources.

Table 1. Data Overview

Type	Subtypes	Sources	Code	Number
Archive 1: Huawei's reports and announcements from its official websites (CR)	1-1: Annual reports	https://www.huawei.com/au/annual-report	CR-AR	34
	1-2: Sustainability Reports	https://www.huawei.com/au/sustainability	CR-SR	
	1-3: Research Reports	https://huaweireport.com/	CR-RD	
	1-4: Corporate Citizenship	https://www.huawei.com/ca/corporate-citizenship/	CR-CC	
Archive 2: Newspapers and videos from well- known media and press (NAV)	2-1: Newspapers and Magazines	The verge	NAV-TV	135
		CBC news	NAV-CBC	
		New York Times	NAV-NY	
		BBC	NAV-BBC	
		Reuters	NAV-REU	
	The Guardian	NAV-GUA		
2-2: Social medias and News channel	The Washington Post	NAV-WP		
	YouTube videos	NAV-YT		
	Twitter	NAV-TW		
	Consumer News and Business Channel	NAV-CNBC		
Archive 3: Archival Interviews (INT)	3-1: Interviews of Huawei's members	A member of the Supervisory Board	INT-TMT-1	31
		A Sales Manager	INT-TMT-2	
		A Senior Executive	INT-TMT-3	
	3-2: Interviews of other authorities	A Director at National Telemedicine Center of China	INT-EXT-1	
		A Secretary in the Kenyan Ministry of ICT	INT-EXT-2	
	A Sustainability Officer of BT	INT-EXT-3		
	Government officials at target country	INT-EXT-4		
Archive 4: Archival data from database	4-1: Online database	World Bank databases	WB	5
		United Nations Conference on Trade and Development	UNCTAD	
		CIA World Factbook	CIA	
		Hofstede Insights	Hofstede	
	4-2: Database software	Refinitiv Eikon	EIKON	
Total archive documents/interviews/databases: 205				

The key country-, organizational- and individual-level characteristics related to Huawei's entries into the four selected countries in infancy (1995-1999), childhood (2000-2005), adolescence (2006-2010), and adulthood (2011-present) stages are presented in Table 2. The four countries are from different global regions: Asia, Africa, Europe, and North America (Table 2). Clearly, Huawei's internationalization path was designed based on market distance and its adaptive capabilities (Johanson & Vahlne, 2009). In the early stages, Huawei entered into institutionally proximate or politically connected countries (e.g., Russia and Kenya). As a private foreign start-up, Huawei faced legitimacy pressures caused by the liability of foreignness and host-country national distrust (Liefner, Si & Schäfer, 2019). In the later stages, Huawei entered into geographically and institutionally distant countries such as the UK and Canada, and its legitimacy challenges were rooted in the liability of origin due to home-market institutional weakness and the effects of hostile political climates (Sun, 2009; Witt, 2019). Hence, we contend that the legitimacy pressures are of varying degrees at different stages of Huawei's growth and in different countries.

Table 2. Macro and Micro Context of Huawei's CSR and Innovations

Internationalization Stage	Infancy Stage (1995-1999)	Childhood Stage (2000-2005)	Adolescence Stage (2006-2010)	Adulthood Stage (2011- Present)	
Macro Context	Target Countries	Russia	Kenya	United Kingdom	Canada
	Entry Mode	Partnerships & Joint Venture	Exporting & Alliance	Contractual & Joint Venture	FDI & Partnerships
	Country classification	Emerging	Underdeveloped	Developed	Developed
	Regions	Asia	Africa	Europe	America
	Cultural distance	Medium	Low	High	High
	Institutional distance	Low	Low	High	High
	Human resources engaged in R&D	N/A	More than 40%	More than 45%	More than 45%
Micro Context	Ethics work	Energy-saving and emission reductions projects	Improve quality of life and humanitarian construction	Green supply chain development and green sustainability works	Build a Better and convenient Society
	CSR strategies	Environmental-oriented strategies such as energy-efficient solutions; engage in the construction of low-carbon society	Provide remote healthcare, support the residents in rural areas; support farmers, youth, and students	Engage in building up harmonious business ecosystems; carry out green partnership program	Assist the local society to reduce unemployment issues; support local ICT industry and universities' R&D

Note: Cultural distance is calculated following Kogut and Singh (1988) and using data collected from Hofstede Insights. Institutional distance data are collected from the Global Competitiveness Report and calculated with reference to Chen, Li and Fan (2018). Data of human resources engaged in R&D are collected from Huawei's annual reports.

CASE ANALYSIS AND FINDINGS

RUSSIA

From its inception in 1987, Huawei has grown speedily to become one of the leading telecom innovators in China (Liefner et al., 2019; Schaefer, 2020; Sun, 2009). Although China became one of the largest FDI recipients in the 1990s, Chinese domestic firms were still faced with institutional constraints and competitive disadvantages in expanding their business, especially for high-tech firms that relied

heavily on intangible assets (Yan et al., 2018). Huawei, by leveraging the close geopolitical relationship between China and Russia, started its first internationalization step to enter the Russian market (Sun, 2009). At the time of starting up businesses in Russia, Huawei's low-quality products were not favored by local consumers (Sun, 2009). Since the Russian economy was highly dependent on heavy industry, foreign firms that could not contribute to key industries or were likely to cause environmental pollution faced pressures from local stakeholders (Hisrich & Grachev, 1993).

Encountering legitimacy challenges in Russia, Huawei began to realize the importance of local-market CSR in gaining societal trust. It gradually developed and employed bioplastic techniques for multiple smartphone production for the sake of building up a low-carbon society and helping local manufacturers save energy and reduce carbon emissions (CR-SR, 2013). For example, Huawei delivered a speech about cybersecurity solutions at Russia's Information Security Forum in 2014 and took action to provide Big Data digital solutions to assist Russia's largest commercial bank to enhance its efficiency (CR-AR, 2014). In addition, through designing new products and update recycle programs, Huawei successfully helped the Russian market increase product recycle rates (CR-SR, 2018). Through cooperation with local firms that have advanced e-waste disposal techniques and intangible resources, Huawei gradually gained trust and recognition in the Russian market.

Although the process of persuading local consumers to accept new products was difficult, the legitimacy challenges were solved by Huawei's continuous product improvement and innovation. From Huawei's operations in Russia, we can observe an intertwining process between legitimacy and innovation: Huawei delicately combined global legitimacy requirements and innovation possibilities to establish a footprint in Russia. Huawei's Sustainability Report (CR-SR, 2008) said:

Our innovative energy-efficient solutions reduce carbon emissions by minimizing the need for activities such as the flow of goods and business trips. We continue to improve the energy efficiency of our products and promote the application of sustainable energy solutions that help operators achieve their environmental and OPEX [Operating Expenses] goals.

Through the technological evolution and legalization, Huawei improved consumers' impressions of its products and expressed its objectives to help locals improve environmental sustainability. A top management team (TMT hereafter) member in Huawei's Corporate Social Development Committee observed:

In the future, Huawei will further improve our sustainability management systems, enforce baseline requirements, and focus on increasing process efficiency. We will also align our mid- and long-term sustainability plans with our corporate business plan to more effectively achieve business goals. (INT-TMT-1, 2012)

Gradually, Huawei grasped local-market information and acquired tacit knowledge via close cooperation with local businesses, obtaining 'nutrients' for its innovation requirements (Miles et al., 2004). The co-evolution between CSR adoption and innovations enabled Huawei to gain a firm foothold in the ICT industry in Russia.

KENYA

Moving into the 21st century, China's outward FDI increased dramatically in Africa and became one of the main sources of foreign investment in Southeast Asia and Africa (Morck, Yeung, & Zhao, 2008). Dating back to the China-Africa Cooperation (FOCAC) forum in October 2000, the establishment of Sino-African relations has resulted in the Chinese government strongly encouraging domestic firms to

enter the African market (Strauss & Saavedra, 2009). Even though Huawei was less competitive than its advanced market counterparts, the geopolitical relationship between China and Africa have introduced benefits for Huawei's internationalization in Africa (Cuervo-Cazurra & Genc, 2008; Strauss & Saavedra, 2009). However, impeded by the distance in language, business culture, and social norms, Huawei's products and services were not always easily understood and accepted by local stakeholders, which led to its operations being constrained (Parente et al., 2019).

In order to embed in the local market and deal with legitimacy challenges in Kenya, Huawei gradually learned that local people attach great importance to living conditions, and this pointed to the need for humanitarian support for local society. In East Kenya, residents were facing difficulties in accessing healthcare, because most medical professionals preferred to work in central cities and because transportation was relatively backward (CR-AR, 2016). Catering to local demand, Huawei proposed a Smart Healthcare Project to facilitate remote online healthcare and diagnosis (CR-AR, 2016). With this innovation, Huawei won the Innovative Global South Award in 2016 because the local people's welfare was greatly improved (CR-AR, 2016). Thus, Huawei built up its humanitarian international reputation in Africa. This move also benefited the rest of the world to a large extent, especially following the outbreak of COVID-19, because telemedicine helps people seek medical advice online while remaining in self-isolation:

With the help of the Cloud, case information can be shared between different health institutions, and diagnosis and treatment information can be quickly added or changed, providing a reference for doctors to fully understand patients' conditions and formulate suitable treatment plans. (INT-EXT-1, 2020)

Huawei also adopted CSR practices to improve the education of rural people. It launched a number of educational projects to sponsor local students with technological equipment and provided internet connections and uninterrupted power supplies for the development of local data centers. For instance, the "DigiTruck" program, developed by Huawei to strengthen digital skill training for women, young unemployed, and teachers in rural areas, was recognized by local society (CR-AR, 2019). By launching ICT innovation competitions in schools, Huawei provided incentives to encourage local students to develop innovative ideas. Hence Huawei's CSR efforts increased the education awareness of rural Kenyans and provided educational support to rural society. The principal secretary in the Kenyan Ministry of ICT praised it:

This enhances the student's employability and capacity to embark on various ventures within the ICT space. (INT-EXT-2, 2019)

Huawei's legitimation practices in Kenya brought about significant innovations, such as Live Virtual Classrooms (LVC), e-Schoolbag systems, and CloudCampus Networks (CR-RD, 2017; see Table 3). Huawei's digital solutions for Kenyan society not only benefited rural students but also helped to improve the living conditions of the general public. Given these CSR efforts, Huawei began to maintain close contact with local authorities and absorbed local knowledge through participating in local innovation competitions (Miles et al., 2004). The purpose of Huawei's CSR practices in Kenya was evidently to achieve product innovation in the process of providing humanitarian construction and improving the quality of life of the Kenyan people. Huawei's internationalization in Kenya illustrates that global legitimation and innovation are intertwined.

THE UK

As Huawei accumulated international experience, it began to venture into the West in the mid-2000s (Schaefer, 2020). The UK was one of Huawei's early targets among European markets. Unlike its entry in developing countries, Huawei faced more serious legitimacy challenges in the UK because of the greater liability of origin, country distance, and market unfamiliarity (Kostova & Zaheer, 1999). At the macro level, the large institutional and cultural distance between China and the West hindered Huawei from seeking market opportunities and led to erroneous attributions of information in relation to its potential partner quality (Couper, Reuber & Prashantham, 2020; Zhang *et al.*, 2020). At the micro level, the lack of experience in cultural and institutional distant countries has given rise to the "person-environment fit" problems of Huawei's expatriates (Kostova & Zaheer, 1999). In particular, although Huawei had earned a good reputation in some developing countries, consumers and domestic firms in the UK were still unfamiliar with Huawei. As a sales manager said:

A lot of them said, 'Who are you?' (INT-TMT-2, 2004)

Drawing on its prior experiences in developing markets, Huawei participated in local CSR activities at the early stages of its UK market operations. It launched the ICT sustainable development project and committed to local market network building through financial support and cooperation with local firms:

[Huawei] donated to schools, including Cambridge University; held parties for political leaders; and sponsored prominent charities like the Prince's Trust, founded by Prince Charles. (NAV-NY-1, 2019)

Facing obstacles to and difficulties in long-distance international trade with the UK, Huawei generated the idea of green supply chain development. It designed supply chain solutions for suppliers and engaged itself in this ethics field in the British market. A Huawei board member in the sustainability report observed:

We are embarking on a transformation from focusing on 'risk management in supplier CSR' to 'efficiency management in supplier sustainability' as we better position ourselves in becoming a global and industry leader in sustainability. (CR-SR, 2012)

In recent years, Huawei has been committed to launching a green partnership program and cooperating with local suppliers to jointly introduce new digital solutions to reduce energy use and greenhouse gas emissions. According to Huawei's CSR report:

In 2019, the global economy and political environment remain highly complex and full of unknowns. Huawei will face many more sustainability challenges. But we believe that there are also many opportunities. These challenges and opportunities will push us to constantly improve and innovate in our products, solutions, and services, so that we can create more social value... (CR-SR, 2018)

In order to promote green initiatives to catch up with industry players, Huawei participated in the development of standards and policies for green supply chain management. In 2012, Huawei was invited by the well-known British firm BT (British Telecom) to become a member of the Better Future Supplier Forum (BFSF), indicating that Huawei's CSR engagement in the construction of a green supply chain has gradually become recognized by the local market. Through partnerships and building collaborative networks, Huawei subsequently absorbed local market knowledge and made the green

supply chain an innovation-focused CSR strategy. For instance, Huawei's participation in the BFSF forum gained it more opportunities to get access to further market-related information and tacit knowledge. As indicated by the host party officer,

We believe in the power of communications to deliver sustainable social and economic growth. The Sustainability Conference has been an excellent opportunity to discuss with global industry leaders and stakeholders how ICT can play a very real part in building a better future. (INT-EXT-3, 2014)

Huawei's CSR efforts also introduced innovations such as the "3 Rs" (Reduce, Recycle & Reuse) digital solution (CR-RD, 2019) and the E-Waste Recycling Program (CR-RD, 2016). The CSR practices by Huawei in the UK show how it leveraged green sustainability initiatives to transfer advanced local knowledge and thus contribute to better innovation performance (e.g., extending the breadth and depth of product chains).

CANADA

The Sino-Canada relationship was in tension until the global recession in 2008, when the Canadian government considered repositioning its collaboration strategy with China. This geopolitical change provided Huawei with political benefits in entering the Canadian market (Witt, 2019). In 2008, Huawei set up its first office in Markham, Ontario, starting its market exploration process with a strong commitment in the form of 'Greenfield' investments and setting up R&D subsidiaries (Schaefer, 2020). Yet the relatively large institutional distance between China and Canada created ethnical challenges for Huawei in its Canadian market exploration process. More seriously, the deep-rooted "made in China" stereotypes generated a "not-to-be trusted" image for Huawei (Cuervo-Cazurra & Genc, 2008).

In response to the legitimacy challenge of Huawei's early operations in the Canadian market, Huawei carried out a series of CSR practices to demonstrate its business ethics. It focused on helping local society to cope with unemployment, in particular offering job opportunities for new immigrant talents in Canada. Through its efforts, Huawei contributed to the maintenance of social stability via alleviating the employment contradictions that affected immigrants (Zhao, Park & Zhou, 2014). In addition, Huawei actively supported the establishment of Canada's ICT Ecosystem (CR-CC, 2016). It targeted the local education industry and provided financial and technical supports for Canadian research centers, universities, and students. As documented in Huawei's Corporate Citizenship Report,

Huawei Canada has ongoing research initiatives with ten universities across Canada and has recently announced strategic collaboration agreements with several universities, including the University of Toronto and the University of Waterloo. Approximately 10% of Huawei's annual R&D investment in Canada goes directly to research partnerships with Canadian research institutions. (CR-CC, 2016)

In addition, Huawei actively engaged in finding new ways to improve education and contribute to the environment in Canada (NAV-TW, 2020). Its CSR practices in the Canadian market also brought significant innovations, owing to the strategic cooperation with the Canadian R&D centers and universities. For instance, Huawei developed the philosophy of Innovation 2.0 (CR-RD, 2019), which aims to bring together local society, universities, and research centers to allow all types of talent resources to come together in the promotion and pursuit of innovation. As of 2019, Huawei had published more than 80 papers in AI technology; these were joint efforts by academia, manufacturers, and horizontal and vertical stakeholders using disruptive technologies. Huawei thus became one of the leading ICT solution providers in Canada.

Unfortunately, however, the innovation achievements of Huawei brought it under stricter scrutiny and legitimacy requirements in the target country. Moreover, China's rapid rise also led to increased geopolitical tensions between China, Canada, and the US (Witt, 2019). Huawei's operations in Canada have been significantly challenged since the end of 2018 and early 2019. On 1 December 2018, Meng Wanzhou, the board deputy chair and Chief Financial Officer (CFO) of Huawei and the daughter of Huawei's founder, was arrested by Canadian officials on a US warrant, on grounds that "Meng covered up attempts by Huawei-linked companies to sell equipment to Iran, breaking U.S. sanctions against the country" (NAV-REU, 2019; NAV-GUA, 2018). As indicated by a US Senator, one of the reasons for this action is related to the geopolitical tension between China, the US, and Canada:

China was aggressively engaged in undermining US national security interests. ... Americans are grateful that our Canadian partners have arrested the chief financial officer. (NAV-BBC, 2018)

Although Meng's lawyers claimed that the arrest was a typical case of "abuse of power" (NAV-WP, 2019), and the founder of Huawei, Ren Zhengfei (Meng's father), insisted that "When it comes to cybersecurity and privacy protection we are committed to be sided with our customers. We will never harm any nation or any individual" (NAV-CNBC, 2019), and "Huawei has no research partnerships with the military at an organizational level" (INT-TMT-3, 2019), Canadian officials did not stop the investigation and cast doubts on Huawei's political goals¹. Local telecom firms also began to review Huawei's security issues, and this led to a deterioration in the trust relationship between Huawei and local Canadian firms. Moreover, the trading restriction proposed by the US government to stop local suppliers from selling any components and software to Huawei created tensions between the Chinese and Canadian governments (Schaefer, 2020; Witt, 2019). Likewise, the trading restriction persuaded the Canadian government to reconsider the legitimacy of Huawei Canada's operation and its participants in 5G network building (NAV-TV, 2019; NAV-YT, 2020). According to a member of the Senate of Canada,

While Canada has strong telecommunications security safeguards in place, we have serious concerns that such safeguards are inadequate given what the United States and other allies know about Huawei. (INT-EXT-4-1, 2020)

To date, Huawei has struggled to deal with legitimacy challenges in the Canadian market because of increased suspicions about Huawei's radical innovations and the geopolitical relationship between China and Canada. Therefore, the initial legitimation pressure in Canada forced Huawei to upgrade its techniques and innovations, and this in turn triggered tougher legitimacy requirements, which also reflects the co-evolution of global legitimation and technology upgrading.

DISCUSSION AND PROPOSITION DEVELOPMENT

COUPLING OF MACRO AND MICRO INFLUENCES AS CO-EVOLUTION ANTECEDENTS

Our analysis reveals that co-evolution between global legitimation and innovation occurs under the joint influence of factors at the micro-level (i.e., firm-specific) and macro-level (i.e., country-specific). Like most Chinese firms, Huawei initially lacked innovation capabilities and could only produce products with few technical inputs (Fu et al., 2018; Sun, 2009). Although Huawei achieved technological leadership in China, the domestic market had left little for it to learn, which blocked it

¹ On 24 September 2021, Meng has been discharged from detention by the Canadian court as the U.S. has withdrawn the extradition request and reached a deferred prosecution deal with her.

from accelerating its innovation and developing sustainable business practices (Liefner *et al.*, 2019; Schaefer, 2020; Sun, 2009). Jointly influenced by a knowledge-seeking intention and China's *Go Global* national policy (Buckley *et al.*, 2007; Morck *et al.*, 2008), Huawei set out on its internationalization journey to seek state-of-the-art knowledge.

In this study, we observe that Huawei, as a high-tech enterprise eager to acquire new knowledge, actively engages in CSR activities for facilitating its learning, capability upgrading, and network building in the global market. Yet, since this involves a key industry in China's economic growth, it faces severe legitimacy challenges in foreign countries. While liabilities of foreignness and newness have been widely recognized in the literature as the unavoidable costs that an MNE faces (Jiang & Zhao, 2020; Li & Fleury, 2020; Zaheer, 1995), Huawei, similar to other Chinese MNEs, is also affected by liability of country of origin, the "Made in China" stereotype, and geopolitical differences and preferences between China and other countries (Cuervo-Cazurra & Genc, 2008). Moreover, China's rapid growth and its relations with other countries have generated greater geopolitical uncertainties for Chinese MNEs (Witt, 2019). Host countries, particularly those in the West, are concerned about leaking intelligence, losing critical technologies, and threats to national security, at the hands of their Chinese competitors (Meyer *et al.*, 2018). Therefore, Huawei must undertake intensive CSR to meet its micro-level knowledge needs and deal with macro-level challenges. Based on Huawei's experience, our summary is that strong knowledge-seeking intentions and geopolitical challenges lead Chinese firms to engage in foreign-market CSR and subsequently improve innovation and to reduce stereotyping. Thus, we propose:

Proposition 1: *Macro-level legitimacy challenges and micro-level knowledge-seeking motivation are coupled to become a catalyst for the co-evolution of global legitimation and innovation.*

THE CO-EVOLUTION PROCESS OF LEGITIMATING, EMBEDDING, AND INNOVATING

In this study, we find that Huawei has accelerated its growth by utilizing CSR practices to improve legitimacy and simultaneously embedding in foreign countries in order to gain access to advanced knowledge for innovation (cf. Bocquet *et al.*, 2017; Rao *et al.*, 2008). As is evident in Huawei's internationalization, it entered developing countries with closer geographical distance (i.e., Russia) or institutional distance (i.e., Kenya) to accumulate experience and gradually improved its image in foreign markets. As we observed, Huawei's legitimacy pressures in these countries mainly arose due to its liability of foreignness and newness that required it to transform from an outsider to an insider (cf. Liefner, Si & Schäfer, 2019; Li & Fleury, 2020). Huawei adopted CSR practices by engaging societal and environmental problems in host countries. In order to provide better solutions, Huawei engaged in international network building and thus gradually acquired new knowledge to support innovation. It later entered developed countries to gain advanced knowledge because the most powerful global players in the telecommunications industry were located in the West (Luo, 2020; Schaefer, 2020).

Huawei's legitimacy challenges in developed countries such as the UK and Canada mainly stemmed from its liability of origin and geopolitical tensions between China and the host countries. The rapid rise of China and the success of Huawei's internationalization have brought serious problems to and cast doubts on Huawei's expansion (Schaefer, 2020; Witt, 2019). Huawei has had to accelerate its innovation to prove to the West that it is technologically competent and meets standardization, rather than being a political vehicle about which the West often speculates critically (Haley & Haley, 2013; Schaefer, 2020). In this process, Huawei has endeavored to catch up with industry leaders by hiring local market experts and getting access to their network resources in order to enrich its connections with the local market knowledge pool (Schaefer, 2020; Tuan, 2016). Digesting new knowledge

absorbed from foreign markets, Huawei has constantly enhanced its learning efficiencies and improved innovativeness by accessing tacit knowledge in host countries.

Huawei's innovation achievements in the global legitimation process are abundant (see Table 3). For instance, in Russia and Kenya, Huawei's CSR aimed to help local communities improve living standards and facilitate the sustainable development of local society (Miska *et al.*, 2016). Its bioplastic technologies, energy-saving innovations and telemedicine solutions not only brought benefits to host countries but also improved its global image by persuading the local stakeholders (Li & Fleury, 2020; Murcia, 2020; Tashman *et al.*, 2019). In developed countries such as the UK and Canada, Huawei helped deal with local unemployment issues by offering jobs and providing financial support to the education sector. Huawei actively sought cooperation with local universities for gaining trust to access local knowledge trust and develop technical skills (Fu *et al.*, 2018; Schaefer, 2020).

In summary, Huawei's co-evolution process thus exhibits a prominent feature, which is the targeting of different types of innovations based on different host-country CSR requirements. Drawing on Huawei's experience, we suggest that Chinese MNEs can become more autonomous and creative in their evolutionary process of adjusting their strategies and governance to counter uncertainty and legitimacy risk in foreign countries. Taking these together, we posit:

Proposition 2: *Global CSR engagement bridges the legitimacy-innovation co-evolution mechanisms. That is, the process allows the EMNEs to embed into the host market and access local tacit knowledge, which ultimately leads to innovations.*

Table 3. Huawei's CSR Strategies and Innovation Outcomes

Target Country	Legitimacy Issues	Main Challenges	CSR Efforts	Innovation Achievements
Russia	Trust-related	Liability of foreignness & newness	Help local communities to reduce environmental pollutions	↔ E-waste technology; Bioplastic techniques
			Help local manufactures to save energy and reduce carbon emissions	↔ Energy-saving innovations Huawei-Optical Cross-Connect (OXC)
Kenya	Cognitive & Trust-related	Liability of foreignness & newness	Provided healthcare assistance for rural residents	↔ Disruptive Telemedicine Solutions; HUAWEI CLOUD
			Launched DigiTruck for digital education	↔ Cloud Campus Networks; Wireless to the X (WTTx) technology
The UK	Regulatory and normative	Liability of origin	Helped to improve logistics efficiency	↔ Green supply chain solutions; E-Waste Recycling Program
			Participated in local network buildings	↔ Innovative recycle solutions of renewable and non-renewable materials
Canada	Regulatory and normative	Liability of origin & Geopolitical tensions	Supported local universities and made donations for local R&D development	↔ Vision-driven Innovation 2.0; Product innovations
			Provided R&D resources to local market	↔ AI technology; 5G, 6G building

Note: Data are sourced from Huawei's CSR reports and corporate reports.

THE DESTINED CO-EVOLUTION CYCLE OF INNOVATION-LED LEGITIMACY CHALLENGES

Although Huawei's innovation achievements earned it higher profitability and helped it leapfrog some stages of international expansion, they have also brought more legitimacy challenges to Huawei's international expansion, leading to co-evolution. This runs counter to previous studies, which suggest that emerging market firms can reduce liability of country of origin and enhance permissibility in foreign countries through increasing their learning and innovation (Chen, Li, & Fan, 2019; Tan & Meyer, 2011; Zaheer, 1995). Our analysis of Huawei, however, shows that these arguments should be re-examined because firms' strategies also exert influences on the host-country environment and affect the institutional settings in host countries (Mazé & Chailan, 2020). For instance, Mazé and Chailan (2020) suggest that Chinese MNEs' innovation can affect the host countries' institutional environments, thus changing the potential of these firms' accelerating international expansion pace. Similarly, Witt (2019) finds that the rise of Chinese MNEs leads some governments in developed

countries to establish constraints on their acquisitions, especially when these firms are from high-tech industries.

Figure 3 displays the dual influences between legitimation and innovation for Chinese MNEs. The dynamic of this model is presented by the arrows that move back and forth between legitimacy requirements and technological innovation. We suggest that, although CSR facilitates Chinese MNEs embedding into foreign markets and facilitates innovations, these achievements in turn affect the host country’s attitude towards such firms, leading them to face more legitimacy pressures. In this study, we observe that, due to Huawei’s growth and increased competitiveness, it has faced more legitimacy challenges all over the world (e.g., the arrest of Huawei’s CFO in Canada, the ‘5G ban’, and the security threat speculation) (Schaefer, 2020; Witt, 2019). These increasing legitimacy pressures have further forced Huawei to revise its legitimation strategies in order to deal with hostile sales bans and to adapt to the changing institutional environments in host countries (Cantwell *et al.*, 2010; Pitelis, 2009; Witt, 2019). That is, its CSR-driven innovations have led to changes in institutional environments, and thereby the requirements for global legitimation have also changed accordingly (Mazé & Chailan, 2020). In this regard, Chinese MNEs fall into a destined new cycle of “legitimation-innovation-legitimation”. Hence, we further suggest:

Proposition 3: While CSR engagement can provide innovation opportunities for Chinese MNEs, it in turn leads them to face increased scrutiny and legitimacy pressures. Consequently, Chinese MNEs invest more in global CSR activities, and the legitimacy-innovation co-evolution is formed.

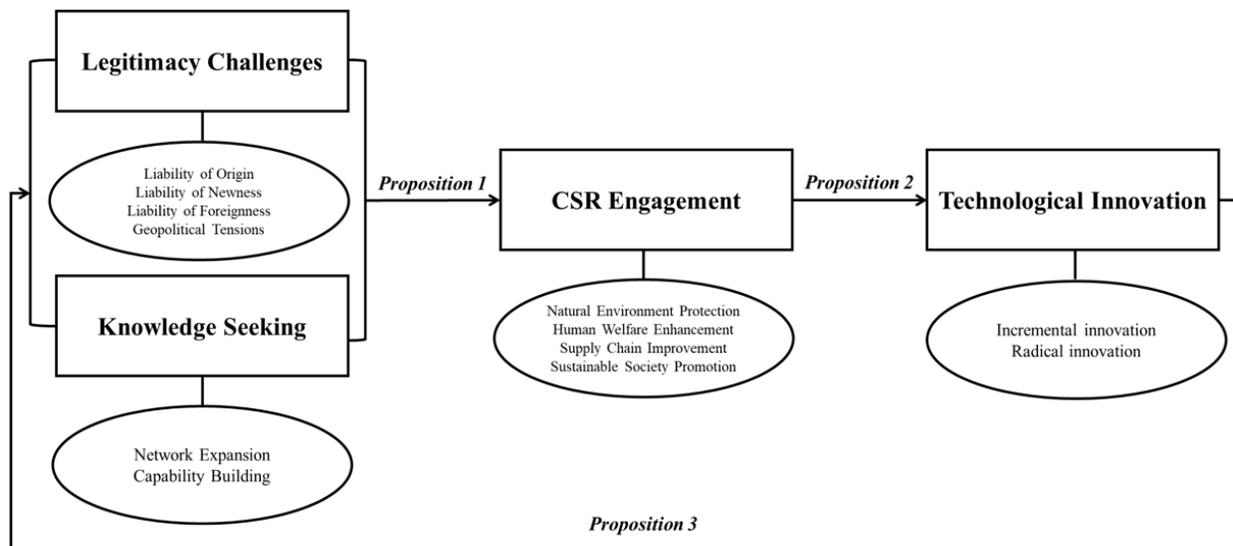


Figure 3. The Co-evolution Process of Legitimation and Innovations

Note: the rectangular boxes represent the main mechanism; the oval circles refer to actions identified by qualitative evidence.

CONCLUSION

THEORETICAL IMPLICATIONS

Findings in the present study add to the state of knowledge in IB research, particularly in business ethics and innovation literature, in three respects. First, we use a co-evolution perspective to provide a more disaggregated picture of Chinese MNEs’ overseas legitimacy challenges and innovation improvement. Analysis of interviews and media sources supports our propositions on the co-

evolution. We argue that Chinese firms' international CSR strategies are developing and evolving to fit foreign-country legitimacy requirements (Tashman *et al.*, 2019; Miska *et al.*, 2016; Zheng *et al.*, 2015). As global market latecomers, Chinese MNEs benefit from embedding in the host country and accessing new knowledge. Yet their innovation outputs put them at a political and social stormfront and thus can arouse more suspicion and mistrust from foreign countries (Witt, 2019). Our findings add new insights to the co-evolution perspective by arguing that global legitimation and innovation co-exist and co-evolve over time.

Second, we leverage Huawei's impressive CSR efforts in four different types of countries to summarize the goals and features of CSR practices by Chinese MNEs. While the extant literature discusses the difficulties of Chinese firms' foreign investments (Buckley *et al.*, 2007; Morck *et al.*, 2008) and drivers for their global CSR integration (Miska, *et al.*, 2016; Witt, 2019), these studies deliberately identify and outline the types of CSR and associated goals. In this study, we fill the research voids to distinguish four global ethical approaches of Chinese MNEs, including focuses on natural environment protection, human welfare enhancement, supply chain improvement, and sustainable society promotion (see Table 4). Our research thus enriches global business ethics research by categorizing the types of CSR conducted by Chinese MNEs and by discussing associated innovation outcomes.

Third, we enrich the IB and innovation research by considering how Chinese MNEs' innovation performance affects geopolitical tensions between China and foreign countries. Our findings show that legitimacy pressures in foreign markets push Chinese firms to explore new approaches and provide innovative solutions (Miska *et al.*, 2016). However, greater innovation achievements will in turn trigger tougher legitimacy requirements for such firms due to increased geopolitical tensions and foreign-country doubts about losing any leading position in the industry. In this case study, we observe that, while CSR engagement has made Huawei better known and more embedded in host countries, its innovation achievements make it difficult for it to further explore the market and gain trust because it is perceived as threatening local competition. Hence this study offers valuable insights into the impacts of the individual MNE's innovation on country-level risks and international relations.

Table 4. The Unique Co-evolution Pathways of Legitimation and Innovation of Huawei

Co-Evolution of Legitimacy and Innovation			
Ethics Works	Subclassifications	CSR Strategies	Innovation Efforts
Environmental Sustainability	Harmony with Nature	○ Promote Energy-saving programs	Incremental innovation; Customer-centric innovation fits existing systems
	Environmental protections	○ Adopt green production technology	
Human Welfare	Improve quality of life	○ Provide local people with medical solutions	Incremental innovation; Modify or upgrade existing business models
	Seeds for Hope	○ Provide education solutions for rural residents	
Economic Responsibility	Supply Chain Management	○ Provide solutions or assistance for firms to enhance logistic efficiency	Radical innovation; Create a new market or new business models
	Digital workplace	○ Committed to helping local firms solve operational issues or workplace conflicts	
Sustainable Society	Committed to Local Society	○ Engage in local collaborated R&D projects, such as cooperate with universities or local firms	Radical innovation; Completely replace existing systems
	Social donation	○ Provide financial supports to local R&D institutions; Provide funding for innovation	

MANAGERIAL IMPLICATIONS

This case study offers meaningful managerial and policy implications to practitioners, and the lessons we learn from Huawei's experiences can be applied to other Chinese MNEs and to MNEs from other emerging countries. First, our study provides a long-term managerial implication for emerging market MNEs, given the observed increase in legitimacy challenges to these global latecomers in recent years. We suggest that firms concentrate on the most radical innovation activities in their home countries to reduce geopolitical risks and doubts about their political goals (Schaefer, 2020). They are encouraged to create incremental innovation in foreign countries to gradually show their technological competence without political spillovers influencing perceptions. We also suggest that the latecomer firms develop more alternative options for their global legitimation and innovation efforts, because the co-evolution process is one of great dynamism and uncertainty (Cantwell *et al.*, 2010; Pitelis, 2009). Firms also need to recognize the mechanisms of the co-evolution process, so as to improve strategies and evaluate different alternatives in order to make better decisions.

Second, decision-makers in emerging-market MNEs should pay attention to the design of their global CSR strategies in order to accelerate efforts to catch up with leaders in industries without triggering additional geopolitical risks (cf. Murcia, 2020). Based on Huawei's experience overseas, the

design of CSR strategies should fit the host country's characteristics and needs. Decision-makers should also pay attention to the added institutional pressures (e.g., geopolitical tensions, criticism) that are consequent upon their firms' innovation (cf. Abdelal, 2015). They are encouraged to make the attainment of host-country legitimacy a guiding principle for their design of CSR practices in order to avoid negative impacts on an MNE's international operations.

Third, government officials in China and other emerging countries may also find our research interesting in view of how innovation of MNEs affect the geopolitical relationship between home and host countries. Our study suggests that Chinese governments pay attention to the liability of origin that their MNEs face overseas. Governments need to understand the negative influences of the subsidies they offer to support their MNEs, such influences as inhibiting the consolidation of production facilities, lowering the firms' efforts to improve competitiveness, or even increasing suspicions of the firms' political purposes (Haley & Haley, 2013).

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

There may be a limitation to the generalizability of our findings to other Chinese MNEs, as Huawei is rather a special MNE due to the politically sensitive nature of its main business in telecommunications infrastructure (Liefner *et al.*, 2019; Schaefer, 2020; Sun, 2009). We encourage future researchers to collect data on other emerging market MNEs to provide more theoretical and empirical evidence to test our propositions and the research model in Figure 3. For example, scholars can use appropriate time lags to identify the mutual influence of CSR expenses and innovation outputs (e.g., number of patents, patent citations), or test the moderating effects of geopolitical tensions or relations between countries in affecting an MNE's CSR practices and innovation achievements. Future studies on the CSR of emerging market MNEs can also identify ethics initiatives in different fields, thus revealing their distinct goals for market embeddedness and characteristics of innovation (cf. Murcia, 2020).

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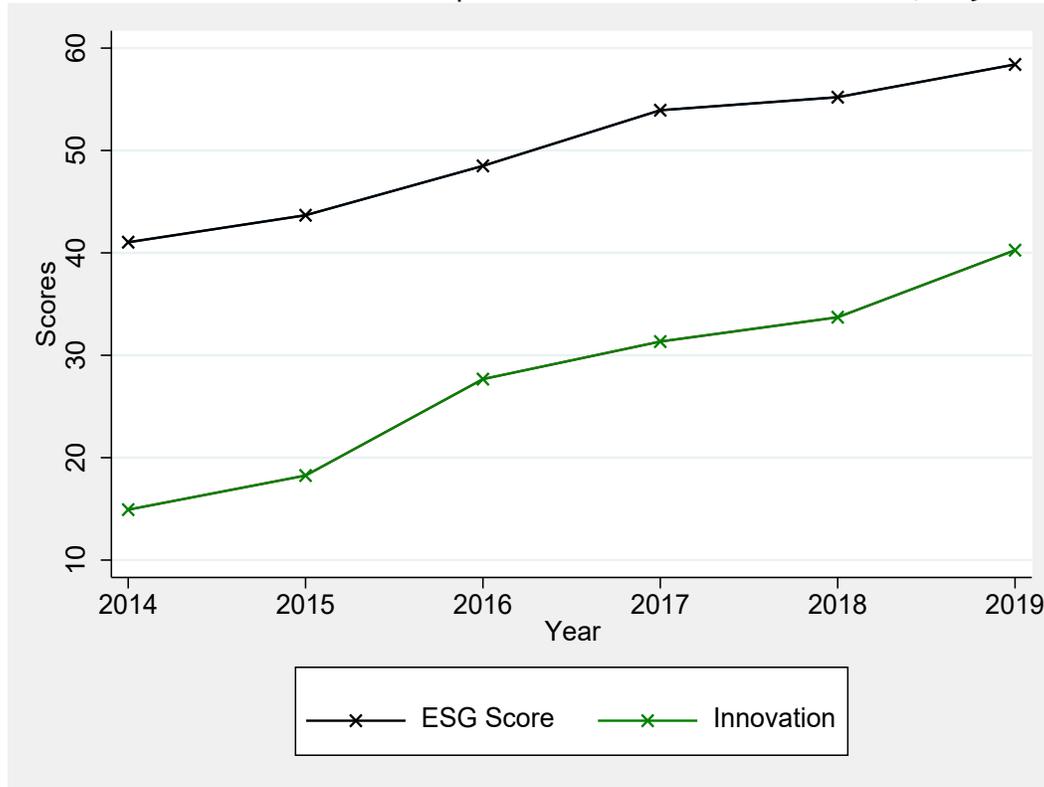
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APPENDIX

Changes of ESG Scores and Innovation of Representative Chinese MNEs from 2014-2019



Note: ESG score is to measure a firm’s environmental, social and governance performance. The scores shown in the Figure are the average value of the Chinese MNEs in the Forbes 500 list.

Data source: updated from Refinitiv Eikon.