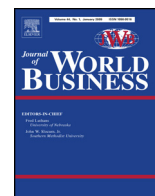




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Global networks as a mode of balance for exploratory innovations in a late liberalizing economy

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ABSTRACT

This article suggests that under weak institutional arrangements, adverse economic conditions, and institutional voids in a late liberalizing economy, local firms that are part of the global value chains of multinational enterprises develop international networks as a *balancing strategy to engage in exploratory innovations*. We argue that local firms do so in order to counter the negative influences of local institutions on exploratory innovations. Using exploratory in-depth qualitative analysis, we study the suppliers of motorcycle parts in Pakistan that are working with leading Japanese and Chinese motorcycle assemblers. The results suggest that in adverse economic situations local institutional factors can sustain only the development of exploitative innovations. As a *balancing strategy*, motorcycle part suppliers develop international networks with global Tier 1 suppliers, international trade fairs, and international institutions. This strategy helps circumvent the negative influence of home institutional factors on developing exploratory innovations. Our study highlights the importance of *global networks* as a *balancing strategy* for creating exploratory innovations by firms in a late liberalizing economy.

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1. Introduction

In this article, we examine the process and mechanisms that facilitate the successful development of exploitative and exploratory innovations in late liberalizing economies (LLEs). This question is important in the context of LLEs because of their extremely weak resource base and highly uncertain institutional conditions. To explore this question, we use the case of the motorcycle component sector of Pakistan, where local suppliers work in non-equity network-based relationships with multinational enterprises (MNEs): Japanese and Chinese assemblers. Our main focus is on understanding how local institutions and MNEs affect the development of exploitative and exploratory innovations of local firms in LLEs characterized by a weak and underdeveloped institutional infrastructure.

Advances in communication technology and intense competitive pressure has forced firms to continually pursue both exploratory and exploitative innovation in order to stay

competitive (Benner & Tushman, 2003; Raisch, Birkinshaw, Probst, & Tushman, 2009; Mueller, Rosenbusch, & Bausch, 2013). Although both exploratory and exploitative innovations are critical for firm performance, economic conditions in the country and contextual issues can greatly influence the strategies used by firms, including their innovation strategies (Mueller et al., 2013; Child & Tayeb, 1982; Kumaraswamy, Mudambi, Saranga, & Tripathy, 2012; Awate, Larsen, & Mudambi, 2012). Child (1981) argued that some aspects of organizational behavior are greatly affected by the cultural and political system of a country. But most of the research on innovation activities typically generates “context-free” theories and empirical evidence (Coad & Rao, 2008; Abernathy & Clark, 1985; Cohen & Levinthal, 1990; Chesbrough, 2006). It has been argued that “context-specific” or “indigenous” theories are pertinent to explaining organizational phenomena, and their examination requires closely integrating the unique country or societal setting (Alon, Child, Li, & McIntyre, 2011; Cheng, 2014; Almeida & Phene, 2004; Wong, Ho, & Autio, 2005; Tsui, 2004; Whetten, 2009; Cheng, 1994). This is especially true in the context of less developed economies (Teagarden & Schotter, 2013). Khan et al. (2016) stressed the importance of the local context of LLEs in framing the institutions that support learning and skill development aimed at innovation. The study of such institutions shows that industrial policy geared toward innovation is weakly

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implemented in LLEs, and it is difficult for local suppliers to develop exploratory and exploitative learning capabilities.

Our current understanding of the effect of local institutions and MNEs in developing exploratory and exploitative innovations by LLE firms is limited (e.g., Mueller et al., 2013; Lorenzen & Mudambi, 2013; Raisch et al., 2009; Khan, Lew, & Akhtar, 2016; Fainshmidt, Judge, Aguilera, & Smith, 2016). Scholars have suggested that global pipelines are becoming important sources of external knowledge for LLEs, because there is asymmetry in the sources of knowledge and support at the local level in such markets. But whether LLE firms use these networks as a balancing strategy to overcome the institutional voids in their home markets in order to develop exploratory or exploitative innovations has not been adequately investigated (Khanna & Palepu, 1997; Lorenzen & Mudambi, 2013; Perez-Aleman, 2011; Maskell, 2014; Ricart, Enright, Ghemawat, Hart, & Khanna, 2004; Ghemawat, 2001).

Recent research suggests that international connections and trade fairs are important sources of assessing knowledge (Maskell, 2014; Li, 2014; Andersson, Dasi, Mudambi, & Pedersen, 2016), but our understanding of whether exploratory and exploitative innovations are successful in different institutional environments (Mueller et al., 2013) and across non-equity based settings remains vague, and it is not clear whether it is possible at all for firms based in LLEs to pursue both these innovations at the same time. The literature on ambidexterity has limitations in its ability to capture the local conditions and underlying processes in LLEs, and most research have focused on developed markets (Raisch et al., 2009; Mueller et al., 2013). Conditions in LLEs are in stark contrast to those in developed markets. Weaker skill development infrastructure, technical advice, and political institutions, among other factors, make it difficult for firms based in these markets to pursue both types of innovation (Hoskisson, Eden, Lau, & Wright, 2000; Wright, Filatotchev, Hoskisson, & Peng, 2005). Thus, it is pertinent to localize, sensitize, and contextualize our theory building in light of the circumstances that surround the exploratory and exploitative innovations undertaken by firms in LLEs (Rousseau & Fried, 2001; Shapiro, Von Glinow, & Xiao, 2007). The weak and underdeveloped institutional conditions prevalent in LLEs such as Pakistan can put pressure on local firms to explore outside sources of knowledge and networks in order to balance exploratory with exploitative innovations. These institutional variations pose significant challenges for firms operating in LLEs in developing both types of innovation and becoming ambidextrous in order to compete effectively in highly integrated global markets. Existing research on exploratory and exploitative innovations overlooked these variations (e.g., Raisch et al., 2009; Mueller et al., 2013), despite the fact that they are central to understanding the underlying mechanisms and processes of developing both types of innovation by LLE firms.

Political instability and budgetary constraints in Pakistan make formal institutions highly ineffective in formulating operative industrial policies and in providing technical advice and access to funding for innovation-related activities. Firms in Pakistan find it difficult to operate and pursue both exploratory and exploitative innovations because of adverse and unstable conditions, such as ambiguous industrial policies and lack of funding and technical advice in matters of innovation (Khan et al., 2016). Lavie, Stettner, & Tushman, 2010 suggested that more research is needed to understand contextual differences and the factors behind the development of exploratory and exploitative innovations. This line of research has neglected the role of international networking as a balancing strategy by firms based in LLEs for developing exploratory innovation. The present paper seeks to fill this gap.

We find that local suppliers in the motorcycle component sector of Pakistan use international networks as a *balancing strategy* for developing exploratory innovation, whereas local institutional

factors are helpful only for developing exploitative innovation. Our contribution is threefold: (a) we show the important role of international networks in the development of exploratory innovation by LLE firms, and we expand the contingency approach to recognize institutional and industry effects on the innovative activity; (b) we theorize the contextual influences on knowledge networks leveraged by the LLE firms, mindful that LLE institutions support exploitative innovation only, therefore external sources of knowledge, global pipelines, are a vital conduit for the development of exploratory innovation by the LLE firms; (c) we provide important insights from Pakistan, a country with limited exposure in the international business and strategy field, thereby deepening our contextual understanding of this phenomenon. Our findings contribute to a nuanced understanding of the effect of international networks, as a *balancing strategy* by local firms, on the development of exploratory innovation. Our results suggest that LLE firms could benefit from international networking, and that policy makers should facilitate and encourage local firms to develop a variety of international connections in order to balance both exploratory and exploitative innovations and become ambidextrous.

2. Literature review

2.1. Exploitative and exploratory innovations

According to Benner and Tushman (2002), “exploitative innovations involve improvements in existing components and build on the existing technological trajectory, whereas exploratory innovation involves a shift to a different technological trajectory.” Similarly, He and Wong (2004) defined exploitative innovation as “technological innovation activities aimed at improving existing product-market domains,” and exploratory innovation as “technological innovation aimed at entering new product-market domains.” Exploitation is the process of seeking new ways to improve existing organizational capabilities and using existing knowledge to increase organisational effectiveness (Jones, 2001). Exploitative innovations are incremental ones, developed and designed keeping in mind the needs and requirements of existing customers or markets (Benner & Tushman, 2003: 243; Benner & Tushman, 2015; Danneels, 2002). Scholars have suggested that these types of innovation broaden the scope of existing knowledge and skills, expand existing products and services, improve current designs, and increase the efficiency of existing distribution channels (Abernathy & Clark, 1985; Benner & Tushman, 2003; Raisch et al., 2009; Kim, Song, & Nerkar, 2012; Mueller et al., 2013).

Exploratory innovations are radical ones, designed to satisfy the needs of emerging markets and customers (Benner & Tushman, 2003; He & Wong, 2004). These innovations offer new designs, create new markets, and develop new channels of distribution; as such they require disrupting existing competences and existing market linkages (He & Wong, 2004; Raisch et al., 2009), as well as new knowledge or at least a departure from existing knowledge bases (Benner & Tushman, 2003; Raisch et al., 2009; Kim et al., 2012). These studies show that learning, improvement, and acquisition of new knowledge are central to both exploitation and exploration. LLE firms lack home-based endowment resources including state-of-the-art knowledge, and may struggle to develop both exploitative and exploratory innovation. The disruption of existing competences and market linkages is more important for the development of exploratory innovation (Benner & Tushman, 2015; Mueller et al., 2013).

Studies on exploitative and exploratory innovations have not sufficiently examined the underlying processes and mechanisms by which firms develop both exploitative and exploratory innovations (e.g., Mueller et al., 2013). This hiatus is even more

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