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Managerial ties and product innovation: The moderating roles of macro- and micro-institutional environments

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Managerial ties include business ties and political ties, but their individual effects on product innovation remain underexplored in the literature. Integrating social network theory and institution theory, this study first proposes a nonlinear relationship between business/political ties and product innovation and further examines the moderating roles of a macro-institutional environment (comparing developed with underdeveloped regions where firms are located) and a micro-institutional environment (i.e., market dynamism) in the proposed relationships. Empirical findings generally confirmed our hypotheses that 1) business ties have an inverted U-shaped effect on product innovation whereas political ties have a U-shaped effect; 2) if firms operate in developed regions their business ties have a stronger influence on product innovation, whereas if they operate in underdeveloped regions their political ties have a stronger influence; and 3) market dynamism positively moderates the curvilinear relationship between business/political ties and product innovation.

Introduction

Product innovation is a process that brings a new technology or combination of technologies to a target market (Dougherty, 1992; Lukas and Ferrell, 2000). To succeed in product innovation, external knowledge acquisition is as important as internal knowledge accumulation and creation (Cohen and Levinthal, 1990; Zahra and George, 2002; Li and Calantone, 1998). China's institutional transition has left firms with a vast under-explored market regime to conquer (Yi et al., 2012), yet the associated institutional void, namely the lack of developed factor markets, market intermediaries, and effective contract-enforcing mechanisms (Khanna et al., 2005), limits knowledge acquisition via the conduit of market transactions (Wright et al., 2005). Managerial ties, that is, senior managers' external relationships with the business community (hereafter *business ties*) and government and regulatory officials (hereafter *political ties*) (Peng and Luo, 2000), could be effective complementary conduits for acquiring external resources and knowledge. Studies in the extant literature have extensively examined the facilitating effects of managerial ties on firm performance in the areas of strategy (Peng and Luo, 2000; Li et al., 2008; Zhang and Li, 2008; Acquaah, 2007), international business (Li et al., 2009; Luo, 2003), and marketing (Gu et al., 2008; Sheng et al., 2011), but have paid inadequate attention to their effects on product innovation.

The effects of managerial ties have been extensively addressed from the social network perspective. In particular, managerial ties enable firms to form relational networks with the business and political communities (Peng and Luo, 2000; Park and Luo, 2001). Moreover, connected firms have to exchange favors with their relational partners because network members should behave in a reciprocal and cooperative manner to maintain the existence and function of the networks (Nee, 1998; Peng and Luo, 2000). Therefore, managerial ties contain a “bitter” side (i.e., obligations, indebtedness, and cultivation costs) and a “sweet” side (i.e., informational, intellectual, governing, and supporting benefits) (Brass et al., 2004; Nie et al.,

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2011; Noordhoff et al., 2011). The social network literature describes the cultivation and utilization of managerial ties as an "imbalanced" and "give-first" game. In particular, firms have to invest first in the expectation of an unequal return at a later stage (Marquis and Raynard, 2015; Puffer et al., 2010). The degree of inequity between investment and return depends on the extent of the power imbalance and the degree of trust between a firm and its relational partners (Sun et al., 2012).

The institutional literature adds to this line of inquiry in several ways. First, it reveals the origins of the "bittersweet" effects. Managerial ties "produce institutional elements," and they "in general can lead to institutionalization" (Zucker, 1987, pp. 453–454) of collective norms such as reciprocity, trust, and cooperation (Dahan et al., 2006). Thus, managers must adopt shared norms and rules to play the game well (Marquis and Raynard, 2015). Second, institutional theory reveals the rationale behind the bittersweet effects tradeoff. During the institutionalization of collective norms, bitter effects emerge when firms are obligated to comply with these norms and behave in a loyal and reciprocal manner even at the expense of individual competencies and benefits (Park and Luo, 2001). Only when firms' relational partners comprehend those norms and begin to conform can they taste the sweetness, and the degree of the power imbalance determines the fairness and timeliness of that sweetness (Shi et al., 2014; Sun et al., 2012). Third, the institutional research delineates the dynamics of the bittersweet effects tradeoff. The ongoing institutionalization process dilutes the influence of the power imbalance and decreases the associated cultivation costs for firms but increases their felt constraints (Marquis and Raynard, 2015). Although social network theory and institutional theory can complement each other to explain the bittersweet effects of managerial ties on the interested firm outcomes, previous studies have rarely integrated these two theoretical perspectives to depict a more complete picture of the complex bittersweet effects of managerial ties on product innovation.

More importantly, managerial ties are developed as a relational mechanism that can complement the weakness of formal institutions (Li et al., 2008; Sun et al., 2010), and their effectiveness relies inherently on the institutional environments in which a firm operates (Brass et al., 2004; Marquis and Raynard, 2015; Shi et al., 2014; Sun et al., 2012). Institutions are multifaceted (Greenwood et al., 2011) and their influence on the effects of managerial ties is constituted by the confluence of interacting and co-integrated "qualitatively different effects" arising from distinct institutional elements (Batjargal et al., 2013, p. 1025). Institutional infrastructures determine the necessity and potential value of managerial ties (Peng, 2003; Holmes et al., 2013), while institutional norms and rules shape the dominance and prominence of relational norms that govern behaviors in the relationship between a business and regulatory agents (Scott, 2013). Previous research offers snapshots of the influences of individual environmental factors, such as political factors (e.g., enforcement inefficiency) and economic factors (e.g., demand uncertainty) (Li et al., 2008; Li and Sheng, 2011; Sheng et al., 2011). Yet it still lacks an investigation that addresses the confluence of the individual influences of multifaceted institutions on the managerial ties–product innovation link.

Moreover, the institutional environments in which firms are embedded involve hierarchies (Griffith, 2010; Kostova and Roth, 2003) and "the macro-level institutional environment is not reducible to lower-level industrial environments" (Meyer and Rowan, 1977, p. 341). At the macro level, geographical regions in which firms reside have their own distinct economic, political, and social institutions (Chan et al., 2010). As such, regions where firms are located can serve as proxies for macro-level institutional environments which "directly determine what arrows a firm has in its quiver" (Ingram and Silverman, 2002, p. 20) and significantly affect the foundations of firm operations. At the micro level, interactions between market players directly shape how firms play within the rules and conform to the associated norms (Gao et al., 2015). Market dynamism, "the rate of change in customers' preferences and competitors' actions" (Maltz and Kohli, 1996, p. 52), could play such a role as a micro-level institutional environment. Unfortunately, previous research has largely neglected the role that hierarchical institutional environments play in the managerial ties–product innovation link, failing to acknowledge the specific influential mechanisms of those hierarchies.

To address these limitations, this study integrates institutional theory and social network theory to investigate the evolving bittersweet effects of managerial ties on product innovation and the moderating effects of firms' macro- and micro-institutional environments. At the macro level, regional development level (developed versus under-developed regions in which firms are located) is used to reflect the unequally transitioned regional institutional environments caused by imbalances in governmental decentralization, marketization, and globalization (DMG) in China (Bao et al., 2002; Chan et al., 2010). A high level of regional development indicates relatively developed local economic and political institutions and highly transitioned social institutions. At the micro level, market dynamism reflects industrial institutional environment that describes interactions between market players in the competitive game in which firms are engaged. Our empirical context, China, is in the midst of an ongoing institutional transition characterized by rapid and unbalanced DMG processes (Hoskisson et al., 2013), which has resulted in vast regional inequities in terms of economic, political, and social institutions (Tsui et al., 2004), and a high-velocity business environment with considerable embedded market dynamism (Li et al., 2005; Sheng et al., 2011). Thus, China provides a comprehensive research setting in which to examine the direct effects and institutional boundaries of managerial ties on product innovation.

This study contributes to the social network research and managerial ties literature by illustrating the bittersweet nature of managerial ties and delineating the evolving bittersweet tradeoff to investigate their nonlinear effects on product innovation. It also contributes to institutional theory by interpreting the moderation effects of hierarchical institutional environments on the managerial ties–innovation link, which adds knowledge to the nascent themes of "institutional polycentrism" and "within-country institutional inequality" in institutional research.

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