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Under what institutional conditions do business groups enhance innovation performance?

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ABSTRACT

This study examines the institutional mechanisms through which business groups impact innovation in emerging markets. Rather than merely viewing groups as the result of a weak institutional environment, this study proposes that there are complementary elements between groups and institutions, enabling groups to benefit from interactions with their institutional environment. Evidence from a large sample of Chinese firms indicates that the effects of groups on innovation are pronounced when the group is affiliated to a higher level government agency and when the level of region-specific marketization is higher. The findings point to the context-dependent nature of the innovation and the existence of both substitution and complementary effects between business groups and institutions.

1. Introduction

Institutional theory suggests that innovation depends on the interaction between the firm and its external environment (Mahmood, Chung, & Mitchell, 2012). Emerging markets, such as China, have less developed institutions, making the role of business groups crucial in addressing institutional voids — defined as the paucity of the specialized intermediaries needed to consummate transactions (Ricart, Enright, Ghemawat, Hart, & Khanna, 2004). As such, scholars often argue that business groups – legally independent firms bound together in formal and informal ways (Granovetter, 1995) – may facilitate innovation. Yet, although groups may compensate for the lack of sufficiently developed institutions (Khanna & Yafeh, 2007), knowledge of how institutions influence innovation in business groups in emerging markets remains rather limited.

Prior studies on the relationship between group affiliation and innovation have produced mixed findings, ranging from a positive effect (e.g., Amsden & Hikino, 1994) to a negative effect (Seru, 2007) and an inverted-U relationship (Mahmood & Mitchell, 2004). Therefore, it remains unclear why some groups benefit from innovation, but others do not (Chang, Chung, & Mahmood, 2006). The mixed empirical results suggest that the relationship between group affiliation and innovation varies in different contexts. The current study develops a contingency model to examine the institutional conditions under which group affiliation impacts innovation of emerging market enterprises (EMEs). The paper contributes to the literature in two ways.

First, while prior research acknowledges that connections to governments help firms gain competitive advantages, little research has examined the role of different types of government involvement (Wang, Hong, Kafouros, & Wright, 2012). The current study addresses this gap by considering how the value of group affiliation is influenced by the level of state ownership of the group, and by examining the idiosyncratic manner in which these groups are affiliated to the government. The distinction between state ownership and government affiliation is important because, as prior research has shown, it reflects that firms exploit political advantages either by creating ties with government (government affiliation) or by incorporating government agents in their internal hierarchy (state ownership) (Boddewyn & Brewer, 1994; Wang, Hong, Kafouros, & Wright, 2012). It also recognizes that a firm's network is composed of different types of relationships (Lin, 2001) that can facilitate different advantages, create different pressures and impact innovation differently.

Second, although the innovation literature often assumes institutional homogeneity within a given nation, in reality there is significant

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heterogeneity in the marketization level of different sub-national regions. Hence, rather than assuming that groups have to deal with the same institutional voids in each region, the study examines how the relationship between organizations and institutions varies across different institutional contexts. This conceptualization advances the premise that the value of group affiliation depends on location-specific institutional characteristics, namely, the level of market development in each region.

2. Theoretical framework and hypotheses

2.1. Business groups, innovation and institutional environment

Affiliation with a group may improve innovation. Transaction cost analyses suggest that groups can respond to market failures and imperfections, and reduce the transaction costs associated with innovation by internalizing processes in the group (Khanna & Palepu, 1997). Similarly, from a resource-based point of view (Barney, 1991), groups provide not only an internal market for factors such as capital and labor for innovative activities but also a platform for sharing resources (Chang & Hong, 2000). An internal labor market, for example, can help a firm counter the rigidities and variations of the external labor market (Mahmood & Mitchell, 2004), enabling groups to allocate available scientific talent to the most suitable projects (Khanna & Palepu, 1997).

In line with the above view, political scientists suggest that government influences the development of groups, particularly in emerging markets (Evans, 1979). Hence, a group's political capital acquired through its political ties may enhance its innovative activities. On the other hand, groups can use their economic power to shape a pro-innovation environment by influencing regulatory institutions. Furthermore, theory on organizational learning (Zander & Kogut, 1995) suggests that groups facilitate organizational learning by bringing together and transferring diverse knowledge across their affiliates. Knowledge sharing compensates for weaknesses in external technology markets (Chang et al., 2006), improving affiliates' ability to create unique technological combinations (Kafouros, Buckley, & Clegg, 2012).

However, groups may also hinder innovation. The internal market within groups may be inefficient due to agency problems arising when affiliates seek to maximize their budget allocation whereas the headquarters seek to maximize the performance of the group as a whole (Seru, 2007). This agency problem can lead to misallocation of resources and cross-subsidization of unprofitable ventures by the profitable ones (George & Kabir, 2012). Groups will respond less efficiently to market failures and even hamper innovation when headquarters allocate resources in a way that leads to “tunneling” of assets from smaller to large members (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). Similarly, industrial organization thinking suggests that as groups have significant market power, they block new entrants, create barriers to knowledge inflows from new businesses and therefore limit the diversity of new ideas (Mahmood & Mitchell, 2004).

Institutional theory reinforces the above predictions. Isomorphic pressures, such as coercive, normative and mimetic forces (Scott, 1995), influence firms' innovative activities in two ways. First, innovation strategies, structures and processes must be congruent with institutional demands. The coercive forces coming from governments can exert pressures through laws, regulations and policies. Because groups in emerging economies are created not only by market forces but also by governments as an instrument to implement market reforms (Yiu, Bruton, & Lu, 2005), they are more likely to be influenced by such pressures than independent firms. For example, normative expectations influence the willingness of group managers to innovate because fulfilling government goals such as technological catch up can accelerate their career. Also, due to mimetic isomorphic pressures, firms facing uncertainty are likely to imitate others that have gained legitimacy by innovating (DiMaggio & Powell, 1983).

Second, institutions influence the availability and cost of innovation inputs as well as the protection of innovation outputs. For example, institutions governing the employment of scientists and engineers influence the availability and cost of labor, and thus the decisions of groups about hiring labor for innovation. Because capital markets, intermediaries and contract enforcement laws are not well developed in emerging markets, EMEs often need to form ties with government to obtain critical resources and secure favorable treatment that circumvents institutional voids. Furthermore, the intellectual property rights (IPR) regime including patent and copyright laws is a crucial part of a country's institutional infrastructure for innovation. It affects not only the incentives to innovate but also the extent to which firms can appropriate value from their innovations. Because the institutional environment in emerging markets features a weak IPR regime, it often discourages innovation.

2.2. The role of government involvement

Government involvement can manifest itself in two conceptually and empirically different forms: government affiliation and state ownership. The former captures a firm's relationship with the government (Wank, 1995), where state ownership refers to cases in which government is one of the shareholders of the firm (Wang, Hong, Kafouros, & Wright, 2012). These two concepts are not always correlated, i.e. a state owned firm may be affiliated to a lower government level, whereas a private firm may be affiliated to a higher government level (Du & Girma, 2010; Wang, Hong, Kafouros, & Wright, 2012).[1] The literature has established that, in China, whereas some firms are affiliated to central government (e.g., state or provincial-level), others are affiliated to a lower level (e.g., city- or county-level) (Wang, Hong, Kafouros, & Wright, 2012). We argue that the level of government affiliation affects the ability of groups to create and appropriate value from innovation. Government in emerging economies can award major contracts and control regulatory and licensing procedures. Affiliation to higher levels of government gives groups not only higher legitimacy, status and protection, but also privileged access to critical information and opportunities to obtain government contracts and approval for new products (Yiu, Lau, & Bruton, 2007). In addition, affiliation to higher governmental levels may help the firm internationalize (Wang, Hong, Kafouros, & Wright, 2012) and acquire new technologies, managerial expertise and scientific talent from abroad. This may not be available for groups affiliated at lower level of government.

Governments at higher levels can also assist groups to develop assets that increase value appropriation from innovation. Such assets are particularly important in weak IPR regimes because inexperienced groups in these emerging markets are often unable to use complexity to protect their innovations from imitation. For example, government at a higher level may allow groups to use specialized information required for developing and commercializing a new product (Wu, 2011). Since institutional influences do not develop in a vacuum, groups associated with higher government levels may also influence institutions in their favor to assist their innovation.

Furthermore, different government levels have different objectives (Bai, Lu, & Tao, 2006), exert different institutional pressures on groups and may impact innovation differently. Governments at lower levels (e.g., at the county level) focus on increasing regional output and decreasing unemployment (Li & Zhou, 2005). Encouraging groups to invest heavily in technology development is therefore not one of their priorities. Conversely, governments at higher levels are more concerned with creating world-class technological leaders. They therefore want to

[1] Our data show that the correlation between the two constructs is 0.47 (see Table 4 in Section 4).