

# Managerial ties, organizational learning, and opportunity capture: A social capital perspective

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**Abstract** From a social capital perspective, this article investigates how entrepreneurs in new ventures utilize their managerial ties (consisting of ties with other firms and ties with government) to capture opportunity. We also explore the moderating role of organizational learning (via exploratory learning and exploitative learning) in this process. Drawing on a sample of 159 new ventures, we find that ties with other firms have a stronger positive effect on opportunity capture than ties with government. We also find that organizational learning moderates the relationship between managerial ties and opportunity capture. Overall, our contributions center on an integrated view of organizational learning, social relationships, and opportunity capture.

**Keywords** Managerial ties · Opportunity capture · Exploratory learning · Exploitative learning · New ventures

Viewed as the heart of entrepreneurship, the ability to capture opportunity is vital to promote new ventures' growth (Austin, Stevenson, & Wei-Skillern, 2006; Short,

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Ketchen, Shook, & Ireland, 2010). Opportunity capture refers to the pursuit and response to given opportunities quickly and utilizing them to achieve better firm growth (Short et al., 2010). Traditional entrepreneurship research on opportunity capture has often focused on entrepreneurs' traits from an endogenous perspective (Bhagavatula, Elfring, van Tilburg, & van de Bunt, 2010; Corbett, 2005). In limited empirical studies, for example, Bingham, Eisenhardt, and Furr (2007) demonstrated that past experiences result in decision making heuristics that allow opportunity capture, and Kwon and Arenius (2010) found that individual-level attributes influence opportunity perception. But what about external factors such as social capital accumulated from ties with external parties? In high uncertainty environments, opportunities appear and disappear quickly (Choi & Shepherd, 2004). The saying that "opportunity only favors the prepared" highlights the importance of resources accumulated for successfully capturing opportunity.

However, suffering from the liabilities of newness, new ventures may not possess enough internal resources to capture opportunities (Mohan-Neill, 1995). As a result, external resources such as managerial ties are often mobilized to capture opportunities (Peng & Luo, 2000). Managerial ties are generally viewed as "executives' boundary-spanning activities and their associated interactions with external entities" (Geletkanycz & Hambrick, 1997: 654). In an emerging economy characterized by an incomplete market system, formal institutional resources may not provide enough support to new ventures (Sheng, Zhou, & Li, 2011). In this case, managerial ties as key social capital can help firms to access scarce resources (Li, Poppo, & Zhou, 2008), manage environmental uncertainties (Li & Zhou, 2010), and improve firm performance (Adler & Kwon, 2002). The existing literature focuses on two types of managerial ties: (1) ties with managers at other firms (mainly including suppliers and buyers), which are horizontal and between peers; and (2) ties with government officials, which are vertical and between subordinates and superiors (Luo, Huang, & Wang, 2012; Park & Luo, 2001; Peng & Luo, 2000). Because these two types of managerial ties have different sources and structures (Li et al., 2008), they may have different impacts on opportunity capture. However, left unaddressed in the existing literature is the first question we address: How do entrepreneurs' ties with other firms and ties with government affect new ventures' opportunity capture?

Further, since market opportunities are rapidly evolving in emerging economies (Choi & Shepherd, 2004; Krug & Hendrischke, 2012; Patterson, 1993), new ventures need to continuously find the right ways to improve the effectiveness of managerial ties affecting opportunity capture. The existing literature suggests that organizational learning is key for new ventures to improve resource efficiency and grasp opportunity (Hsu & Pereira, 2008; Li, Young, & Tang, 2012a; Short et al., 2010; Sirmon, Hitt, Ireland, & Gilbert, 2011). Especially in emerging economies such as China, environmental uncertainty is relatively stronger (Wright, Filatotchev, Hoskisson, & Peng, 2005), and new ventures often lack enough resources and social capital to support their growth (Li & Peng, 2008; Wright et al., 2005). In this case, new ventures need to continuously leverage their learning capability to improve the effectiveness of social capital embodied in managerial ties, which can help new ventures capture opportunities and improve performance (Sheth, 2011; Sirmon et al., 2011; Zhao, Li, Lee, & Chen, 2011). In the existing literature, exploratory learning and exploitative learning are viewed as the most important types of organizational learning (March, 1991).

They can impact the absorption, translation, and utilization of social capital (Zhao et al., 2011), and improve firm performance (Lumpkin & Lichtenstein, 2005). Because these two learning mechanisms have different characteristics (March, 1991) and ties with other firms or government also have different features (Luk et al., 2008; Luo et al., 2012; Peng & Luo, 2000), exploratory learning and exploitative learning may have different effects on the linkage between different managerial ties and opportunity capture (Lin, Peng, Yang, & Sun, 2009; Yang, Lin, & Peng, 2011). Unfortunately, the existing literature seldom considers these different moderating effects. Therefore, we address our second question: How do explorative learning and exploitative learning moderate the relationship between managerial ties and opportunity capture?

Addressing the two important but previously underexplored questions, this study draws on social capital theory as an overarching framework to develop a conceptual model that integrates the managerial ties and organizational learning literature in order to explore the relationship among managerial ties, organizational learning, and opportunity capture in new ventures from an emerging economy. We endeavor to contribute both theoretically and empirically. Theoretically, regarding the conceptualization of social capital with a focus on managerial ties with managers in other firms and with government officials (Luk et al., 2008), we argue that these two types of ties can differentially facilitate opportunity capture for new ventures. Further, we introduce exploratory learning and exploitative learning as moderators in this process. Integrating social capital theory with the organizational learning perspective, we not only explain how organizational learning affects the linkage between managerial ties as important social capital and new ventures' opportunity capture, but also extend opportunity capture research from entrepreneurs' endogenous traits to their exogenous relationships. These efforts enrich the opportunity-based view of entrepreneurship (Shane & Venkataraman, 2000), and shed new light on the social capital perspective of opportunity capture (Bingham et al., 2007; De Carolis & Saporito, 2006; Ozgen & Baron, 2007).

Empirically, we pay more attention to new ventures in an emerging economy that has been experiencing vibrant entrepreneurial growth (Wright et al., 2005). By sampling new ventures in China, which has a long tradition of using managerial ties as social capital to facilitate business (Li et al., 2008; Li & Zhang, 2007), this study integrates the literature on managerial ties and organizational learning with opportunity research. It also reveals the contingency values of organizational learning in exploiting these valuable ties in an emerging economy. Overall, the evidence strongly supports our model, thus enabling us to extend current opportunity capture research from a single perspective to an integrative view by integrating the role of external managerial ties and related internal learning mechanisms.

## Theoretical background

“Without an opportunity, there is no entrepreneurship” (Short et al., 2010: 40). However, unexploited, profitable, high-growth opportunities are hard to capture (Austin et al., 2006). Effective opportunity capture requires subtle preparation that needs the investment of scarce resources with the hope of future returns (Sahlman, 1996; Shane & Venkataraman, 2000). Given the significant turbulence, the fast

change, and the primitive regulations, new ventures in an emerging economy such as China may need much more resources for opportunity capture (Lin, Li, & Chen, 2006; Rauch, Wiklund, Lumpkin, & Frese, 2009). However, most new ventures in China lack sufficient internal resources to support this hard work (Li & Peng, 2008; Stam & Elfring, 2008). In this case, new ventures frequently encounter problems and uncertainties they cannot handle alone. Thus, new ventures in China may emphasize more on the utilization of external resources to effectively deal with emerging problems and then capture opportunities (Adler & Kwon, 2002; Inkpen & Tsang, 2002). According to social capital theory, a firm's social networks such as managerial ties are effective ways to gain external resources and can contribute to its performance (Peng & Luo, 2000).

In an emerging economy such as China, managerial ties may help new ventures to reduce transaction costs or increase transaction values through facilitated exchange of resources, information, and knowledge (Luo, 2003; Standifird & Marshall, 2000). Thus, new ventures with strong managerial ties may have a quick response to local opportunities (Luo, 2001). Given China's long tradition of using managerial ties as a conduit to nurture business transactions (Luo, 2003; Zhang & Li, 2008), managerial ties can provide ample resources to capture lucrative opportunities. However, the existing literatures pay more attention to how managerial ties improve firm performance (Li et al., 2008; Sheng et al., 2011), and little evidences is provided to explain how managerial ties of new ventures in an emerging economy affect opportunity capture. Based on social capital theory, viewing managerial ties as an important type of social capital (Luk et al., 2008), we argue that the new ventures in China can leverage their managerial ties to improve opportunity capture.

The existing literature suggests that ties with other firms and ties with government are two of the most important managerial ties for firms in an emerging economy such as China (Luk et al., 2008; Peng & Luo, 2000). Ties with other firms including relations with suppliers, buyers, and customers are horizontal among peers, and are embedded in a relatively large network (Lim & Cu, 2012). From these ties, new ventures can gain information related to potential market needs (Li & Zhou, 2010). Meanwhile, given the extensive government intervention in emerging economies such as China, new ventures have to establish ties with governmental officials and regulators who can assist them in attenuating market challenges (Li et al., 2008; Li, He, Lan, & Yiu, 2012b). In an emerging economy, building ties with the government is an efficient way to facilitate economic exchanges and to overcome administrative interventions by the government (Baron & Tang, 2009; Peng & Luo, 2000). Although the existing research notes the different effects of these two ties on firm performance (Sheng et al., 2011), we will further extend the existing literature by arguing that ties with other firms and ties with government have different effects on opportunity capture of new ventures because of their different features (Luk et al., 2008; Sheng et al., 2011), which can help new ventures to leverage their managerial ties more effectively in improving opportunity capture.

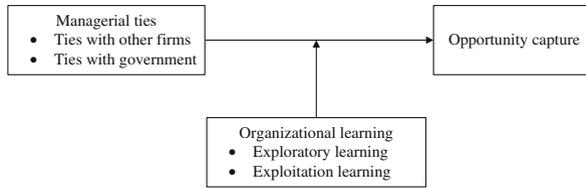
In the process that new ventures utilize their managerial ties to capture opportunities, they need to improve their effectiveness in the management of these social capital resources (Sirmon et al., 2011). The existing literature emphasizes that organizational learning is especially important for resource management of new ventures in dynamic environments (Short et al., 2010; Sirmon et al., 2007). For

example, Yli-Renko, Autio, and Sapienza (2001) pointed out that the links between social capital and organizational learning should be highlighted in the domains of entrepreneurship research. Similarly, Yli-Renko, Autio, and Tontti (2002) proposed a model to explicate the relationship between social capital and learning in new ventures. However, these studies have ignored the interaction of these two constructs in the process of entrepreneurial activity such as opportunity capture, which leave room for us to do further research.

As two key types of organizational learning, exploratory learning and exploitative learning have different features (Li, Lee, Li, & Liu, 2010; Lin et al., 2009; Yang et al., 2011). Exploratory learning refers to the learning of product and process development skills that are entirely new to the current experiences of the firm. The keywords in exploratory learning activities are “search, variation, risk taking, experimentation, play, flexibility, discovery, and innovation” (March, 1991: 71). Its essence is experimentation with new alternatives, since it occurs along an entirely different trajectory through the processes of concerted variation, planned experimentation, and play (Benner & Tushman, 2002; Gupta, Smith, & Shalley, 2006; Yang, Liu, Gao, & Li, 2012). In contrast, exploitative learning refers to the learning from the knowledge and skills that are familiar with the firms’ current experiences. Exploitative learning is characterized by “refinement, choice, production, efficiency, selection, implementation, and execution,” and it focuses on “the refinement and extension of existing competencies, technologies, and paradigms exhibiting returns which are positive, proximate, and predictable” (March, 1991: 85). The primary emphasis of exploitative learning is on control, efficiency, and reliability (Auh & Menguc, 2005).

Further, different organizational learning activities can reflect the focal firm’s attitude on handling various types of resources (Kim & Atuahene-Gima, 2010; Yi, Liu, He, & Li, 2012; Zhao et al., 2011). As a result, organizational learning may serve as a “gear box” that can change the effectiveness of managerial ties on opportunity capture. For example, new ventures in emerging economies do not seem to engage in a great deal of exploratory innovation (Hitt et al., 2004). Thus, the Chinese government attaches great importance to exploratory innovation, and makes great effort to support such innovation actively (Li, Liu, & Liu, 2011a; Li, Wang, & Liu, 2011b). In this case, the new ventures need to strengthen their exploratory learning to improve the effectiveness of managerial ties in affecting opportunity capture. Meanwhile, as technology and market demands change quickly, new ventures also need to improve their exploitative learning to leverage current resources more effectively. Different with established firms, new ventures are often new entrants, and lack sufficient social capital (Li & Zhang, 2007). In this case, it is more important for new ventures in emerging economies such as China to leverage their organizational learning to improve the effects of managerial ties on opportunity capture. However, in the existing literature, the effects of the interaction between organizational learning and managerial ties on the entrepreneurial activity of new ventures are ignored. Contributing to recent efforts to integrate and reconcile the social capital and organizational learning perspectives (Atuahene-Gima & Murray, 2007), we argue that exploratory learning and exploitative learning can differentially improve the effectiveness of managerial ties’ effects on opportunity capture of new ventures in emerging economies.

Overall, we develop a conceptual model illustrated in Fig. 1. It weaves together managerial ties, organizational learning, and opportunity capture to explain how ties



**Fig. 1** Theoretical model

with other firms and ties with government differentially affect opportunity capture, and how exploratory learning and exploitative learning moderate these processes.

## Hypothesis development

### Managerial ties and opportunity capture

For new ventures, building ties with the business community can help overcome the lack of resources, because ties with other firms may facilitate knowledge transfer, information sharing, and resource exchange (Li, Zhou, & Shao, 2009). For example, closer linkages with suppliers can help new ventures acquire quality materials, good services, and timely delivery. Thus, the new ventures may quickly respond to the changing market conditions and gain valuable information from the upstream firms that may present potentially great opportunities—and will be fairly certain to capture them. Similarly, ties with buyers enable the firm to have more sensitive perceptions of the taste and preference of customers (Luo, 2003), which can help capture opportunities that satisfy customer demand and spur customer loyalty.

Meanwhile, intimate relationships with government officials may help firms achieve more institutional support, such as favorably interpreting regulations, enforcing contracts, settling negotiations, and erecting entry barriers (Peng & Luo, 2000). Thus, close ties with government can help ensure access to some scarce resources such as land, capital support, and the latest news about industrial planning or relevant policies and regulations, all of which may facilitate the new ventures to quickly capture opportunities.

While both types of ties impact opportunity capture, they may exert different effects. Ties with other firms involve not only the sharing of operational resources (e.g., raw materials, production facilities, technologies, financial capital, and distribution channels), but also strategic resources (e.g., information, experience, and knowledge). As economic transitions deepen, more Chinese new ventures are shifting from cultivating relationships with government officials to building ties with managers in other firms (Peng & Zhou, 2005). Moreover, ties with other firms are embedded in a relatively large network, which may provide plenty of information related to potential market needs and underdeveloped opportunities on time and at lower cost. Ozgen and Baron (2007) also stated that entrepreneurs with wide social networks tend to be more successful at grasping opportunities than those with narrower ones.

Compared with ties with other firms, the non-substitutability of the government implies that firms must abide by government regulations or be punished for

noncompliance. In an emerging economy, government officials rotate their positions across different departments and geographic locations frequently, which may weaken or terminate a firm's political connections (Sheng et al., 2011). Moreover, building and maintaining ties with government will induce more substantial costs, and resources received from these ties always carry some political complexity, which may constrain new ventures' opportunity-capture activities to a relatively small area (Tsang, 1998). Meanwhile, government officials prefer to pay more attention to influential or large firms, which can significantly increase tax revenue. But most new ventures have little influence in their industry, and can not afford tax increase. Although both ties with other firms and government provide valuable resources for opportunity capture, the nature of the attributes of ties with government may make them less beneficial. Therefore:

**Hypothesis 1a** Ties with other firms positively affect new ventures' opportunity capture.

**Hypothesis 1b** Ties with government positively affect new ventures' opportunity capture.

**Hypothesis 1c** The positive effect of ties with other firms on opportunity capture is stronger than that of ties with government.

#### The moderating role of organizational learning

According to social capital theory, entrepreneurs operate in a social context inside and outside of their organizations, and interactions between external managerial ties and internal organizational learning will influence firm strategy and its outcomes, particularly in new ventures (Dubini & Aldrich, 1991). Thus we argue that organizational learning may improve the effectiveness of new ventures' managerial ties on opportunity capture. The essence of exploratory learning is experimentation with new alternatives (March, 1991). Exploratory learning occurs along an entirely different trajectory through the processes of concerted variation and planned experimentation (Benner & Tushman, 2002; Gupta et al., 2006), with an ideal outcome of novel innovation (Auh & Menguc, 2005).

Through ties with other firms, firms not only gain resources and information similar to their existing business, but also gain novel information (such as technological changes) different from their existing business. McEvily and Zaheer (1999) indicated that ties with other firms may broaden and deepen firms' market knowledge. New ventures must implement necessary activities such as exploratory learning to better utilize and transform these resources in order to capture opportunity more effectively, and thus survive in the context of new competition. By strengthening exploratory learning, new ventures can find more uses of ties with other firms in creating new products and services, targeting emerging market segments (Levinthal & March, 1993; Zahra & Bogner, 1999), creating new niches (Lumpkin & Dess, 2001), and meeting or even leading the needs of the emerging markets (Zahra, 1996). Overall, based on stronger exploratory learning, firms can more effectively leverage ties with other firms to capture opportunities. Thus:

**Hypothesis 2a** Exploratory learning positively moderates the relationship between ties with other firms and opportunity capture.

While entrepreneurs in all countries cultivate ties with other firms, ties with government may be a relatively unique type of ties that entrepreneurs in an emerging economy especially like to cultivate (Peng & Luo, 2000). Despite the reforms, Chinese officials still have considerable power to approve projects and allocate resources. In this case, by strengthening exploratory learning, firms can leverage their ties with government more effectively to get government support to grasp more market opportunities. Specifically, because the Chinese government encourages and organizes novel innovations based on exploratory learning (Li et al., 2011a, b), the new ventures that emphasize exploratory learning will be better able to cater to the government's preferences. In other words, strengthening exploratory learning will improve the effectiveness of ties with government in identifying and capturing opportunities. Thus:

**Hypothesis 2b** Exploratory learning positively moderates the relationship between ties with government and opportunity capture.

Different than exploratory learning, exploitative learning aims to improve current operational efficiency (Schildt, Maula, & Keil, 2005). Exploitative learning has a primary emphasis on control, efficiency, and reliability (Deming, 1981; Juran & Gryna, 1988). Therefore, exploitation relies on cumulative learning (Uzzi & Lancaster, 2003).

Because most resources from ties with other firms focus on concrete pragmatic issues (Li et al., 2009), exploitative learning can help new ventures to extend the roles of these resources along the same trajectory via experiential refinement, selection, and reuse of existing routines (Benner & Tushman, 2002; Gupta et al., 2006). Further, by undertaking exploitative learning, new ventures can better understand specific preferences from current customers and suppliers, which can also improve the effectiveness of current business relationships on opportunity capture (Kim & Atuahene-Gima, 2010). Therefore:

**Hypothesis 3a** Exploitative learning positively moderates the relationship between ties with other firms and opportunity capture.

In contrast, the effect of ties with government on opportunity capture may decrease with the increase of exploitive learning. First, in addition to the specific resources such as financial capital or loans that can be gained from ties with government in emerging economies, information that government agencies provide is usually aggregated, such as industrial or regional economic output (Sheng et al., 2011). Such information tends to take a relatively long time to collect and compile, such that it may become dated quickly in a volatile market (Glazer & Weiss, 1993). As a result, in emerging economies such as China, changes in market may reallocate opportunities before the new ventures focused on exploitative learning can capitalize on resources from ties with government for capturing those opportunities. Thus, new ventures in China with strong exploitative learning often prefer to engage in incremental innovation, and reduce the effectiveness of ties with the government in affecting capture opportunity. Second, the government in an emerging economy such as China prefers

to provide policies to support novel innovation (Li et al., 2008). However, exploitative learning mainly focuses on the refinement of existing competencies and technologies (March, 1991), and thus the outcomes of exploitative learning may not be preferred by the government. Further, government officials mainly focus on developing their political careers, and they prefer to appease their superiors, not to accommodate firms such as new ventures (Sheng et al., 2011). In this case, if the new ventures appear to have more tendencies on exploitive instead of exploratory activities, the positive effect of ties with government on opportunity capture may decline. Therefore:

**Hypothesis 3b** Exploitative learning negatively moderates the relationship between ties with government and opportunity capture.

## Methodology

### Sample and data collection

Our data were obtained through a face-to-face interview survey. We chose manufacturing firms from Guangdong, Henan, Jiangsu, Jilin, Shaanxi, and Shandong provinces, which cover eastern, central, and western China. There are two reasons why we sampled Chinese new ventures. First, firms in China have a long tradition of using managerial ties to facilitate business. Also, as an emerging economy, China's market system is incomplete. Although it is transitioning to a market economy, the government still has considerable power. Thus, both the market and the government influence firms' business operations, such that firms have incentives to build ties with both other business entities and government officials. Second, the significant structural turbulence and market transitions generate huge amounts of entrepreneurial opportunities.

The questionnaire was originally designed in English and was then translated into Chinese with the assistance of four PhD candidates competent in both languages. To ensure content validity, two researchers consulted extensively with three entrepreneurs and asked for their advice concerning questionnaire items. We modified the instrument according to their comments.

A pilot test was conducted with 18 senior managers whose responses were excluded from the final study. During the process, interviewers checked each item with pilot test participants to make sure every question could be accurately understood. Afterwards, interviewers held discussions and made necessary modifications to the questionnaire. All the interviewers were professors or PhD students in relevant research areas who had knowledge and capability in both the substantive area and survey techniques. A training course was conducted before the survey to ensure reliable and complete responses. To reduce the possibility of social desirability bias, we made sure all questions were phrased to be neutral. We also informed all respondents in advance of the academic purpose of the project and the confidentiality of their responses, and assured them that these responses would be used only in aggregated analysis.

A total of 300 new ventures (aged less than 6 years) were approached. A total of 159 firms provided all the necessary data. Therefore, the effective response rate was

53 % (159 out of 300). One issue commonly raised concerning survey methodology is non-response bias. In evaluating non-response bias, we compared the responding and non-responding firms along major firm attributes such as firm size, ownership status, sales, and age, using *t*-tests. All *t*-statistics were insignificant, suggesting little non-response bias. Additionally, the likelihood of non-response bias was further tested by splitting the total sample into two groups: one group that responded earlier and another group that responded later (Armstrong & Overton, 1977). We did a *t*-test to compare the early and late respondents on model variables (include ties with other firms, ties with government, exploratory learning, exploitative learning, and opportunity capture). The results show that all *t*-statistics were insignificant, suggesting no significant differences between these two groups.

To eliminate single respondent bias, we asked each firm for two questionnaires completed by different members of the top management team (Podsakoff & Organ, 1986). Questionnaires were ordinal numbered, and under each number there were two identical questionnaires, A and B. A was for top leaders such as CEOs from a strategic perspective, and B was for COOs or department managers from an operational perspective. Almost all of these CEOs and COOs in new ventures are founding members of these entrepreneurial firms. We also assessed inter-rater reliabilities, and all the indices are larger than .60. This result suggests a high level of internal consistency between two sets of answers, thus, single respondent bias does not appear to exist in the sample (Boyer & Verma, 2000). In addition, we examined the possibility of common method bias via Harman's one-factor test (Podsakoff & Organ, 1986). The result revealed five distinct factors explaining 65.9 % of the total variance, with the first factor explaining 16.7 % of the variance, which was not the majority of the total variance. Therefore, the common method bias is not a serious concern.

## Measures

Multi-item scales were used to operationalize all the constructs. A 5-point Likert scale from 1 = totally disagree to 5 = totally agree was used to measure the items.

Based on the definition and measures developed by Luk et al. (2008) and Peng and Luo (2000), we measured *ties with other firms* by six items to reflect the firms' relationship with their buyers and suppliers. Adapting from Li et al. (2009) and Peng and Luo (2000), we measured *ties with government* by three items to portray the firms' relationship with government officials. Extending prior research (Brown, Davidsson, & Wiklund, 2001; Davidson & Honig, 2003; Sirmon et al., 2007) and keeping in mind the market circumstances in China, we measured *opportunity capture* (in the context of an emerging economy) with three items to describe the pursuit and response to given opportunities quickly and utilizing the opportunity to achieve a better advancement. Our measurements on *exploratory learning* and *exploitative learning* are based on existing research (Atuahene-Gima, 2005; He & Wong, 2004; Katila & Ahuja, 2002; Yalcinkaya, Calantone, & Griffith, 2007). Both of them are measured by five items. The specific measurements of these five variables could be found in Table 1.

To account for alternative explanations, the following variables were controlled. First, firm size and firm age were controlled because of their potential impact on

**Table 1** Factor loadings and coefficient alphas

Variables	Items	Loading	alpha
Ties with other firms (AVE = .548)	To what extent do you agree with statements about relationships with buyers and suppliers:		
	We have cultivated close connections with our buyers	.678	.832
	We put great emphasis on understanding our buyers' needs	.801	
	We focus on developing relationships with our buyers	.797	
	Personal relationships with our suppliers are important to the firm	.737	
	We have invested in relationships with the managers of our suppliers	.739	
	We understand our suppliers' strengths and weaknesses	.681	
Ties with government (AVE = .816)	To what extent to you agree with statements about relationships with governmental officials:		
	We ensure good relationships with influential government officials	.889	.887
	We have invested heavily in building relationships with government officials	.930	
	Improving our relationships with government officials have been important to us	.891	
Exploratory learning (AVE = .699)	Over the last 3 years, to what extent have your firm:		
	Acquired manufacturing technologies and skills entirely new to the firm	.810	.891
	Learned product development skills and processes entirely new to the industry	.853	
	Acquired entirely new managerial and organizational skills that are important for innovation	.819	
	Take the lead to learn new skills in certain domains	.869	
	Strengthened innovation skills in areas where it had no prior experience	.830	
Exploitative learning (AVE = .619)	Over the last 3 years, to what extent have your firm:		
	Consolidated current knowledge and skills for familiar products and technologies	.726	.844
	Invested the resources into the mature technology skill in order to raise the productivity	.791	
	Constructed capabilities in searching for existing solutions to customer problems gradually	.859	
	Consolidated existing product development process skill	.789	
	Improved projects' knowledge and skills to enhance efficiency of existing innovation activities	.766	
Opportunity capture (AVE = .574)	When facing opportunity:		
	Highlight on alertness and speed in responding to opportunities	.718	.628
	Focus on pursuing high-potential business prospects	.781	
	Utilize the capability of discovering potential value to create competitive advantages	.773	

AVE refers to the average variance extracted

opportunity capture (Gielnik, Zacher, & Frese, 2010). *Firm size* was measured by the firm's full-time employees (Zahra, Ireland, & Hitt, 2000). The respondent was asked to indicate the range of their employees (1 = 1 ~ 50, 2 = 51 ~ 200, 3 = 201 ~ 500, 4 =

501 ~ 1,000, 5 = more than 1,000). *Firm age* was measured by the years since the firm was established. Second, three market environment-related items—competitive predictability, environment threat, and adequate capital supply in the industry—were controlled. This was because the external environment may serve as a trigger for new ventures' opportunity capture (Choi & Shepherd, 2004; Zhou, Yim, & Tse, 2005). These three control variables were measured using a five-point Likert scale (1 = totally disagree to 5 = totally agree). To measure *competitive predictability*, the respondent was asked to rate to what extent it is easy for his/her firm to predict the behavior of competitors. To measure *environment threat*, the respondent was asked to rate to what extent his/her firm has faced external threats about survival and development. To measure *adequate capital supply*, the respondent was asked to rate to what extent his/her firm has sufficient capital supply.

### Reliability and construct validity

Typically, reliability coefficients of .70 or higher are considered adequate (Nunnally, 1978). In Table 1, Cronbach's alphas range from .628 to .891. Although the constructs developed in this study primarily relied on previously validated measurement items and were strongly grounded in the literature, they were modified partly to fit the Chinese context. According to Nunnally (1978), permissible alpha values can be slightly lower (>.60) for newer scales. Therefore, these results suggest that our measures are reliable.

Convergent validity is demonstrated by the statistical significance of the loadings at a given alpha (e.g.,  $p = .05$ ). A factor loading of .70 or greater indicates that about half of the item's variance (the squared loading) can be attributed to the construct, which is an indication of construct validity (Fornell & Larcker, 1981). As shown in Table 1, among the 22 item loadings, only two are below this threshold, but all are over .60, implying close relationships between the items and their respective constructs. An average variance extracted (AVE) of .50 or greater (Fornell & Larcker, 1981) demonstrates that the construct as a whole shares more variance with its indicators compared with the error variance. The calculations emerging from the AVE analysis are also provided in Table 1, and all surpass the recommended threshold for each construct.

We checked for discriminant validity by examining if the square root of AVE for each construct (within-construct variance) is greater than the correlations between constructs (between-construct variance) (Fornell & Larcker, 1981). An examination of the values in the diagonal line (in bold) in Table 2, which are the square root of the AVE for each construct, reveals that they are significantly greater than the correlation coefficients, indicating that there is discriminant validity among the constructs.

## Results

Table 3 shows the results. All the variables were mean-centered to minimize the threat of multicollinearity in equations that included the interaction terms (Aiken & West,

**Table 2** Descriptive statistics and correlation matrix<sup>a</sup>

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Firm size	1.736	.961										
2. Firm age	4.099	1.448	.197*									
3. Competitive predictability	3.201	.705	-.101	-.087								
4. Environment threat	2.011	.799	-.023	-.001	.229**							
5. Adequate capital supply	2.699	.829	.007	-.096	.169*	.445**						
6. Ties with other firms	3.475	.625	-.124	-.206**	.341**	.215**	.320**	<b>.740<sup>b</sup></b>				
7. Ties with government	3.675	.502	-.059	-.121	.167*	.082	.169*	.560**	<b>.904</b>			
8. Exploratory learning	4.040	.394	-.261**	-.024	.341**	.025	.117	.466**	.286**	<b>.836</b>		
9. Exploitative learning	3.627	.718	.023	-.016	.095	.130	.144	.244**	.117	.296**	<b>.787</b>	
10. Opportunity capture	3.907	.536	-.123	-.197*	.102	.028	.181*	.335**	.220**	.503**	.520**	<b>.758</b>

<sup>a</sup> N = 159

<sup>b</sup> The square root of average variance extracted (AVE) for each construct is along the diagonal (in bold)

\* Correlation is significant at the .05 level (2-tailed)

\*\* Correlation is significant at the .01 level (2-tailed)

**Table 3** Results of optimal scaling regression

Variable	Opportunity capture				
	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Controls</b>					
Firm size	-.168**	-.029	-.016	-.022	-.002
Age	-.174**	-.164*	-.157*	-.169*	-.084
Competitive predictability	.194***	-.259***	-.175***	-.204***	-.432***
Environment threat	-.151†	-.044	-.049	-.039	.217***
Adequate capital supply	.259***	.097	.193***	.155**	-.112†
<b>Predictors</b>					
Ties with other firms			.288***	.251***	.484***
Ties with government		.197***		.157**	.127**
<b>Moderators</b>					
Exploratory learning (Er)		.279***	.216***	.208***	.213***
Exploitative learning (Ei)		.317***	.269***	.274***	.170***
<b>Interaction</b>					
Ties with other firms × Er					.465***
Ties with government × Er					.255***
Ties with other firms × Ei					.163**
Ties with government × Ei					-.458***
<b>Test Results</b>					
R-square	.179	.428	.432	.451	.581
ΔR-square	–	.249***	–	.019*	.130***
F-Value	2.433**	5.162***	5.871***	4.548***	4.336***

†  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

1991). We also calculated variance inflation factors (VIFs) to assess multicollinearity. In all models, VIFs do not exceed 2.7. Therefore, multicollinearity does not appear to be a significant problem.

### Main effects

Hypothesis 1 predicts managerial ties have a positive effect on opportunity capture, and ties with other firms have a stronger positive effect than ties with government. In Table 3, Model 1 provides the baseline results for the effects of the control variables. From Model 4, significant positive relationships are found between ties with other firms and opportunity capture ( $\beta = .251$ ,  $p < .001$ ) and between ties with government and opportunity capture ( $\beta = .157$ ,  $p < .01$ ). Therefore, Hypotheses 1a and 1b are supported. We then tested the relative power of ties with other firms and ties with government. The  $t$ -test of the equality of these two coefficients ( $t = 2.879$ ,  $p < .01$ ) indicates that the coefficient of ties with other firms is significantly greater than that of ties with government (Cohen, Cohen, West, & Aiken, 2002). Further,  $R^2$  change from Model 2 to

Model 4 is .023 ( $p < .05$ ), while  $R^2$  change from Model 3 to Model 4 is .019 ( $p < .05$ ), and both are significant. All these results lend support to Hypothesis 1c.

### Moderating effects

Hypothesis 2 predicts that exploratory learning positively moderates the relationship between both types of managerial ties and opportunity capture (H2a and H2b). Hypothesis 3 predicts that exploitative learning positively moderates the relationship between ties with other firms and opportunity capture (H3a), and negatively moderates the relationship between ties with government and opportunity capture (H3b). Model 5 in Table 3 shows that the coefficient of ties with other firms multiplied by exploratory learning is positive and significant ( $\beta = .465, p < .001$ ). Thus, Hypothesis 2a is supported. The coefficient of ties with government multiplied by exploratory learning is positive and significant ( $\beta = .255, p < .001$ ), thus supporting Hypothesis 2b. The coefficient of ties with other firms multiplied by exploitative learning is positive and significant ( $\beta = .163, p < .01$ ). Thus, Hypothesis 3a is supported. The coefficient of ties with government multiplied by exploitative learning is negative and significant ( $\beta = -.458, p < .001$ ). Thus, exploitative learning negatively moderates the relationship between ties with government and opportunity capture, and Hypothesis 3b is supported.

## Discussion

### Contributions

This article advances research on new ventures' opportunity capture by applying social capital theory as an overarching framework. Our conceptual model explores the relationships among managerial ties, organizational learning, and opportunity capture in an emerging economy. Our results show that managerial ties as important social capital have a significant positive impact on opportunity capture, and organizational learning can influence the effectiveness of managerial ties' impact on opportunity capture. Specifically, our study offers three important contributions to entrepreneurship and organizational learning literatures.

Our first contribution lies in building a linkage between managerial ties as one type of social capital and opportunity capture of new ventures, and we emphasize the different effects of ties with other firms and ties with government in this linkage. By empirically comparing the difference effects of these two ties, we find that ties with other firms are more helpful than ties with government for new ventures when capturing opportunities. This result is an improvement over previous studies that have been unable to find a link between entrepreneurs' managerial ties and opportunity capture (Bhagavatula, et al., 2010; Bingham et al., 2007). Thus, our study enriches the literature in both entrepreneurship and social capital through introducing managerial ties as antecedents of opportunity capture, and provides a new approach of opportunity capture.

Second, our research represents a step toward theoretically integrating social capital theory and organizational learning theory by linking managerial ties (via ties

with other firms and ties with government), organizational learning approaches (via exploratory learning and exploitative learning), and the opportunity capture of new ventures to formulate a more comprehensive framework. We unpack the notion of organizational learning in improving effectiveness of social capital by exploring the moderating effects of both exploratory learning and exploitative learning, and find that exploratory learning and explorative learning have different moderating effects on relationships between managerial ties and opportunity capture. Based on these findings, we can suggest that the effectiveness of fit between managerial ties and organizational learning approaches are essential for new ventures to capture opportunity effectively. In other words, our findings suggest that the social resources of new ventures need to seek better matches and effective interactions between different organizational learning modes (e.g., exploratory and exploitative learning) and social capital resource types (e.g., ties with other firms and ties with government). By understanding the situations under which different organizational learning enhances opportunity capture more effectively, our study provides an integrated view of social capital and organizational learning on opportunity capture.

Finally, we advance theoretical accounts of both social capital and entrepreneurship in China, which as one of the largest emerging economies has many new ventures endeavoring to capture opportunities. Focusing on the context of Chinese new ventures, our results show specific theoretical implications. We suggest that the new ventures in China emphasize the positive roles of managerial ties as very important social capital in seeking and capturing new growth opportunities. Further, our results show that ties with other firms can provide more help to the new ventures in China to capture opportunity, which provide new evidence to support that ties with government is more useful to large and established firms such as state-owned enterprises (Luo et al., 2012). More importantly, our results suggest that new ventures in China can improve opportunity capture by strengthening both the effect of interaction between ties with other firms and exploitative learning and the effect of interaction between ties with government and exploratory learning, which provide specific evidence from the new ventures in China and thus enrich literature in social capital theory and organizational learning theory.

### Managerial implications

The study provides firms with guidance on how to use managerial ties to facilitate opportunity capture. The theory and data analyzed here indicate that in an emerging economy such as China, building and maintaining relationships with both business counterparts and government officials can help new ventures capture opportunities. New ventures should emphasize ties with other firms, which can significantly improve the efficiency of their opportunity capture.

Meanwhile, our results note that firms should be aware that organizational learning can facilitate the process of opportunity capture, and that new ventures should choose a suitable learning type that matches a specific type of managerial ties. Specifically, when new ventures prefer to capture opportunity through ties with other firms, they need to engage in more organizational learning (via both explorative and exploitative learning). In contrast, when they hope to capture opportunities by using resources

acquired from their ties with government, firms should focus more on exploratory learning. Overall, our study provides new ventures with a systematic way to manage the opportunity capture process through managerial ties and organizational learning in the context of an emerging economy.

### Limitations and future research

Despite its contributions, this study has three limitations that suggest directions for further research. First, our results are context-specific and should be viewed cautiously when extended to other contexts (Li & Peng, 2008). Although we have been very tentative regarding the generalization of this study to other settings, there are theoretical reasons to believe that new ventures in other emerging economies may experience similar processes in opportunity capture (Bruton, Ahlstrom, & Obloj, 2008). Therefore, a useful extension would be to conduct this study in other emerging economies.

Second, because we do not have fine-grained details on the different types of opportunity, we are not able to explain effectively the difference between the effects of managerial ties on the opportunity types ranging from minor product improvements to new venture creations (Eckhardt & Shane, 2003). Thus, future research should investigate how the organizational learning mechanisms affect the relationships between managerial ties and the capturing of these different types of opportunities.

Finally, under a high uncertainty environment, new opportunities may orient new ventures to seek social capital such as managerial ties for their growth (Sirmon et al., 2007). For instance, when the firm recognizes more opportunities, managers may be prompted to build and take advantage of more ties so as to access more needed resources. Also, when the opportunity is more exploratory, the need for new resources, and thus to cultivate and utilize more social capital for supporting resources is greater. Thus, future research should pay more attention to this issue, and explain how opportunity identification and capturing influence the formulation of different ties as social capital.

### Conclusion

Moving from a focus on entrepreneurs' endogenous traits, we leverage a social capital perspective by investigating opportunity capture from an exogenous level. Specifically, we provide a more in-depth understanding of the relationship among managerial ties, organizational learning, and opportunity capture of new ventures. Using a survey of new ventures in China, we find that both ties with other firms and ties with government as important sources of external social capital have a positive effect on new ventures' opportunity capture, while ties with other firms have a stronger impact than ties with government. Further, we demonstrate that organizational learning can moderate this process. Overall, our examination of these relationships has significant implications for managerial practice and future research on entrepreneurial opportunity capture and social capital management.

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## References

- Adler, P. S., & Kwon, S. 2002. Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1): 17–40.
- Aiken, L. S., & West, S. G. 1991. *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Armstrong, J. S., & Overton, T. S. 1977. Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14: 396–402.
- Atuahene-Gima, K. 2005. Resolving the capability-rigidity in new product innovation. *Journal of Marketing*, 69: 61–83.
- Atuahene-Gima, K., & Murray, J. Y. 2007. Exploratory and exploitative learning in new product development: A social capital perspective on new technology ventures in China. *Journal of International Marketing*, 15(2): 1–29.
- Auh, S., & Menguc, B. 2005. Balancing exploration and exploitation: The moderating role of competitive intensity. *Journal of Business Research*, 58: 1652–1661.
- Austin, J., Stevenson, H., & Wei-Skillern, J. 2006. Social and commercial entrepreneurship: Same, different, or both?. *Entrepreneurship: Theory and Practice*, 30(1): 1–22.
- Baron, R. A., & Tang, J. 2009. Entrepreneurs' social skills and new venture performance: Mediating mechanisms and cultural generality. *Journal of Management*, 35(2): 282–306.
- Benner, M. J., & Tushman, M. L. 2002. Process management and technological innovation: A longitudinal study of the photography and paint industries. *Administrative Science Quarterly*, 47: 676–706.
- Bhagavatula, S., Elfring, T., van Tilburg, A., & van de Bunt, G. G. 2010. How social and human capital influence opportunity recognition and resource mobilization in India's handloom industry. *Journal of Business Venturing*, 25: 245–260.
- Bingham, C. B., Eisenhardt, K. M., & Furr, A. R. 2007. What makes a process a capability? Heuristics, strategy, and effective capture of opportunities. *Strategic Entrepreneurship Journal*, 1: 27–47.
- Boyer, K. K., & Verma, R. 2000. Multiple raters in survey-based operations management research: A review and tutorial. *Production and Operations Management*, 9(2): 128–140.
- Brown, T., Davidsson, P., & Wiklund, J. 2001. An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behavior. *Strategic Management Journal*, 22: 953–968.
- Bruton, G. D., Ahlstrom, D., & Obloj, K. 2008. Entrepreneurship in emerging economies: Where are we today and where should the research go in the future. *Entrepreneurship: Theory and Practice*, 32(1): 1–14.
- Choi, Y. R., & Shepherd, D. A. 2004. Entrepreneurs' decisions to exploit opportunities. *Journal of Management*, 30(3): 377–395.
- Cohen, J., Cohen, P., West, S., & Aiken, L. 2002. *Applied multiple regression/correlation analysis for the behavioral sciences*, 3rd ed.: 640–642. Mahwah, NJ: Lawrence Erlbaum.
- Corbett, A. C. 2005. Experiential learning within the process of opportunity identification and exploitation. *Entrepreneurship: Theory and Practice*, 4: 473–491.
- Davidson, P., & Honig, B. 2003. The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18: 310–331.
- De Carolis, D. M., & Saporito, P. 2006. Social capital, cognition, and entrepreneurial opportunities: A theoretical framework. *Entrepreneurship: Theory and Practice*, 30(1): 41–56.
- Deming, W. E. 1981. *Management of statistical techniques for quality and productivity*. New York: New York University, Graduate School of Business.
- Dubini, P., & Aldrich, H. E. 1991. Personal and extended networks are central to the entrepreneurial process. *Journal of Business Venturing*, 6: 305–313.
- Eckhardt, J., & Shane, S. 2003. Opportunities and entrepreneurship. *Journal of Management*, 29(3): 333–349.
- Fornell, C., & Larcker, D. F. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18: 39–50.
- Geletkanycz, M. A., & Hambrick, D. C. 1997. The external ties of top executives: Implications for strategic choices and performance. *Administrative Science Quarterly*, 42: 654–681.

- Gielnik, M. M., Zacher, H., & Frese, M. 2010. Focus on opportunities as a mediator of the relationship between business owners' age and venture growth. *Journal of Business Venturing*, 27(1): 127–142.
- Glazer, R., & Weiss, A. M. 1993. Marketing in turbulent environments: Decision processes and the time-sensitivity of information. *Journal of Marketing Research*, 30(4): 509–521.
- Gupta, A. K., Smith, K. G., & Shalley, C. E. 2006. The interplay between exploration and exploitation. *Academy of Management Journal*, 49(4): 693–706.
- He, Z., & Wong, P. 2004. Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science*, 15(4): 481–494.
- Hitt, M. A., Ahlstrom, D., Dacin, M. T., Levitas, E., & Svobodina, L. 2004. The institutional effects on strategic alliance partner selection in transition economies: China vs. Russia. *Organization Science*, 15(2): 173–185.
- Hsu, C., & Pereira, A. 2008. Internationalization and performance: The moderating effects of organizational learning. *Omega*, 36: 188–205.
- Inkpen, A. C., & Tsang, E. W. K. 2002. Social capital, networks, and knowledge transfer. *Academy of Management Review*, 30(1): 146–165.
- Juran, J. M., & Gryna, F. M. 1988. *Juran's quality control handbook*, 4th ed. New York: McGraw-Hill.
- Katila, R., & Ahuja, G. 2002. Something old, something new: A longitudinal study of search behavior and new product introduction. *Academy of Management Journal*, 45: 1183–1194.
- Kim, N., & Atuahene-Gima, K. 2010. Using exploratory and exploitative market learning for new product development. *Journal of Product Innovation Management*, 27: 519–536.
- Krug, B., & Hendrichske, H. 2012. Market design in Chinese market places. *Asia Pacific Journal of Management*, 29(3): 525–546.
- Kwon, S., & Arenius, P. 2010. Nations of entrepreneurs: a social capital perspective. *Journal of Business Venturing*, 25: 315–330.
- Levinthal, D. A., & March, J. G. 1993. The myopia of learning. *Strategic Management Journal*, 14: 95–112.
- Li, H., & Zhang, Y. 2007. The role of managers' political networking and functional experience in new venture performance: Evidence from China's transition economy. *Strategic Management Journal*, 28(8): 791–804.
- Li, J., Young, M. N., & Tang, G. 2012a. The development of entrepreneurship in Chinese communities: An organizational symbiosis perspective. *Asia Pacific Journal of Management*, 29(2): 367–385.
- Li, J. J., Poppo, L., & Zhou, K. Z. 2008. Do managerial ties in China always produce value? Competition, uncertainty, and domestic vs. foreign firms. *Strategic Management Journal*, 29: 383–400.
- Li, J. J., & Zhou, K. Z. 2010. How foreign firms achieve competitive advantage in the Chinese emerging economy: Managerial ties and market orientation. *Journal of Business Research*, 63(8): 856–862.
- Li, J. J., Zhou, K. Z., & Shao, A. T. 2009. Competitive position, managerial ties, and profitability of foreign firms in China: An interactive perspective. *Journal of International Business Studies*, 40: 339–352.
- Li, W., He, A., Lan, H., & Yiu, D. 2012b. Political connections and corporate diversification in emerging economies: Evidence from China. *Asia Pacific Journal of Management*, 29(3): 799–818.
- Li, Y., Lee, S. H., Li, X., & Liu, Y. 2010. Knowledge codification, exploitation, and innovation: The moderating influence of organizational controls in Chinese firms. *Management and Organization Review*, 6(2): 219–241.
- Li, Y., Liu, Y., & Liu, H. 2011a. Co-opetition, distributor's entrepreneurial orientation and manufacturer's knowledge acquisition: Evidence from China. *Journal of Operations Management*, 29: 128–142.
- Li, Y., & Peng, M. W. 2008. Developing theory from strategic management research in China. *Asia Pacific Journal of Management*, 25(3): 563–572.
- Li, Y., Wang, L., & Liu, Y. 2011b. Organizational learning, product quality and performance: The moderating effect of social ties in Chinese cross-border outsourcing. *International Journal of Production Research*, 49(1): 159–182.
- Lim, K., & Cu, B. 2012. The effects of social networks and contractual characteristics on the relationship between venture capitalists and entrepreneurs. *Asia Pacific Journal of Management*, 29(3): 573–596.
- Lin, B., Li, P., & Chen, J. 2006. Social capital, capabilities, and entrepreneurial strategies: A study of Taiwanese high-tech new ventures. *Technological Forecasting and Social Change*, 73: 168–181.
- Lin, Z., Peng, M. W., Yang, H., & Sun, S. L. 2009. How do networks and learning drive M&As? An institutional comparison between China and the United States. *Strategic Management Journal*, 30: 1113–1132.
- Luk, C.-L., Yau, O. H. M., Sin, L. Y. M., Tse, A. C. B., Chow, R. P. M., & Lee, J. S. Y. 2008. The effects of social capital and organizational innovativeness in different institutional contexts. *Journal of International Business Studies*, 39: 589–612.

- Lumpkin, G. T., & Dess, G. G. 2001. Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16: 429–451.
- Lumpkin, G. T., & Lichtenstein, B. B. 2005. The role of organizational learning in the opportunity-recognition process. *Entrepreneurship: Theory and Practice*, 29(4): 451–472.
- Luo, Y. 2001. Determinants of local responsiveness: Perspectives from foreign subsidiaries in an emerging market. *Journal of Management*, 27: 451–477.
- Luo, Y. 2003. Industrial dynamics and managerial networking in an emerging market: The case of China. *Strategic Management Journal*, 24: 1315–1327.
- Luo, Y., Huang, Y., & Wang, S. L. 2012. *Guanxi* and organizational performance: A meta-analysis. *Management and Organization Review*, 8: 139–172.
- March, J. G. 1991. Exploration and exploitation in organizational learning. *Organization Science*, 2: 71–87.
- McEvily, B., & Zaheer, A. 1999. Bridging ties: A source of firm heterogeneity in competitive capabilities. *Strategic Management Journal*, 20(12): 1133–1156.
- Mohan-Neill, S. I. 1995. The influence of firm's age and size on its environmental scanning activities. *Journal of Small Business Management*, 33(4): 10–21.
- Nunnally, J. C. 1978. *Psychometric theory*. New York: McGraw-Hill.
- Ozgen, E., & Baron, R. A. 2007. Social sources of information in opportunity recognition: Effects of mentors, industry networks, and professional forums. *Journal of Business Venturing*, 22: 174–192.
- Park, S., & Luo, Y. 2001. *Guanxi* and organizational dynamics: Organizational networking in Chinese firms. *Strategic Management Journal*, 22: 455–477.
- Patterson, W. 1993. First-mover advantage: The opportunity curve. *Journal of Management Studies*, 30: 759–777.
- Peng, M. W., & Luo, Y. 2000. Managerial ties and firm performance in a transition economy: The nature of a micro-macro link. *Academy of Management Journal*, 43(3): 486–501.
- Peng, M. W., & Zhou, J. Q. 2005. How network strategies and institutional transitions evolve in Asia. *Asia Pacific Journal of Management*, 22(4): 321–336.
- Podsakoff, P. M., & Organ, D. W. 1986. Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12: 531–544.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. 2009. Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship: Theory and Practice*, 33(3): 761–787.
- Sahlman, W. A. 1996. Some thoughts on business plans. In W. A. Sahlman, H. Stevenson, M. J. Roberts & A. V. Bhidé (Eds.). *The entrepreneurial venture*: 138–176. Boston: Harvard Business School Press.
- Schildt, H. A., Maula, M., & Keil, T. 2005. Explorative and exploitative learning from external corporate ventures. *Entrepreneurship: Theory and Practice*, 29(4): 493–515.
- Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25: 217–226.
- Sheng, S., Zhou, K. Z., & Li, J. J. 2011. The effects of business and political ties on firm performance: Evidence from China. *Journal of Marketing*, 75: 1–15.
- Sheth, J. N. 2011. Impact of emerging markets on marketing: Rethinking existing perspectives and practices. *Journal of Marketing*, 75(4): 166–182.
- Short, J. C., Ketchen, D. J., Shook, C. L., & Ireland, R. D. 2010. The concept of “opportunity” in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management*, 36(1): 40–65.
- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. 2007. Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32(1): 273–292.
- Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. 2011. Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, 37(5): 1390–1412.
- Stam, W., & Elfring, T. 2008. Entrepreneurial orientation and new venture performance: The moderating role of intra- and extraindustry social capital. *Academy of Management Journal*, 51(1): 97–111.
- Standifird, S. S., & Marshall, R. S. 2000. The transaction cost advantage of *guanxi*-based business practices. *Journal of World Business*, 35(1): 21–42.
- Tsang, E. W. K. 1998. Can *guanxi* be a source of sustained competitive advantage for doing business in China?. *Academy of Management Executive*, 12(2): 64–73.
- Uzzi, B., & Lancaster, R. 2003. Relational embeddedness and learning: The case of bank loan managers and their clients. *Management Science*, 49(4): 383–399.
- Wright, M., Filatotchev, I., Hoskisson, R. E., & Peng, M. W. 2005. Strategy research in emerging economies: Challenging the conventional wisdom. *Journal of Management Studies*, 42(1): 1–33.

- Yalcinkaya, G., Calantone, R. J., & Griffith, D. A. 2007. An examination of exploration and exploitation capabilities: Implications for product innovation and market performance. *Journal of International Marketing*, 15(4): 63–93.
- Yang, H., Lin, Z., & Peng, M. W. 2011. Behind acquisitions of alliance partners: Exploratory learning and network embeddedness. *Academy of Management Journal*, 54: 1069–1080.
- Yang, J., Liu, H., Gao, S., & Li, Y. 2012. Technological innovation of firms in China: Past, present, and future. *Asia Pacific Journal of Management*, 29(3): 819–840.
- Yi, Y., Liu, Y., He, H., & Li, Y. 2012. Environment, governance, controls, and radical innovation during institutional transitions. *Asia Pacific Journal of Management*, 29(3): 689–708.
- Yli-Renko, H., Autio, E., & Sapienza, H. 2001. Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. *Strategic Management Journal*, 22: 587–613.
- Yli-Renko, H., Autio, E., & Tontti, V. 2002. Social capital, knowledge, and the international growth of technology-based new firms. *International Business Review*, 11: 279–304.
- Zahra, S. A. 1996. Technology strategy and financial performance: Examining the moderating role of the firm's competitive environment. *Journal of Business Venturing*, 11: 189–219.
- Zahra, S. A., & Bogner, W. C. 1999. Technology strategy and software new venture's performance: Exploring effect of the competitive environment. *Journal of Business Venturing*, 15: 135–173.
- Zahra, S. A., Ireland, R. D., & Hitt, M. A. 2000. International expansion by new venture firms: International diversity, mode of entry, technological learning, and performance. *Academy of Management Journal*, 43(5): 925–950.
- Zhang, S., & Li, X. 2008. Managerial ties, firm resources, and performance of cluster firms. *Asia Pacific Journal of Management*, 25(4): 615–633.
- Zhao, Y., Li, Y., Lee, S. H., & Chen, L. 2011. Entrepreneurial orientation, organizational learning, and performance: Evidence from China. *Entrepreneurship: Theory and Practice*, 35(2): 293–317.
- Zhou, K. Z., Yim, C. K., & Tse, D. K. 2005. The effects of strategic orientations on technology- and market-based breakthrough innovations. *Journal of Marketing*, 69: 42–60.

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