

Institutional relatedness behind product diversification and international diversification

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Abstract Previous diversification research has largely focused on product relatedness, but ignored institutional relatedness—the degree of informal embeddedness with the dominant institutions that confer resources and legitimacy. We argue that during institutional transitions, political ties and international experience represent different types of institutional relatedness linking firms, respectively, to political institutions and market institutions. Specifically, CEOs’ political ties may help firms access critical resources, sense new market entry opportunities, and gain board support to increase firms’ product diversification. CEOs’ international experience may help firms leverage different market-based capabilities, engage in international competition, and then lead firms to grow on a different path by expanding internationally. We further investigate a crucial contingency factor: the degree of economic freedom. Data from 11,992 firm-year observations based on firms listed on China’s stock exchanges between 2001 and 2011 largely support our predictions.

Keywords Institutional relatedness · Political ties · International experience · Diversification · Institutional transitions

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“What determines the scope of the firm?” is one of the most fundamental questions in strategic management (Rumelt, Schendel, & Teece, 1994: 454). A central topic addressing this question, relatedness is the historical focus in strategy research on product diversification and international diversification (Barney, 1988; Capar & Kotabe, 2003; Kumar, 2009; Lu & Beamish, 2004; Miller, 2006; Sakhartov & Folta, 2015; Schmidt, Makadok, & Keil, 2016; Silverman, 1999). In addition to market-based product relatedness, recent research argues that diversification strategies are significantly influenced by nonmarket, institutional factors (Banalieva & Dhanaraj, 2013; Boschma & Capone, 2015; Kogut, Walker, & Anand, 2002; Wan & Hoskisson, 2003). Peng, Lee, and Wang (2005: 623) suggested that institutional relatedness, defined as “the degree of informal embeddedness with the dominant institutions in the environment that confer resources and legitimacy,” may be an underexplored driver behind the scope of the firm.

It is no longer controversial to assert that institutions matter in diversification strategies both in developed economies (Ahuja & Yayavaram, 2011; Kogut et al., 2002; Wan & Hoskisson, 2003) and emerging economies (Carney, 2008; Carney, Gedajlovic, Heugens, Van Essen, & Van Oosterhout, 2011; Khanna & Yafeh, 2007; Shi, Sun, Yan, & Zhu, 2017; Sun, Peng, Lee, & Tan, 2015b). What remains unknown is: *How* does institutional relatedness matter (Meyer & Peng, 2016; Wan, Hoskisson, Short, & Yiu, 2011)? Further, many emerging economies have been undergoing institutional transitions, which are “fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players” (Peng, 2003: 275). Then, how does institutional relatedness affect the scope of the firm during institutional transitions?

Addressing this important but previously underexplored question, this article leverages the institutional relatedness construct (Peng et al., 2005) and integrates it with the literature on upper echelons (Hambrick, 2007) and CEO/board power (Markóczy, Sun, Peng, Shi, & Ren, 2013; Westphal & Zajac, 1995). Grounded in the context of China’s institutional transitions, we focus on two types of CEOs—those with political ties and those with international experience—and investigate how the diversification strategies of the firms they lead differ. CEOs with political ties represent corporate elites who have developed dense connections with one set of dominant institutions—various levels of governments (Faccio, 2006; Peng et al., 2005; Shi, Markóczy, & Stan, 2014; Sun, Hu, & Hillman, 2016; Sun, Mellahi, Wright, & Xu, 2015a). Despite the importance of political ties (Sun, Mellahi, & Thun, 2010), few studies focus on how such political ties affect the scope of the firm in terms of both product diversification and international diversification.

At the same time, in many emerging economies, a lot of CEOs with international experience have risen to the top ranks of firms (Peng, Sun, & Markóczy, 2015). Many of these CEOs return to their homeland after years of education and work experience in the West. In China, these elites have a unique social identity—nicknamed “turtles” (*haigui*) (Li, Zhang, Li, Zhou, & Zhang, 2012; Liu, Lu, Filatotchev, Buck, & Wright, 2010; Vanhonacker, Zweig, & Chung, 2006). They present another type of institutional relatedness—interconnectedness with another set of important institutions: the rule-based, market-oriented exchange (Peng, 2003). While these CEOs may have limited connections with domestic

officials, their international experience may facilitate their firms' international diversification (Peng et al., 2015).

An emerging economy such as China is an ideal context in which to explore the effect of changing institutional conditions on the relationship between institutional relatedness and the scope of the firm (Peng et al., 2005). China's institutional transitions embody gradual migration from state socialism toward market competition (Xu, Lu, & Gu, 2014). The rules of two institutional logics—state control and market liberalization—often coexist and are in conflicts (Chang & Wu, 2014; Peng, Bruton, Stan, & Huang, 2016; Yiu, Hoskisson, Bruton, & Lu, 2014). On the one hand, the state control logic suggests that CEOs with political ties may lead their firms to fill institutional voids and engage in product-unrelated diversification, resulting in a *wider* product scope of the firm (Guillén, 2000; Khanna & Yafeh, 2007). On the other hand, the market liberalization logic posits that as market competition heats up, political ties may become less relevant (Sun et al., 2010). CEOs with international experience may *reduce* their firms' product scope but *increase* geographic scope (Meyer, 2006).

Given that one of the most distinguishing hallmarks of institutional transitions is increasing economic freedom, we further investigate economic freedom as an important force that moderates the relationship between institutional relatedness and diversification strategy (Peng, 2003). Overall, we focus on a crucial but underexplored question: How do the two types of institutional relatedness—political ties and international experience—affect the scope of the firm during institutional transitions?

Our theoretical framework is illustrated in Fig. 1. We endeavor to make three contributions. First, we develop a theoretical framework on how institutional relatedness matters for the scope of the firm and enrich the institution-based view of strategy (Ahuja & Yayavaram, 2011; Boschma & Capone, 2015; Carney et al., 2011; Peng et al., 2005; Wan & Hoskisson, 2003). Second, our contingency analysis suggests that the efficacy of institutional relatedness also in part depends on economic freedom. The insights on the joint institutional and firm effect on scope can extend the recently emerging research stream on institutional competitive advantage (Cuervo-Cazurra & Dau, 2009; Martin, 2014). Finally, extending some of the propositions suggested by Peng et al. (2005), we empirically support both the direct effects and moderating effects of institutional relatedness on the scope of the firm, while few previous studies examine how institutions matter on firm scope and their joint effects with different CEOs.

Institutional relatedness and firm scope

Recent research identifies the role of nonmarket, institutional factors in diversification strategies (Diestre & Rajagopalan, 2011; Li, Peng, & Macaulay, 2013; Meyer & Peng, 2016; Sun et al., 2015a; Wan & Hoskisson, 2003). This insight has led to the development of the institutional relatedness construct, which focuses on the degree of informal embeddedness or interconnectedness with dominant institutions (Peng et al.,

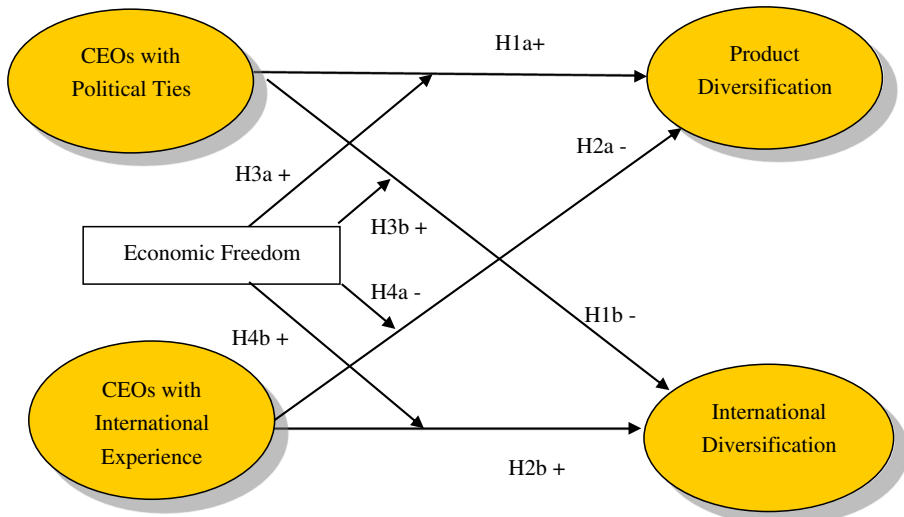


Fig. 1 Theoretical framework

2005). Such embeddedness confers resources and legitimacy (Granovetter, 1985; Oliver, 1991). Specifically, “a high degree of institutional relatedness means that there is a dense network of ties with dominant institutions” (Peng et al., 2005: 624).¹

Extending Peng et al. (2005), we identify two types of institutional relatedness, which have a profound impact on both product and international diversification during institutional transitions. On the one hand, relationship-based, personalized exchange still dominates a great deal of interpersonal and interorganizational relationships (Peck & Zhang, 2013; Peng, 2003). Individuals and firms rely on strong social networks to access key resources. In this scenario, CEOs with political ties may leverage their connections with the government in many decisions (Fan, Wong, & Zhang, 2007; Li, Zhou, & Shao, 2009; Shi et al., 2014). Research has found that political ties in emerging economies affect firm performance (Li, Meng, Wang, & Zhou, 2008a; Li, Poppo, & Zhou, 2008b; Siegel, 2007; Sun et al., 2015b), competition (Sun et al., 2010), survival (Li & Zhang, 2007), acquisition (Li & Qian, 2013), internationalization (Tan & Meyer, 2010), and rent appropriation (Sun et al., 2016).

¹ For example, in 2012, Sany, the sixth-largest heavy equipment manufacturer in the world, moved its headquarters from Hunan (a province in central China) to Beijing. While Sany’s proclaimed goals were to access more resources for internationalization, this move can be viewed as an effort to enhance institutional relatedness. With more officials, ministries, and banks (most of which are state-owned) in Beijing, more political connections can be cultivated. With a large supply of executives with international experience—both Chinese and non-Chinese—Beijing features more talents who can help Sany expand overseas. Numerous other examples of institutional relatedness exist. For instance, in Mexico, Carlos Slim, a business magnate, has leveraged rich political connections to enter many regulated industries and build a conglomerate. One of his high-profile moves was to expand into the telecom industry by buying the state-owned Telmex in 1990. Moreover, such examples of institutional relatedness are not necessarily restricted to emerging economies. In developed economies such as the United States, in the last decade a leading private firm Koch Industries doubled its size by expanding into product-unrelated industries such as food, water, and personal technology. At the same time, the owners, Koch brothers, sponsored many conservative political organizations and helped spawn the Tea Party movement—clearly leveraging a dense network of political ties.

On the other hand, rule-based, impersonal exchange emerges and plays a more significant role (Cuervo-Cazurra & Dau, 2009; Peng, 2003; Shinkle & Kriauciunas, 2012). CEOs with international experience have become an emerging visible group of corporate leaders in China (Liu et al., 2010; Peng et al., 2015). Some of them are native Chinese people returning from abroad with advanced knowledge (e.g., foreign MBA degrees), some have worked for foreign-owned multinationals, and others have expatriate experience in overseas subsidiaries of Chinese firms. We argue that CEOs' international experience represents another type of institutional relatedness, because it indicates an affinity with market-based institutions that support rule-based, impersonal exchange (Peng et al., 2015). Overall, incorporating these two sides, we extend Peng et al. (2005) to conceptualize CEOs' political ties and international experience as important proxies of institutional relatedness, which, we argue, influence the scope of the firm.

In building our hypotheses, we develop three arguments to articulate how institutional relatedness translates into strategic actions such as diversification. First, extending earlier research (Peng et al., 2005), we argue that different types of institutional relatedness grant executives access to different powers, authorities, and resources for competition (Xia, Ma, Lu, & Yiu, 2014; Yang, Sun, Lin, & Peng, 2011). For example, CEOs with political ties may leverage political resources (Faccio, 2006) and then adjust their firms' diversification strategies (Shaffer & Hillman, 2000). We call this theoretical angle as the *resource access* argument.

Second, the upper echelons perspective suggests that executives' strategic decisions reflect their own background and experience, which, in turn, shape firm scope (Hambrick, 2007; Jensen & Zajac, 2004). Therefore, CEOs' institutional relatedness, based on either political ties or international experience, can influence their cognition, attitudes, and behaviors. We call this theoretical angle as the *cognition* argument, since executives' experience, value, and personality are converted into strategic choice mostly through psychological and social processes (Hambrick, 2007).

Third, CEOs' diversification decisions are typically monitored by boards, and how effective boards are depends on the particular institutional environment (Bruton, Filatotchev, Chahine, & Wright, 2010; Cuervo-Cazurra & Dau, 2009; Tan, 2010). Specifically, we argue that the effect of two types of institutional relatedness on firm scope is subject to the CEO/board power balance in corporate governance (Westphal & Zajac, 1995). We then call this angle the *CEO/board power* argument. In summary, our hypothesis development will be based on these three arguments—resource access, cognition, and CEO/board power—that are highly related to the construct of institutional relatedness (Peng et al., 2005).

CEOs with political ties

We argue that CEOs with political ties may be more likely to increase the product scope of the firm but to reduce the geographic scope. Three arguments underpin this reasoning. First, the resource access argument suggests that given the extensive government control over crucial resources, CEOs with political ties may promote their firms to access some of these unique resources, and to enter product-unrelated industries by leveraging their political ties (Guillén, 2000). In some firms in China,

promotion of executives is not necessarily based on their technical or administrative capability, but often according to their ability to access these scarce political resources (Li & Qian, 2013). Political ties thus constitute valuable resources to facilitate product diversification (Zhang, Tan, & Wong, 2015). However, these ties may become a liability overseas. For example, the US and Australian governments always suspect Huawei CEO Ren Zhengfei's political ties with the Chinese military and then block Huawei's bidding on telecom networks. In short, political ties—a proxy for institutional relatedness—may help promote product-unrelated diversification at home, but may become a liability in international diversification.

Second, the cognition argument suggests that CEOs with political ties can better understand the government's ambiguous political, social, and economic goals with their experiences and personal networks. In many jurisdictions, local officials' promotion is often linked to infrastructure investment, job creation, tax revenue, and GDP growth (Park & Luo, 2001; Shi et al., 2014; Sun et al., 2015a, b). A strategy of product diversification caters to these policy priorities. CEOs with political ties may thus extend the product scope to increase local employment, boost tax revenue, and then in exchange obtain more resources from local governments (Shi et al., 2014). In contrast, although the central government promotes firms' international expansion with policies such as tax relief and credit support (Luo, Xue, & Han, 2010), such expansion cannot boost local GDP immediately. As a result, local governments would not list it as one of their policy priorities. Thus, CEOs with political ties, who are more embedded within local networks, may cut overseas investment but enhance local investment into multiple unrelated industries to satisfy local officials.

Third, the CEO/board power argument posits that weak boards may lead CEOs to engage in "empire building" (Peng & Delios, 2006: 390), resulting in a wider product scope of the firm (Jiraporn, Kim, Davidson, & Singh, 2006), especially in the case of state-owned enterprises (SOEs) (Peng et al., 2016; Shi et al., 2014). In an effort to consolidate power, CEOs with political ties often invite more bureaucrats rather than individuals with relevant professional backgrounds to join boards (Fan et al., 2007; Peng et al., 2015). This creates an unbalanced power structure that is unable to effectively restrain CEOs' potentially self-serving behavior in diversification (Deutsch, 2005). Further, since powerful individuals often entrench themselves in top positions (Ocasio & Kim, 1999), CEOs with political ties may consolidate their power and entrench their position through relatively easy product diversification (with a domestic focus) rather than relatively risky international diversification. Overall:

Hypothesis 1a CEOs with political ties increase the degree of product diversification.

Hypothesis 1b CEOs with political ties decrease the degree of international diversification.

CEOs with international experience

Also drawing on the three arguments, this section analyzes the effect of CEOs with international experience on the scope of the firm. First, the resource access argument suggests that CEOs with international experience are recruited largely for two reasons:

(1) defend domestic markets and (2) expand overseas markets (Peng et al., 2015). From a *defensive* standpoint, the pressures from the rising market competition in domestic markets may make CEOs to focus on firms' core businesses (Meyer, 2006). As all types of international firms rush to China, Chinese firms increasingly feel the competitive "heat" (Ayyagari, Dau, & Spencer, 2015; Mutlu, Zhan, Peng, & Lin, 2015). According to the upper echelons literature, CEOs with international experience can better leverage such experience to deal with competition from foreign entrants than CEOs without such experience (Carpenter, Geletkanycz, & Sanders, 2004). Given the Penrosian constraints on the limits of firm resources and coordination costs (Meyer, 2006; Rawley, 2010; Wang, Huang, & Shou, 2015), when CEOs with international experience defend against the onslaught of foreign entrants, they may choose to reallocate scarce managerial and financial resources and attention away from non-core businesses. Instead, these CEOs may focus on core businesses and consequently reduce product diversification.

From an *offensive* standpoint, many Chinese firms are eager to establish an overseas presence (Mutlu et al., 2015). CEOs with international experience may have more management savvy to transform their firms to engage in international competition. Since most Chinese firms do not have sophisticated capabilities in international competition, CEOs' international experience will be very precious for such initial steps in international diversification (Peng et al., 2015).

Second, the cognition argument points out that the necessity to embrace globalization is increasingly institutionalized among Chinese elites, especially after China's accession to the World Trade Organization (WTO) in 2001. A visible group of such elites, CEOs with international experience have developed more global or cosmopolitan mindset through their exposure overseas (Peng et al., 2015). Relative to CEOs without international experience, CEOs with international experience have stronger cognitive knowledge and talents to deal with the complexity in international diversification (Kim, 2016; Levy, Beechler, Taylor, & Boyacigiller, 2007). They have more motivations to leverage their experience in international diversification than in product diversification (Bennett & Pierce, 2016).

Third, since CEOs with international experience are mostly not promoted internally and are mostly recruited externally, the CEO/board power argument posits that boards typically possess more power than such CEOs and are more likely to actively monitor CEOs' performance (Peng et al., 2015). This is especially likely when these CEOs do not belong to local directors' inner circles. Such CEOs' proposals for product diversification may be more likely to be rejected by boards, whose members may not view such CEOs to possess the necessary competencies to undertake largely domestically-oriented product diversification. But such CEOs' proposals for international diversification may be more likely to be accepted, given their possession of such competencies in the eyes of board members. Thus:

Hypothesis 2a CEOs with international experience decrease the degree of product diversification.

Hypothesis 2b CEOs with international experience increase the degree of international diversification.

Contingency effect of economic freedom during transitions

A hallmark of institutional transitions is a lack of stability and predictability. While the march of market forces is clearly evident, whether the influence of the old regime (such as political ties) is necessarily in decline remains a point of contention (Li et al., 2013; Peng, 2003; Walder, 2003). Given the dynamic nature of institutional transitions, how do different CEOs with different institutional relatedness make decision on the scope of the firm?

Economic freedom is one of the leading indicators of market-oriented institutional transitions (Gwartney, Lawson, & Norton, 2007). In emerging economies, some of the most significant consequences of increased economic freedom is decreased entry barriers, growing external capital markets, and stronger support for arm's-length transactions (Cuervo-Cazurra & Dau, 2009; Peng, 2003; Shinkle, Kriauciunas, & Hundley, 2013; Sun et al., 2015b). The consequences of enhanced economic freedom, however, are subject to debate. One view is that CEO with international experience may gain more advantage than CEO with political ties during such transitions. However, most governments in emerging economies still maintain significant power in distributing resources (Peck & Zhang, 2013). For example, China still preserves an authoritarian system while pledging to let markets play a decisive role. Thus, another plausible view is that economic freedom enhances the value of political ties during transitions (Landry, 2008; Walder, 2003). How these contingency effects of economic freedom impact institutional relatedness and firm scope has never been explored previously—a task we take up next.

In a large and complex country such as China, sub-national institutional differences at the province level are significant because “they both constrain and facilitate firm strategies” (Shi, Sun, & Peng, 2012: 1222). It is true that sub-national institutional differences exist in every large and complex country, such as India (Dheer, Lenartowicz, & Peterson, 2015), Italy (Laursen, Masciarelli, & Prencipe, 2012), the United States (Chan, Makino, & Isobe, 2010), and Vietnam (Meyer & Nguyen, 2005). Given China's size, this holds even more so (Tse, 2010). In terms of informal institutions, “provinces retain their distinct identities, with their own cuisines, customs, dialects, and sometimes languages” (Tse, 2010). In terms of formal institutions, despite the nationwide implementation of market reform policies, sub-national differences in economic freedom are still pronounced (Li & Qian, 2013; Shi et al., 2012). Given the uneven development of nationwide markets in finances, talents, and strategic factors (especially land), many Chinese firms, which may operate in product markets around the country, still strongly rely on their headquarters region at the province level to access supportive political resources, favorable financial backing, preferential tax treatment, and top talents (Chan et al., 2010; Shi et al., 2012; Sun et al., 2015b). How these dynamics affect the relationship between institutional relatedness and firm scope is explored next.

CEOs with political ties

First, the resource access argument posits that accessing political resources may become more important in an environment featuring increasing economic freedom. During institutional transitions, politically connected elites, such as communist cadres and officials, instead of losing power, are often able to maneuver themselves into newer and more lucrative positions of power and wealth (McCarthy & Puffer, 2003; Walder,

2003). In China, where communist party remains in power, a majority of listed firms are still SOEs with the government being the dominant shareholder and CEOs directly being appointed by the government. For CEOs in private firms, political ties provide a legitimate, yet symbolic protection (Li et al., 2008a). In other words, during institutional transitions, “legacies of the planned or transition economy make relationship building with regulators and governments no less critical than before” (Luo & Rui, 2009; see also Sun, Yang, & Li, 2014).

Thus, in regions (provinces) with a high degree of economic freedom, CEOs with political ties may be important *intermediaries* connecting political and market resources (Li et al., 2008a; Shi et al., 2014; Siegel, 2007). They may leverage these brokerage capabilities to lead their firms to enter more product-unrelated industries than CEOs without such ties (Guillén, 2000). In another scenario, as economic freedom heats up the domestic competition, political ties may help CEOs to restructure the product scope and enter new unrelated industries with relatively low levels of competition.

However, leveraging domestic-based political ties may be viewed as a liability in international expansion, even though the degree of economic freedom improves. Host-country stakeholders such as the government and the public may raise concerns about unfair competition, and host-country governments may be suspicious (Globerman & Shapiro, 2009; Stevens, Xie, & Peng, 2016). This may curb the international aspiration of CEOs with political ties (Xie, Huang, Peng, & Zhuang, 2016).

Second, the cognition argument suggests that CEOs with political ties are more sensitive to new market entry opportunities in both factor markets and product markets during institutional transitions. They have better knowledge to channel resources among different rules of the game, especially in a mixed system with both relationship-based and rule-based exchange (Li et al., 2013; Peng, 2003). For example, some firms may boost employment in exchange for favors from policy makers (Faccio & Hsu, 2013). Such knowledge may help CEOs with political ties to increase their firms' product diversification even when market-based exchange becomes more important in a region with a high degree of economic freedom. However, while CEOs pay more attention on manipulating the connections and resources domestically, they almost by default would pay insufficient attention on international diversification.

Third, the CEO/board power argument claims that CEOs with political ties may gain more power in boards by inviting friendly directors (Markóczy et al., 2013). While economic freedom is generally on the rise, ironically in regions with a high degree of economic freedom, CEOs with political ties tend to advocate more “freedom” without interference from boards (Peng, 2004: 456). With relatively ineffective monitoring and control from boards, CEOs with political ties are likely to boost product diversification (Pi & Lowe, 2011). Thus:

Hypothesis 3a The degree of economic freedom in firms' headquarters region increases the positive relationship between CEOs' political ties and product diversification.

Hypothesis 3b The degree of economic freedom in firms' headquarters region increases the negative relationship between CEOs' political ties and international diversification.

CEOs with international experience

First, the resource access argument suggests that economic freedom facilitates CEOs with international experience to expand both the product scope and geographic scope of their firms. A high degree of economic freedom in a region within an emerging economy attracts more FDI and market-based transactions (Peng, 2003; Sun et al., 2015b). Thus, CEOs with international experience may gain more opportunities in linking and integrating domestic and foreign resources (Shi et al., 2012; Siegel, 2007). For example, CEOs with international experience may be able to more effectively build trust with foreign partners than other types of CEOs.

Also, in a region with a high degree of economic freedom within an emerging economy, CEOs with international experience may not only benefit more from market-supporting institutions in domestic markets, but can also extend these benefits to compete overseas. For instance, given more economic freedom and better market-based access to more resources in product markets, CEOs with international experience may be better equipped to capture opportunities overseas than other types of CEOs (Sun, Peng, Ren, & Yan, 2012). At the same time, when more factor markets are liberalized, CEOs with international experience can access more resources in product-related diversification to build competitive advantage (Hoskisson, Wright, Filatotchev, & Peng, 2013). Previous constraints on product scope expansion may be dismantled by market-oriented reforms (Cuervo-Cazurra & Dau, 2009). In addition, a mixed strategy in both product diversification and international diversification—instead of emphasizing either one—may further improve firm performance under uncertainty (Kumar, 2009; Shinkle et al., 2013).

Second, the cognition argument claims that CEOs with international experience accumulate their knowledge and skills through trial and error processes. Since economic freedom gives CEOs more discretion and tolerance in business failure, these environments may help them unfreeze mental maps, while transferring international experience across multiple industries and countries (Zeng, Shenkar, Lee, & Song, 2013). Such learning may detect new opportunities in multiple industries and multiple countries, thus enhancing both product diversification and international diversification.

Finally, the CEO/board power argument suggests that as economic freedom increases the power of external capital market, boards may become more professional and independent in monitoring CEOs (Cordeiro, He, Conyon, & Shaw, 2013; Markóczy et al., 2013). With more capabilities in market-based exchange than other types of CEOs, CEOs with international experience may gain more trust and respect from professional directors, who are more likely to evaluate CEOs based on market-based skills and performance (Cordeiro et al., 2013). Therefore, these CEOs' proposals on product diversification and international diversification may gain board support. In addition, professional directors on these boards may give investors enough confidence in these firms' long-term plans in entering appropriate product and international markets (Tihanyi, Johnson, Hoskisson, & Hitt, 2003). Therefore,

Hypothesis 4a The degree of economic freedom in firms' headquarters region decreases the negative relationship between CEOs' international experience and product diversification.

Hypothesis 4b The degree of economic freedom in firms' headquarters region increases the positive relationship between CEOs' international experience and international diversification.

Methods

Sample and data

Our sample is drawn from firms listed on the Shanghai and Shenzhen Stock Exchanges (A shares) from 2001 to 2011 (inclusive). Following Markóczy et al. (2013), we exclude all financial services-related firms because they follow different accounting rules. Our final sample consists of 11,992 firm-year observations in 11 years. The number of firms ranges between 846 in 2001 and 1576 in 2011.

We manually collect CEO background data from the annual reports. Data on corporate governance are from the China Stock Market and Accounting Research (CSMAR) database and WIND database. Both are widely regarded as the most authoritative data sources in China and have been used in recent studies. For example, Peng et al. (2015) and Sun et al. (2015b) use CSMAR, and Lin, Peng, Yang, and Sun (2009) and Yang et al. (2011) draw on WIND.

Dependent variables

Product diversification (PD) We measure product diversification by the Herfindahl index as

$$PD = 1 - \sum_{i=1}^M P_i^2 \quad (1)$$

where P_i is sales attributed to segment i (Bowen & Wiersema, 2005). The higher the PD value, the more product diversified the firm.

International diversification (ID) is measured by the Herfindahl index as

$$ID = 1 - \sum_{i=1}^M W_i^2 \quad (2)$$

where W_i is sales attributed to foreign region i . Such sales can be derived from exports, outward FDI-based production abroad, or both. This measure captures the extent of exposure to foreign markets. Sales in Hong Kong, Macau, and Taiwan are counted as international revenue. This is a practice used in firms' annual reports, recorded by CSMAR and WIND, and acknowledged by Chinese government bodies such as the China Securities Regulatory Commission (CSRC), which is equivalent to the US SEC.

Independent variables

Political ties and international experience

Following Fan et al. (2007) and Markóczy et al. (2013), we obtain a profile of the CEO from the "Profile of Directors and Senior Managers" section of the annual report. The

CEO's profile contains information on education, professional background, and career history. A CEO is classified as having political ties if he or she worked as an official in the central government, the local government, or the military.² Adopting Peng et al.'s (2015) measure, we also trace international experience by examining whether a CEO worked for foreign-owned multinationals, was employed by overseas subsidiaries of Chinese firms, or was educated abroad (including Hong Kong, Macau, and Taiwan). Both political ties and international experience are coded by a dummy variable as *CEO political ties* and *CEO international experience*, respectively.

Moderator variable

Economic freedom

Since market-based institutional development is unbalanced among provinces in China (Chan et al., 2010; Li & Qian, 2013; Shi et al., 2012, 2017), we apply the National Economic Research Institute's (NERI) Corporate Capital Freedom Index to capture *economic freedom* in different provinces across the 11-year period. To capture the multidimensional institutional change, NERI develops many indexes that are widely used (Chang & Wu, 2014; Jia, 2014; Shi et al., 2012; Sun et al., 2015b).

The Corporate Capital Freedom Index for each year and region is compiled by Feng and Xia (2008) and Feng and Mao (2012) from a principle component factor analysis (similar to Dushnitsky & Shapira, 2010). It follows a similar method of economic freedom index used by the Heritage Foundation (Gwartney et al., 2007; Shinkle et al., 2013). It is generated from: (1) government and institutional factors, such as government consumption, size of subsidies to firms, role of markets in allocating resources, enterprise burden in addition to normal taxes, and legal protection and enforcement; (2) economic factors, such as the number of firms and employees, development of the private sector (such as the ratio of industrial output by the private sector to total industrial outputs), and FDI size; (3) monetary supply and financial market development (such as the inflation and its standard deviation in most recent years and the size of deposit in financial institution); and (4) marketization of financial sector (such as bank competition). A higher index means a higher degree of economic freedom.

Control variables

A series of control variables are used. First, we control for (1) *firm size* (natural logarithm of the book value of total assets) and (2) *firm age*. Second, we control for organizational characteristics, such as (3) *state ownership*, defined as a dummy variable (1 = the ultimate controlling shareholder of the listed firm is the state, 0 = otherwise) (Sun et al., 2015b);³ (4) *recoverable slack*, measured by the ratio of selling and general

² We have tested the difference of the average degree of product diversification and international diversification among three groups: (a) CEOs with a central government background; (b) CEOs with a local government background; and (c) CEOs with a military background. We find that there is no significant difference in the average degree of product diversification and international diversification across these three types of political ties.

³ In our sample, 59% of firms are SOEs. Among them, 78% are ultimately controlled by provincial governments.

administrative expenses (SG&A) over sales (Tan & Peng, 2003); and (5) *potential slack*, defined as the debt/equity ratio as another measure of slack (Stan, Peng, & Bruton, 2014; Yang, Narayanan, & De Carolis, 2014).

Third, following Porter (2008), we use (6) *return on invested capital (ROIC)* to measure firm financial performance. It is defined as follows:

$$\text{ROIC} = \frac{\text{net income} + \text{interest} + \text{taxes}}{\text{total assets} - \text{excess cash} - \text{non-interest bearing liability}} \quad (3)$$

This measure controls for the idiosyncratic differences in capital structures and tax rates across firms and industries. It also captures the internal capital advantage of business groups in emerging economies (Carney et al., 2011; Khanna & Yafeh, 2007).

Fourth, we introduce board characteristics, such as (7) *CEO duality* and (8) *board independence* (measured by the ratio of independent directors on the board), to control the influence of boards on diversification decisions. Fifth, (9) *CEO age* and (10) *CEO tenure* are also controlled.

Finally, to further control for the regional characteristics, we introduce two province-level variables: (11) *provincial GDP per capita* and (12) *provincial GDP growth rate* (Jia, 2014). (13) We follow CSRC guidelines to group our sample into 21 industries, and create 20 dummy variables to control for possible industrial effects. To account for possible time effects such as the change in policies, economic development, and other macro-level issues, we create (14) nine dummy variables for each of the nine years (2002–2010) while 2011 served as a baseline. (15) We further control for the regional effects and create 30 dummy variables for each province while Guangdong province serves as a baseline.

Estimation strategy

We first compare the characteristics of CEOs and firms between two categories of institutional relatedness: namely, CEOs with political ties and those with international experience. By testing the differences between the two groups, we can provide some initial evidence that institutional relatedness may be an important factor behind the scope of the firm during institutional transitions.

To address the spatial dependency issue, we apply the multilevel analysis to account for the nesting structure in China while observations within the high level—province level—share some similarities. For example, since firms in the same province often share similar legal environment, factor market, and culture (Sun et al., 2015b), firms in lower level units often adapt common diversification strategies. To overcome this bias, we process our data under a two-level hierarchical structure and apply random coefficient model with the “xtmixed” command in Stata V.13. In this multilevel mixed-effects linear model, the regression coefficients of the low level models are regressed on the high level variables such as economic freedom (Cuervo-Cazurra & Dau, 2009; Rabe-Hesketh & Skrondal, 2008).

We lag all variables by one year except dependent variables (Cassiman & Golovsko, 2011). We have multiple observations for a firm over several years, which may raise the concern of potential interdependence. To test H3a/b and H4a/b, we construct two interaction variables: *economic freedom* × *CEO political ties* and *economic freedom*

× *CEO international experience*. To mitigate the multicollinearity concern, we mean center the variables *economic freedom*, *CEO political ties*, and *CEO international experience* before we obtain these two interaction terms. We include the interaction variables in regression models to see if the effect of economic freedom affects the relationship between institutional relatedness and the scope of the firm.

Since firms may select CEOs based on firms' preferred diversification strategy, this selection process may potentially influence our results. To account for the potential for spurious relation and simultaneous determination of the appointment of CEOs and diversification strategy, we estimate a three-stage-least-squares (3SLS) model of simultaneous equations. This setup allows us to examine the direct effect of CEOs on diversification strategy selection after netting out the selection process for CEOs. In this robustness check, we consider *CEO political ties* and *CEO international experience*, respectively, and treat them as endogenous variables while using standard 3SLS.

Following Bettis, Gambardella, Helfat, and Mitchell (2014), Greene (2012), and Semadeni, Withers, and Certo (2014), we first develop instrumented values for the endogenous variables *CEO political ties* and *CEO international experience*. We obtain the instrumented values as the predicted values resulting from a regression of each variable, *CEO political ties* or *CEO international experience*, on all exogenous variables. Then we obtain a consistent estimate for the covariance matrix of the equation disturbances.

Findings

Table 1 presents descriptive statistics. The correlations suggest little collinearity between CEOs with political ties and CEOs with international experience—in other words, very few CEOs possess both attributes. In addition, variance inflation factor (VIF) scores suggest little problems of multicollinearity.

Table 2 compares two groups of CEOs using *t*-tests and Wilcoxon rank sum tests. Approximately 20.5% of sampled CEOs possess political ties, and 5.6% have international experience. Because only 158 firm-year observations (1.32% in the sample) feature CEOs with both political ties and international experience, we drop these observations to avoid confounding effects.

The *t*-tests show the different characteristics of two types of CEOs. The median age of CEOs with political ties (47) is older than that of CEOs with international experience (45). But CEOs with political ties enjoy longer tenures than CEOs with international experience. More than 18% of CEOs with political ties are also chairman of the board—CEO duality. Only less than 9% of CEOs with international experience enjoy CEO duality. However, we cannot find any significant difference of board independence between two groups in *t*-test. Table 2 also compares firm characteristics between the two groups. CEOs with international experience run firms in a lean way—with higher sales but fewer employees. The financial performance (ROIC) of firms under CEOs with international experience is significantly better than the performance of firms under CEOs with political ties.

Table 3 shows multilevel regression results. Models 1–3 report the results on product diversification. Model 1 provides the baseline with all the control variables. In Model 2, we include the main variables CEO political ties and CEO international experience to test H1a and H2a. The coefficient of CEO political ties is significantly positive

Table 1 Descriptive statistics and correlation matrix ^a

Variable	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1 PD _{t+1}	.214	.243																	
2 ID _{t+1}	.052	.132	-0.53																
3 CEOs with political ties	.205	.404	.098	-0.37															
4 CEOs with int'l experience	.056	.230	-0.19	0.067	-0.42														
5 Economic freedom	6.579	1.427	.047	.168	-0.13	.075													
6 Firm size	21.378	1.190	-0.08	.043	-0.12	-0.01	.107												
7 Firm age	9.241	4.503	.065	-0.104	-0.041	-0.034	.049	.025											
8 State ownership	.585	.493	.035	-0.085	-0.039	-0.063	-0.217	.190	.084										
9 Recoverable slack	.135	.305	-0.12	-0.072	.014	.015	-0.038	-0.299	.104	-0.83									
10 Potential slack	1.313	2.237	.003	-0.011	-0.009	-0.019	-0.015	.150	.095	.039	-0.33								
11 Performance (ROIC)	.103	.324	-0.36	.015	.014	.011	.079	.081	-0.076	-0.048	-0.108	-0.50							
12 CEO duality	.135	.342	-0.06	.051	.178	.009	.105	-0.112	-0.103	-0.182	.030	-0.25	.038						
13 Board independence	.325	.099	-0.57	.113	-0.24	-0.02	.340	.124	.078	-0.197	-0.016	.024	.038	.076					
14 CEO age	47.232	6.691	.002	-0.53	.061	-0.11	-0.056	.102	-0.020	.202	-0.043	-0.017	.007	.003	-0.106				
15 CEO tenure	2.237	1.673	.092	-0.113	.021	-0.020	-0.055	.027	.122	.149	-0.025	.002	-0.034	-0.006	-0.085	.217			
16 Provincial GDP per capita	27,949.9	18,813.2	.038	.113	-0.068	.075	.713	.226	.060	-0.128	-0.043	-0.007	.088	.066	.287	-0.045	-0.118		
17 Provincial GDP growth rate	.124	.021	-0.40	.036	-0.019	-0.027	.019	-0.006	.066	-0.018	-0.014	.031	-0.003	-0.005	.262	-0.031	.034	-0.196	

^a Correlations in **bold** are significant at the .10 level

Table 2 CEOs with political ties versus CEOs with international experience

Variables		CEOs with political ties	CEOs with int'l experience	<i>t</i> -test or <i>Wilcoxon</i> test
Firm-year observations		2455	870	
Age	Mean	47.982	46.880	8.120**
	Median	47.000	45.000	3.210**
Male	Mean	.942	.955	-1.424
	Median	1.000	1.000	-1.424
Tenure	Mean	2.311	2.090	2.522**
	Median	2.000	2.000	3.102**
CEO duality	Mean	.183	.086	4.013**
	Median	.000	.000	3.115**
Board independence	Mean	32.03%	32.43%	-1.620
	Median	33.33%	33.34%	-1.581
Firm size (employees)	Mean	8.240	7.591	1.098
	Median	7.583	7.280	1.180
Firm size (sales)	Mean	20.958	21.451	-2.109*
	Median	20.982	21.513	-2.010*
Performance (ROIC)	Mean	.113	.118	-1.960*
	Median	.088	.095	-2.322*

† $p < .1$; * $p < .05$; ** $p < .01$. Two tailed

($\beta = .057$, $p < .01$), while that of CEO international experience is significantly negative ($\beta = -.033$, $p < .01$). Overall, in terms of the impact on the product scope of the firm, CEOs with political ties have a positive effect while CEOs with international experience have a negative effect. Overall, our results support H1a and H2a.

Model 3 tests the moderating effect of economic freedom. Its result indicates that economic freedom has a significantly positive effect on the relationship between CEO political ties and product diversification ($\beta = .015$, $p < .01$). Also, the coefficient of economic freedom \times CEO international experience is significantly negative ($\beta = -.019$, $p < .01$) in Model 3. These results support our H3a and H4a.⁴ Figs. 2 and 3 illustrate the regression results.

Models 4–6 present the results on international diversification. Model 4 is the baseline model. Model 5 includes the variables CEO political ties and CEO international experience to test H1b and H2b. The coefficient of CEO political ties is significantly negative ($\beta = -.009$, $p < .01$), while that of CEO international experience is significantly positive ($\beta = .043$, $p < .01$). In terms of the impact on international scope of the firm, CEOs with political ties have a negative effect while CEOs with international experience have a positive effect. Overall, H1b and H2b are supported.

⁴ We further test the difference of the moderating effects of economic freedom on the relationships (1) between CEO political ties and product diversification and (2) between CEO international experience and product diversification. We find that two moderating effects are significantly different ($\chi^2 = 18.53$, $p < .01$).

Table 3 The results of multilevel regression models ^a

Dependent variable	PD _{t+1}			ID _{t+1}		
	(1)	(2)	(3)	(4)	(5)	(6)
CEOs with political ties (H1a/H1b)		.057** (.005)	.059** (.005)		-.009** (.003)	-.008** (.003)
CEOs with int'l experience (H2a/H2b)		-.033** (.009)	-.027** (.010)		.043** (.005)	.036** (.005)
CEOs with political ties × Economic freedom (H3a/H3b)			.015** (.004)			.004 [†] (.002)
CEOs with int'l experience × Economic freedom (H4a/H4b)			-.019** (.007)			.025** (.004)
Economic freedom	.013* (.005)	.013* (.005)	.014** (.005)	.003 (.003)	.003 (.003)	.003 (.003)
Firm size	.001 (.002)	.000 (.002)	.000 (.002)	-.000 (.001)	-.000 (.001)	-.000 (.001)
Firm age	.003** (.001)	.003** (.001)	.003** (.001)	-.003** (.000)	-.003** (.000)	-.003** (.000)
State ownership	-.002 (.005)	-.001 (.005)	-.002 (.005)	.003 (.003)	.004 [†] (.003)	.004 (.003)
Recoverable slack	-.022** (.007)	-.023** (.007)	-.023** (.007)	-.020** (.004)	-.020** (.004)	-.020** (.004)
Potential slack	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.001)
Performance (ROIC)	-.018** (.007)	-.019** (.007)	-.019** (.007)	-.015** (.003)	-.015** (.003)	-.014** (.003)
CEO duality	.002 (.006)	-.010 (.007)	-.010 (.007)	.014** (.003)	.016** (.003)	.016** (.003)
Board independence	.044 (.036)	.047 (.036)	.046 (.036)	-.040* (.019)	-.038* (.019)	-.037* (.019)
Ln (CEO age)	-.061** (.016)	-.071** (.016)	-.071** (.016)	.007 (.008)	.009 (.008)	.009 (.008)
CEO tenure	.006** (.002)	.006** (.001)	.006** (.001)	.001 (.001)	.001 (.001)	.001 (.001)
Ln (provincial GDP per capita)	.012 (.015)	.013 (.014)	.011 (.014)	.011 (.007)	.011 (.007)	.013 [†] (.007)
Provincial GDP growth rate	-.097 (.159)	-.070 (.158)	-.087 (.158)	-.404** (.080)	-.413** (.080)	-.414** (.080)
Constant	.264 [†] (.137)	.297* (.135)	.310* (.135)	-.082 (.065)	-.087 (.065)	-.101 (.066)
Observations	11,992	11,992	11,992	11,992	11,992	11,992
Log likelihood	351.515	414.529	426.786	8305.413	8350.149	8374.605
Wald chi ²	397.111	528.731	554.321	1889.913	1993.118	2049.983
LR test to (1) or (4)		126.03**	150.54**		89.47**	138.39**
LR test to (2) or (5)			24.51**			48.91**

^a Coefficients of regional, industrial, and year dummies are not reported. Robust standard errors are in parentheses

[†] $p < .1$; * $p < .05$; ** $p < .01$. Two tailed

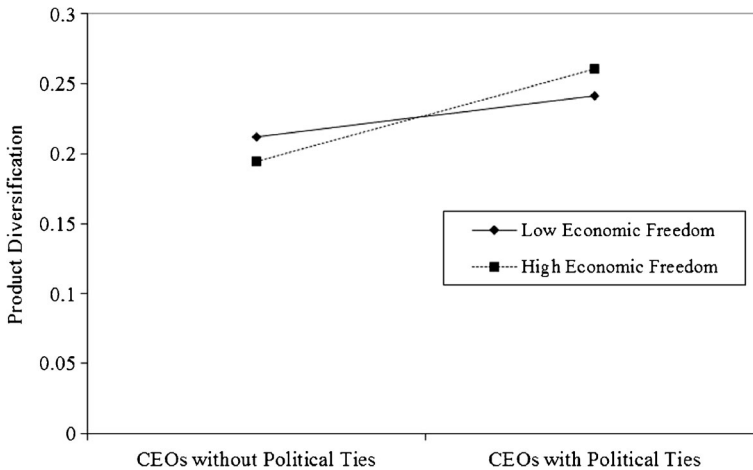


Fig. 2 The moderating effects of economic freedom on the relationship between CEOs with political ties and product diversification (PD_{t+1}) (H3a).

Model 6 tests the moderating effect of economic freedom. Specifically, Model 6 indicates that the moderating effect of economic freedom on the relationship between CEO political ties and international diversification is significantly positive ($\beta = .004$, $p < .01$). Therefore, H3b receives support. We depict this supported moderating effect in Fig. 4. In addition, the coefficient of *economic freedom* \times *CEO international experience* is significantly positive ($\beta = .025$, $p < .01$) in Model 6.⁵ Plotted in Fig. 5, this result thus supports our H4b.

Robustness checks

To address the concern of the influence of CEO selection processes on the relationship between CEO background and diversification strategy, we employ a 3SLS model of simultaneous equations to address the potential bias when a sample is not randomly selected. In the first stage, we estimate the probability of the appointment of CEOs with political ties (or those with international experience) by using logit regression in which the dependent variable is a dummy variable of CEOs with political ties (or CEOs with international experience) on a set of firm characteristics. Then we estimate the 3SLS model of simultaneous equations. The fitted probability of the appointment of CEOs is used as the instrument variable in the model of CEOs with political ties (or those with international experience).⁶ In Table 4, we only report the results of product diversification in Models 7–10, while those of internationalization diversification in Models 11–14. The results on the main variables and interaction terms in Table 4 are consistent

⁵ We further test the difference of the moderating effects of economic freedom on the relationships (1) between CEO political ties and international diversification and (2) between CEO international experience and international diversification. We find that two moderating effects are significantly different ($\chi^2 = 27.89$, $p < .01$).

⁶ We use F -statistic in the first stage to test instrument strength and identify that instrument variables (the predicted values resulting from the regression on each variable, CEO political ties or CEO international experience, respectively) are strong (Semadeni et al., 2014).

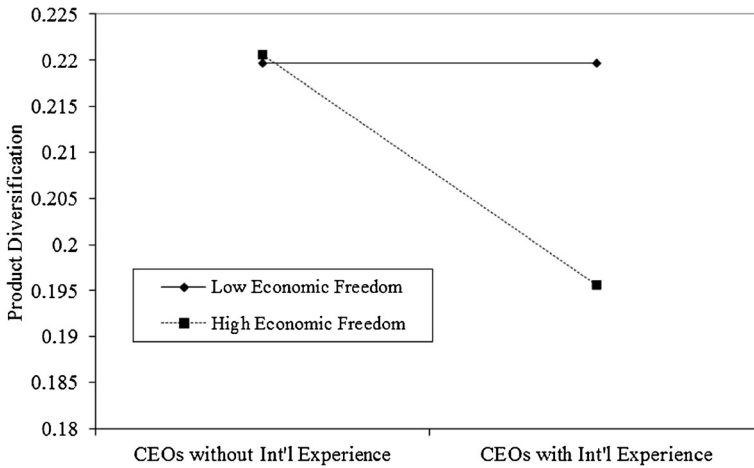


Fig. 3 The moderating effects of economic freedom on the relationship between CEOs with international experience and product diversification (PD_{t+1}) (H4a)

with those in Table 3. It suggests that after controlling for the biases in CEO appointment, the hypotheses still receive robust support.

Discussion

Contributions

This article focuses on one of the most fundamental questions in strategic management: What determines the scope of the firm? (Rumelt et al., 1994) Three contributions emerge. First, we push diversification research to a new theoretical direction by

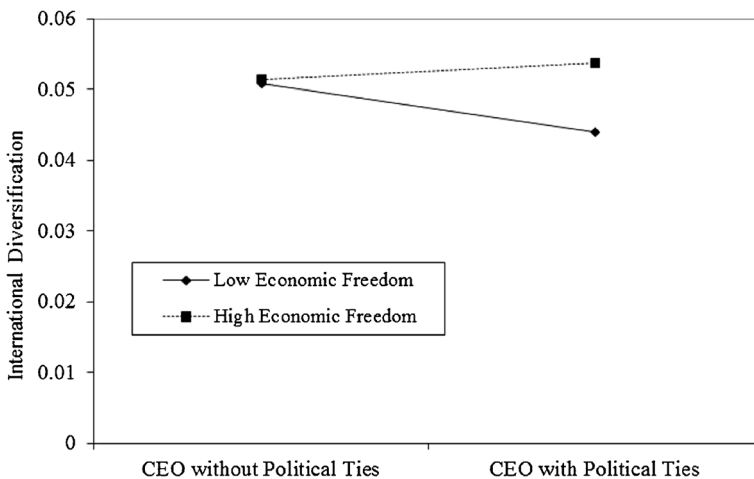


Fig. 4 The moderating effects of economic freedom on the relationship between CEOs with political ties and international diversification (ID_{t+1}) (H3b)

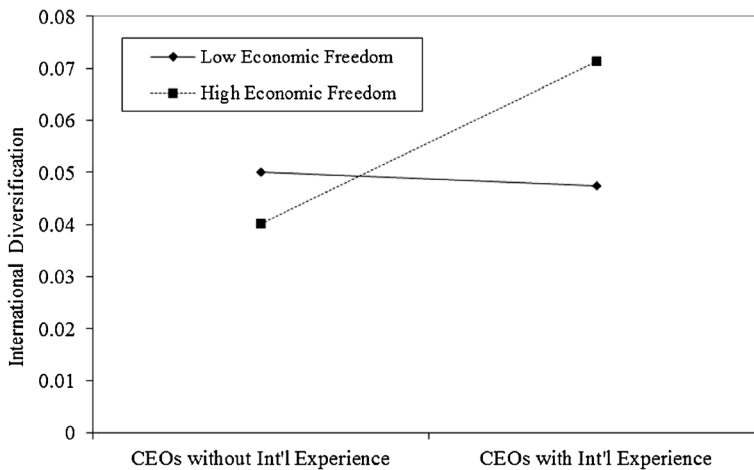


Fig. 5 The moderating effects of economic freedom on the relationship between CEOs with international experience and international diversification (ID_{t+1}) (H4b)

explicitly considering the impact of institutional relatedness, thus enriching the institution-based view (Ahuja & Yayavaram, 2011; Carney et al., 2011; Khanna & Yafeh, 2007; Kogut et al., 2002; Meyer & Peng, 2016; Peng, Sun, Pinkham, & Chen, 2009; Wan & Hoskisson, 2003; Wan et al., 2011). Specifically, we argue that our understanding of the drivers behind the scope of the firm may be incomplete without an appreciation of institutional relatedness.

Second, this study adds to Xu et al. (2014) by revealing that the co-existence of state control and market liberalization continues to shape strategy during institutional transitions. Unlike the traditional view on the scope of the firm that focuses on product relatedness and synergy (Barney, 1988; Bennett & Pierce, 2016; Miller, 2006), we provide an alternative explanation of the opportunities and constraints behind the growth of the firm in China. Meanwhile, our contingency analysis indicates the importance of the joint institutional and firm effects on scope. Institutions not only constrain firms' strategy on scope, but also facilitate different CEOs to make different strategic choices (Lin et al., 2009; Yang et al., 2011). Our empirical results suggest that CEOs with different institutional relatedness can strategically change their firms' scope in response to market-oriented reforms that enhance economic freedom. These findings enrich the growing research on institutional competitive advantage (Cuervo-Cazurra & Dau, 2009; Hoskisson et al., 2013; Martin, 2014).

Third, extending Peng et al.'s (2005) theoretical work on institutional relatedness, we conduct what we believe to be the first empirical test that directly operationalizes this construct. Going above and beyond Peng et al. (2005), we identify and highlight the important role of two types of institution relatedness—CEO political ties and CEO international experience—behind the scope of the firm along both product and international dimensions. Specifically, we find that on the one hand, state control during institutional transitions promotes CEOs with political ties to engage in more product diversification. On the other hand, CEOs with international experience institutionalize the power from economic freedom during institutional transitions via more international expansion.

Table 4 The results of three-stage-least-squares regression ^a

	PD _{t+1}				ID _{t+1}			
	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
CEOs with political ties (H1a/H1b)	.314** (.029)	.050** (.005)			-.231** (.017)	-.232** (.017)		
CEOs with int'l experience (H2a/H2b)			-.041** (.009)	-.117 (.177)			.424** (.046)	.210** (.042)
CEOs with political ties × Economic freedom index (H3a/H3b)		.020** (.004)				.044** (.009)		
CEOs with int'l experience × Economic freedom index (H4a/H4b)				-.238** (.076)				.101** (.033)
Economic freedom	.006 (.008)	.005 (.007)	.005 (.007)	.008 (.008)	-.000 (.004)	.004 (.004)	.001 (.004)	.001 (.003)
Firm size	-.004 [†] (.002)	.004 [†] (.002)	.004* (.002)	.002 (.002)	.004** (.001)	.005** (.001)	-.002 [†] (.001)	-.001 (.001)
Firm age	.003** (.001)	.002** (.001)	.002** (.001)	.002** (.001)	-.003** (.000)	-.003** (.000)	-.002** (.000)	-.003** (.000)
SOE dummy	.006 (.005)	.005 (.005)	.003 (.005)	-.005 (.008)	-.002 (.003)	-.004 (.003)	.019** (.003)	.010** (.003)
Slack	-.030** (.008)	-.029** (.007)	-.029** (.007)	-.026** (.008)	-.014** (.005)	-.012** (.005)	-.026** (.005)	-.024** (.004)
Debt/equity	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.001)	-.000 (.001)	.000 (.001)	.000 (.001)	-.000 (.001)
Performance (ROIC)	-.024** (.007)	-.020** (.007)	-.020** (.007)	-.020** (.007)	-.010* (.004)	-.009* (.004)	-.017** (.004)	-.013** (.004)

Table 4 (continued)

	PD _{t+1}				ID _{t+1}			
	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
CEO/Chair duality	-.062** (.009)	-.005 (.006)	.005 (.006)	.003 (.007)	.061** (.005)	.060** (.005)	.016** (.004)	.015** (.004)
Board independence	0.071† (.039)	.054 (.035)	.048 (.035)	.028 (.041)	-.060** (.023)	-.061** (.023)	-.005 (.022)	-.038* (.017)
Ln (CEO age)	-.112** (.018)	-.053** (.016)	-.046** (.016)	-.060** (.017)	.045** (.011)	.047** (.010)	.016† (.010)	.001 (.009)
CEO tenure	.007** (.002)	.005** (.001)	.005** (.001)	.007** (.002)	.000 (.001)	.000 (.001)	.002** (.001)	-.001† (.001)
Ln (provincial GDP per capita)	-.056† (.030)	-.046† (.027)	-.040 (.027)	-.063* (.031)	.055** (.018)	.048** (.017)	.058** (.017)	.113** (.005)
Provincial GDP growth rate	.185 (.188)	.022 (.167)	.014 (.168)	.009 (.184)	-.661** (.110)	-.689** (.108)	-.609** (.105)	-.430** (.071)
Constant	1.059** (.271)	.757** (.241)	.689** (.242)	.893** (.275)	-.594** (.158)	-.560** (.156)	-.490** (.151)	-.923** (.056)
Observations	11,991	11,991	11,991	11,992	11,991	11,991	11,991	11,991

^a Regressions are estimated using the 3SLS methodology. Coefficients of provincial, industrial, and year dummies are not reported. Standard errors are in parentheses

† $p < .1$; * $p < .05$; ** $p < .01$. Two tailed

Limitations and future research directions

The limitations of our study open doors for some promising future directions. First, the effects of product diversification and geographic diversification can mutually interweave. In this study, we assume that different CEOs with different types of institutional relatedness can set different goals in terms of the scope of the firm. As a result, we have not explored more complicated models of interconnectedness between these two types of diversification. Future studies can gain additional insight by investigating such interconnectedness (Chen & Jaw, 2014; Kumar, 2009; Sakhartov & Folta, 2015; Wan et al., 2011). We speculate that institutional relatedness may moderate these mutual influences.

Second, future studies will need to capture the effect of institutional relatedness *over time* (Carney, 2008; Hoskisson et al., 2013; Peng et al., 2005). In addition, to keep two types of institutional relatedness measurements consistent, we have to use the coarse-grained dummy variable approach. Future research may develop more fine-grained and more precise approaches.

A third limitation is our measure of international experience, which follows Peng et al. (2015) by combining work experience in foreign-owned multinationals and work experience in overseas subsidiaries of Chinese companies with educational experience abroad. Future work needs to distinguish among these three sets of experience.

Conclusions

This article has argued and demonstrated that one of the missing links in our understanding of the determinants of the scope of the firm is institutional relatedness. A hallmark of institutional transitions in emerging economies is the simultaneous coexistence of political powers and market forces. Such an institutional environment leads CEOs to leverage different types of institutional relatedness—political ties and international experience—in order to undertake different diversification strategies for their firms. The contingency effects of the degree of economic freedom further show that market-oriented reforms moderate the relationship between institutional relatedness and the scope of the firm. Overall, we make and substantiate the case that institutional relatedness matters. In conclusion, a new generation of research on one of the most fundamental questions in strategy, “What determines the scope of the firm?” needs to take institutional relatedness into account.

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