Outward FDI, location choices and innovation performance of emerging market enterprises

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A B S T R A C T

Although prior research conceptualizes how knowledge-seeking motivates the internationalization of emerging-market enterprises (EMEs), whether outward foreign direct investment (OFDI) indeed leads to enhanced innovation performance has received limited attention. We address this subject by conceptualizing how Chinese EMEs’ OFDI enhances their subsidiaries’ organizational learning and innovation performance and whether geographic location choices influence this relationship. Our panel data analysis of Chinese EMEs shows that OFDI has a positive effect on innovation performance of Chinese EMEs’ subsidiaries and that this effect is stronger when the OFDI is directed towards developed rather than emerging countries. These findings advance the notion that EMEs can use OFDI as a strategy to globalize R&D and enhance their innovation performance and demonstrate that certain established assumptions regarding organizational learning are not valid for EMEs.

1. Introduction

The past two decades have witnessed a remarkable rise in outward foreign direct investment (OFDI) and rapid advancements in technological innovation from emerging market enterprises (EMEs) (Hoskisson et al., 2013; Luo et al., 2011). Innovation scholars have sought to explain this phenomenon by examining how emerging countries enhance indigenous R&D capabilities by reforming their national innovation systems to enable more market-based competition and by encouraging technological advancement through internationalization activities (e.g., Liu et al., 2011; Wu et al., 2016). In particular, scholarly research considers that OFDI is a key mechanism through which technological laggards seek to learn and develop technological capabilities on a global basis (Cantwell, 1989).

Despite the consensus that internationalization generates learning opportunities for firms, the assumptions and findings that have informed theory are largely based on studies of internationalized firms from developed economies. As a result, we have an incomplete understanding of whether EMEs – as latecomers – can successfully learn and absorb new knowledge from abroad (Chittoor et al., 2015). The theoretical significance of this question derives from the understanding of the drivers of EMEs’ technological advantages and their unique approaches to learning, particularly through internationalization. From an organizational learning perspective, firms from advanced economies typically develop technological advantages by relying on internal R&D and cumulative experiential learning. However, path-dependency, strong government involvement and underdeveloped institutions in emerging economies make it difficult for EMEs to adopt such learning models. By studying whether and when OFDI helps to improve EMEs’ innovation performance, this study contributes to the literature on innovation and internationalization of EMEs in two ways.

First, although prior research suggests that EMEs use internationalization as a learning tool to upgrade innovation capabilities (Guillen and Garcia-Canal, 2009), the intersection of OFDI strategies, organizational learning and innovation is under-theorized (Hotho et al., 2015). Our contribution consists primarily in demonstrating whether and when OFDI helps EMEs’ subsidiaries enhance their innovation performance by conceptualizing how they can learn and integrate knowledge from foreign locations and use it for innovation. Second, building on the notion that not all location choices are equally beneficial to all EMEs, we conceptualize how geographic destination choices of OFDI (developed vs. emerging countries) facilitate or constrain the proposed innovation-enhancing effects of OFDI by influencing subsidiaries’ organizational learning in the host countries. This approach enables us to extend beyond merely asking the question of whether OFDI enhances the innovation performance of EMEs’ subsidiaries and...
instead spurs us to theorize regarding how different OFDI location strategies can lead to differential innovation performance outcomes for EMEs.

China is a particularly suitable empirical setting for this study. On the one hand, many Chinese firms have in recent years accelerated globalization of innovation by engaging in OFDI (WIR, 2014) and, on the other, these firms have leapfrogged others to become important competitors in the global battle for technological leadership. We test our predictions by investigating 96 publicly listed high-technology Chinese manufacturing enterprises, which have conducted OFDI by establishing a total of 247 subsidiaries in 46 different countries over the period of 2001–2012. Our findings explain the rise of EMEs as innovators by demonstrating how OFDI positively influences the innovation success of EMEs’ subsidiaries and how location choices influence this relationship.

2. Background

2.1. EMEs’ international learning and innovation

Organizational learning refers to the change in an organization’s knowledge that occurs either as a function of its own experience or by learning from the experiences of others (Argote, 2015). Organizations learn in different ways depending on their learning ability, prior experiences and the knowledge base that they have developed (Barkema and Vermuelen, 1998). Because EMEs have been historically weak in R&D resources and typically co-evolve with underdeveloped home institutional environments that constrain experimentation-based learning, they may learn and develop technological advantages in ways that differ from their counterparts in developed countries.

First, EMEs learn and develop innovations by imitating and reverse engineering successful products (Malik and Kotabe, 2009). Several EMEs have used this learning method and became global technology leaders over a short period of time. For example, China’s Huawei has transformed from a ‘copycat’ into a global competitive innovator (Luo et al., 2011). According to China’s State Intellectual Property Office (SIPO), in 2015, Huawei granted 769 invention patents to Apple, while in return Apple granted 98 to Huawei. Although sometimes constrained by weak internal R&D resources, EMEs are able to leverage their abilities to acquire, purchase and license key components and technologies in open markets, and to learn from disassembling products into observable technological components of lower complexity (Malik and Kotabe, 2009), which can lead to the development of architectural innovations.

Second, EMEs overcome their internal weaknesses in R&D resources and catch up by indirect learning, i.e., learning through observing, incorporating and sharing others’ experiences (Banerjee et al., 2015). As opposed to multinational corporations (MNCs) from developed economies, which have been accumulating R&D resources for decades, EMEs must develop such resources in much shorter periods of time because they are typically situated in underdeveloped institutional environments but are in the same time amid intense global competition. Therefore, EMEs overcome their weak R&D resources by learning indirectly through their leaders, their industry competitors, and other firms in their networks (e.g., suppliers) who operate in developed countries (Banerjee et al., 2015).

Specifically, OFDI acts as a key vehicle for the organizational learning of EMEs. Liberalization in emerging markets has initially enabled EMEs to benefit from inward FDI in their home markets through demonstration effects, linkages with suppliers, customers and competitors, and employee turnover. For example, Nanjing Automobile Corporation (NAC) was among the first Chinese companies in 1986 to receive FDI from Italy’s FIAT and by 2004 it had formed 14 Joint Ventures with FIAT and reached an annual production of 200,000 vehicles. In particular, learning through joint ventures and strategic alliances (e.g., via original equipment manufacturers (OEMs)) has helped EMEs forge network ties with technology leaders (Li et al., 2012; Luo and Tung, 2007) and accumulate international experience and R&D resources, thus laying the foundation for international learning through OFDI.

The literature on EMEs’ OFDI suggests that because these firms have limited conventional ownership advantages (e.g., global brand recognition and proprietary knowledge) that can be exploited when venturing abroad, they didn’t follow traditional models in which foreign subsidiaries learn from the parent (Luo et al., 2011). Instead, EMEs’ subsidiaries learn from the local markets by imitating known processes to manufacture products, by acquiring the technological knowledge of local entities and by exploiting relationships with individuals, competitors and networks (Srinivasan et al., 2007). For example, Chinese BOE Technology Group acquired Hydis, the South Korean manufacturer of TFT-LCD technologies, making BOE the first Chinese MNC to hold core technological assets and capabilities on TFT-LCD panels (Peng, 2003). In a similar vein, the strategic intent perspective suggests that EMEs establish subsidiaries overseas via merger and acquisitions (M&As) in order to get access to the strategic assets of the acquired companies (Rui and Yip, 2008).

While OFDI in other emerging economies allows EMEs to benefit from global economies of scale and increase market share, it only leads to incremental advances in organizational learning (Rabbiosi et al., 2012) because they are exposed to underdeveloped markets and institutions, local firms with weak R&D resources and less-demanding customers. By contrast, when EMEs expand to developed markets with industry-specific comparative technological advantages, they can benefit from knowledge spillovers and gain access to valuable R&D resources and skilled labour. For example, in these markets, EMEs can improve their organizational learning as local customers’ sophistication and rapidly changing needs force them to continuously improve and innovate (Rabbiosi et al., 2012). Nevertheless, although the innovative capacity of each country differs (Porter and Stern, 2001), internationalization in multiple countries provides EMEs with exposure to diverse and broad organizational learning opportunities and sources, which increases EMEs’ knowledge base and R&D capabilities in the aggregate.

2.2. China’s innovation and OFDI performance: an overview

China has witnessed remarkable economic growth in recent years and plays a crucial role in the global innovation races. China’s R&D expenditures in 2012 totalled US$163 billion, the 2nd largest in the world, and its ratio of R&D to GDP was 1.98% in 2012, almost matching that of EU-28 as well as closing the gap with the USA and Japan (Eurostat, 2015). The increased R&D expenditure and rapid economic and institutional transformation has enabled China to overtake the US and to assume the world lead in intellectual property output as of 2012 (WIPO, 2012).

OFDI, in particular, has become a crucial part of China’s economic and innovation development plan since the late 1990s (Luo and Tung, 2007). With the ‘visible’ hand of the Chinese government affecting key decisions such as resource allocation (e.g., low-cost loans, funding, and tax incentives) and geographic location choices (developed vs. emerging economies), Chinese EMEs have become the world’s third largest foreign investors, investing an estimated US$101 billion in 2013 (WIR, 2014). Indeed, internationalized Chinese companies such as Haier, Lenovo, TCL, Galanz, Baosteel, and Sinopec have grown to become global competitors. OFDI has helped Huawei and ZTE, for example, to increase their international technological competitiveness by tapping into markets and foreign advanced knowledge and technology, and reach the world’s second and third positions in patent applications in 2014 (Fan, 2011).

To enable the innovation-enhancing effect of internationalization, many Chinese EMEs locate subsidiaries in countries which offer greater potential for networking, strategic alliances and knowledge spillovers.
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