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Resource Structuring and Ambidexterity: The Contingent Role of Managerial Ties in New Ventures

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Resource Structuring and Ambidexterity:*The Contingent Role of Managerial Ties in New Ventures***Abstract**

Focusing on how resource structuring mechanisms and managerial ties influence organizational ambidexterity of new ventures in emerging economy, this study explores the effects of resource structuring mechanisms (i.e., resource acquiring and resource accumulating) on organizational ambidexterity. It further examines the moderating effects of managerial ties, (i.e., ties with other firms and ties with the government) on the above relationships. Survey data from China's 202 new ventures demonstrates that the resource acquiring has an inverted U-shaped effect whereas the resource accumulating has a U-shaped effect on organizational ambidexterity in new ventures. Further, because of the traditional culture and economic transition characteristics, new ventures actively leverage managerial ties as key social relations to obtain special resources or nurture business transactions. We propose that ties with other firms and ties with government can differently strengthen the effects of acquiring and accumulating on organizational ambidexterity. The results support our propositions.

Key words: Resource Structuring; Ambidexterity; Managerial Ties; New Venture

INTRODUCTION

Organizational ambidexterity can generate synergistic outcomes for enhancing firm performance (Cao, Gedajlovic and Zhang, 2009; He and Wong, 2004; Jansen, Simsek and Cao, 2012), and it is vital for new ventures (Banbury and Mitchell, 1995; Gedajlovic, Cao and Zhang 2012; Gilbert, McDougall and Audretsch, 2006; Robinson, 1990). Hence, we should ask the question about what most likely shapes organizational ambidexterity. March (1991, 1996, 2006) explicitly argues that exploration and exploitation is inherently conflicting a tradeoff because they compete for scarce resources and mutually drive each other out due to their incompatible managerial styles. In particular, new ventures tend to face the higher level of resource deficiency in emerging economies than those established firms in developed economies (Hoskisson et al., 2000; Li, Chen and Shapiro, 2010; Sheng, Zhou and Li, 2011). To enhance ambidexterity, new ventures in emerging economies have to constantly extend or upgrade their resource portfolios to overcome this shortage via resource structuring mechanisms (Adner and Helfat, 2003; Sirmon and Hitt, 2009). It is the features of extending and upgrading resource portfolios that shape organizational ambidexterity.

The resource management perspective suggests that the mechanisms of structuring resource portfolios fall into two types: resource acquiring and resource accumulating (Sirmon, Hitt and Ireland, 2007; Helfat and Peteraf, 2003; Lee and Lieberman, 2010). In general terms, *resource acquiring* refers to obtaining resources from the external markets, and accurate *resource accumulating* refers to the internal development of resources (Sirmon et al., 2007). To a certain extent, resource acquiring and resource accumulating can obtain different kinds of resources for new ventures to pursue ambidexterity. Because of resource structuring and restructuring, new ventures can not only reduce the conflict, but also increase the synergy between exploitation and exploration so as to achieve the higher level of organizational ambidexterity.

However, extant literature contains conflicting views regarding the effects of resource acquiring and resource accumulating on exploration directly, thus ambidexterity indirectly. Based on the organizational inertia theory and open innovation perspective, Vermeulen and Barkema (2001) and Karim and Mitchell (2004) argue that firms can leverage resource acquiring to obtain new knowledge and resources and to break the rigidities in routines so as to enhance exploration, while resource accumulating can inhibit a firm's ability to gain external resources, and then result in the "core rigidities" and "competency traps" so as to inhibit exploration. In contrast, those studies rooted in the absorptive capacity perspective and dynamic capability view maintain that resource accumulating can provide sufficient expertise to resolve complex or unusual problems so as to enhance the firm's capability to sense and seize distant technological or market opportunities for exploration (Teece, 2007; Zhou and Wu, 2010), while resource acquiring can lead to the erosion of core technology and also result in a dysfunctional resource base so as to hurt exploration. Given the complex features of resource acquiring and resource accumulating, it is unlikely for their core effects on organizational ambidexterity to be simply linear.

Further, the effects of resource structuring mechanisms can be influenced by different institutional environments (Barthélemy, 2011; Sirmon et al, 2007). In emerging economies, such as China, the rapid change of institutional environment and the immaturity of formal institution systems (Li and Peng, 2008; Wright et al., 2005) force the firms to actively leverage informal institutions, such as managerial ties as a partial substitution for formal institutions (Li et al., 2012; Li and Zhang, 2007; Xin and Pearce, 1996). Meanwhile, Chinese traditional business culture emphasizes the role of relational ties in business transactions (Hitt et al., 2004; Liu, Luo, and Liu, 2009). Therefore, managerial ties as both a specific type of social capital embedded in the network of China's social relations (Li, Zhou and Shao, 2009; Stam, et al.. 2013) and the substitution mechanism for formal institution can change the

effectiveness of the managers' resource-related actions (Sirmon et al., 2007). Unfortunately, extant literature provides little knowledge on this issue.

To address these important issues, this study integrates structuring mechanisms, managerial ties, and organizational ambidexterity all together to explore how acquiring and accumulating differently shape organizational ambidexterity, as well as how managerial ties moderate the link between resource structuring mechanisms and organizational ambidexterity in the new ventures in emerging economies. Our contributions focus on two aspects.

First, by linking resource structuring mechanism to organizational ambidexterity, we build a new perspective that a well-balanced fit between resource structuring mechanisms can reduce the conflict, and also increase the synergy, between exploration and exploitation so as to achieve organizational ambidexterity. In particular, our new perspective explains how acquiring and accumulating have two contrasting curvilinear effects on the ambidexterity of new ventures. Our insights have the potential to enrich the literatures in resource management and organizational ambidexterity.

Second, by linking resource management perspective to social capital theory, we can explain the contingent effects of managerial ties on the core relationships between resource structuring mechanisms and organizational ambidexterity. Different from other studies that focus on the moderating effects of managerial ties on firm performance (Li et al., 2009), we examine the different moderating roles of both ties with other firms and ties with government in improving the effect of such ties on organizational ambidexterity. We believe that this approach will enrich literature on social capital theory. Therefore, this research provides a new avenue for new ventures to strengthen their organizational ambidexterity by effectively aligning resource structuring mechanisms with managerial ties.

THEORY AND HYPOTHESES

Organization Ambidexterity

Organizational ambidexterity refers to the condition in which firms pursue both exploration and exploitation simultaneously (Atuahene-Gima, 2005; Cao et al., 2009; Jansen et al., 2012; Pérez-Luño, Wiklund and Cabrera, 2011). Exploration refers to activities to attain novelty, diversity, and flexibility in products and/or services with novel variations by the use of discovering and obtaining new knowledge and skills (Atuahene-Gima, 2005; March, 1991), and its essence is experimentation with new alternatives (Cao et al., 2009 ; March, 1991).

Exploitation refers to activities to attain new products and/or services with incremental variations by use of refining and extending its existing resources (Atuahene-Gima, 2005; Benner and Tushman, 2003; March, 1991), and its essence is the refinement and extension of existing competencies, technologies, and paradigms (Cao et al., 2009; March, 1991). Both exploration and exploitation are essential and inseparable for organizations' long-term adaptation (Benner and Tushman, 2003; Jansen et al., 2012). Thus, they need to be combined and embedded to generate synergistic outcomes (Cao et al., 2009; He and Wong, 2004).

Especially for new ventures, the initial novel products have the strongest potential to build the market share, and the exploitation is important for sustained growth (Gilbert et al., 2006). To reflect this synergy effect of organizational ambidexterity, some studies view organizational ambidexterity as the interaction between exploration and exploitation (Cao et al., 2009; He and Wong, 2004; Jansen et al., 2012).

However, in existing literature, a widespread controversy about whether firms develop exploration and exploitation simultaneously (Atuahene-Gima, 2005; Benner and Tushman 2003; O'Reilly and Tushman, 2004; Pérez-Luño et al., 2011) still exists. On one hand, because of different resource requirements, exploitation success leads to repetition and drives out exploration, or exploration leads to a constant shifting in experimentation and

drives out exploitation (March, 2003; O'Reilly and Tushman, 2004; Siggelkow and Rivkin, 2006). Thus, both types of innovation compete for scarce resources and seem “incompatible” because new ventures tend to have severely limited resources (Choia, Lévesqueb and Shepherd, 2008; Zhang and Li, 2010), and they may be particularly vulnerable to pursuing the “ambidextrous” strategy.

On the other hand, evidence does show that some firms have been able to achieve ambidexterity and gained long-term success in this dynamic environment (Gilbert et al., 2006; O'Reilly and Tushman, 2008). All the pessimistic views about the ability of organizations to be “ambidextrous” concentrate on the static resource endowment and the conflicting features of resources, thus neglecting the possibility that managers may overcome this dilemma by strategically restructuring firms' resource portfolios. Because the routines, processes, and skills required for exploitation are fundamentally different from those required for exploration (Pérez-Luño et al., 2011; O'Reilly and Tushman, 2008), different resource structuring mechanisms, coupled with the dynamic managerial capabilities to effectively coordinate and deploy (Sirmon and Hitt, 2009; Sirmon et al, 2007), can provide new ventures with a superior portfolio with a unique mix of valuable resources (Gilbert et al., 2006; Sirmon et al., 2011). It can help mitigate the negative influence of resources competing on innovation and thus produce synergy outcomes for organizational ambidexterity (Cao et al., 2009; He and Wong, 2004; Jansen et al., 2012).

The debate between these two views is whether the achievement of organizational ambidexterity by new ventures depends on resource sufficiency and the effective combination of these resources. Thus, it is critical for firms to effectively structure necessary and sufficient resources when they hope to realize organizational ambidexterity.

Resource Structuring

Structuring as well as restructuring resources “to compete in emerging and mature

businesses, to be ambidextrous, is a critical element in sustainable competitive advantage” (O’Reilly and Tushman, 2008). By effectively leveraging resource structuring mechanisms, new ventures can select different resource portfolios to reduce resource conflict so as to strengthen organizational ambidexterity (O’Reilly and Tushman, 2004). Resource acquiring and resource accumulating, as two typical resource structuring mechanisms (Helfat and Peteraf, 2003; Lee and Lieberman, 2010; Sirmon et al., 2007), require managers to identify resources, make investment, and design organizational structures to nurture innovation (Sirmon et al., 2011). Different resource structuring mechanisms provide different opportunities to deploy and leverage internal and external competencies into diverse resource portfolios. O’Reilly and Tushman (2004) suggested that the senior leaders’ careful orchestration of assets and competencies can promote organizational ambidexterity. Thus, we argue that, by leveraging resource structuring mechanisms effectively, new ventures can enjoy the superior resource portfolios with an effective coordination of co-specialized resources in various ways conducive to organizational ambidexterity (Sirmon and Hitt, 2009). Hence, both resource acquiring and resource accumulation are necessary to obtain a proper resource portfolio for organizational ambidexterity (Levinthal and March 1993; March, 1991, 2010). As March (2010: 81) points out, while exploration and exploitation tend to mutually drive each other out, the two are also complementary in the sense that both are needed because “either alone is not enough”, so the biggest challenge is to identify “the extent to which the foolishness of exploration has to be juxtaposed to the discipline of exploitation” with a balanced “ratio of imagination to the discipline of conventional knowledge.”

Resource acquiring can provide new resources that new ventures may not be able to develop internally due to time diseconomies and learning constraints (Sirmon et al., 2007). Existing literature highlights how resource acquiring represents a favorable channel for obtaining external resources (Wang and Zajac, 2007; Yang, et al., 2011; Zollo and Singh,

2004). In particular, the fast-changing nature of markets in emerging economies requires that new ventures emphasize the speed of innovation to compete in the global economy, but this requirement for fast innovation makes the exclusive reliance on resource accumulation inside new ventures risky (Prabhu, et al., 2005; Rindfleisch and Moorman, 2001). The required speed of innovation often motivates new ventures in emerging economies to upgrade their resources through resource acquiring (King, et al., 2008; Makri, et al., 2010). More importantly, resource acquiring is a way to obtain those intangible assets needed for innovation that are not available internally or too time-consuming to accumulate internally (Ahuja and Katila, 2001; Denrell, et al., 2003; Prabhu et al., 2005; Yang et al., 2011).

Distinct from resource acquiring, resource accumulating focuses on developing the internal resources. It is necessary because the factor markets are unlikely to provide new ventures with all required resources, especially when the environmental munificence is low (Sirmon et al, 2007). Depending on internal accumulating, new ventures orchestrate their specific resource portfolios which can enhance the isolating mechanism, such as causal ambiguity (Thomke and Kuemmerle, 2002; Wang, He and Mahoney, 2009). In this way, the idiosyncratic internal resources can provide durable competitive advantages because they may not be easily traded, redeployed outside the venture or imitated by competitors, as argued by the resource-based view (Barney, 1991, 2001).

Because of the different functions in formulating resource portfolios, resource acquiring and resource accumulating can provide proper resource portfolios that may reduce the tradeoff between exploration and exploitation due to their resource competition as well as their style incompatibility (i.e., mutually driving-out effect), while enhancing their potential synergy for organizational ambidexterity among new ventures. The ability of utilizing and fitting these resource structuring mechanisms for organizational ambidexterity is at the core of the ability of a firm to be ambidextrous (O'Reilly and Tushman, 2008). Once new ventures

can effectively leverage resource acquiring and resource accumulating, they can overcome the shortage and conflict of resources through internal resource accumulating and external resource acquiring (Delmar, et al., 2003; Gilbert et al., 2006) to establish and nurture the organizational ambidexterity. In particular, for new ventures in emerging economies such as China, insufficient resources force them to acquire external resources and accumulate internal resources more actively (Jiang, 2008; Wright, et al., 2005).

Resource Structuring for Organizational Ambidexterity

Structuring a unique mix of valuable resources to meet the need for organizational ambidexterity is at the heart of dynamic capability in a firm's long-run survival (Helfat et al., 2007; O'Reilly and Tushman, 2008). Effective resource acquiring can provide opportunities for new ventures to obtain some new knowledge from the outside (Ahuja and Katila, 2001; Makri et al., 2010), but new ventures also have to invest to integrate the externally acquired knowledge into the internal base as a new part of resource accumulating. Comparing to established firms, new ventures in emerging economies have the disadvantages of resource shortages and weak market experience (Zhang and Li, 2010). Thus, when leveraging the resource acquiring from external markets to resolve innovation resource shortage, new ventures in emerging economies have to face an increasing coordination cost as the level of resource acquiring increases. The higher coordination cost derives from the difficulty in managing the balance between exploration and exploitation since the two mutually drive out each other due to their competition for the fixed supply of resources as well as the conflict in the required style to manage the two modes of learning and innovation (Levinthal and March, 1993; March 1991). As a result, new ventures must balance the level of resource acquisitions to resolve resource shortages with the increase in coordination cost related to the management of integrating the externally acquired resources with internally accumulated resources. Hence, resource acquiring is expected to have an inverted U-shaped curvilinear effect on

organizational ambidexterity.

When obtaining external resources at a proper level, new ventures are exposed to a large variety of new resources, which will enable new firms to develop a richer knowledge base (Vermeulen and Barkema, 2001). Karim and Mitchell (2004) even highlighted that “obtaining new ideas commonly involves acquiring other businesses”. For example, new ventures can more easily enter a new market through acquiring other firms which have more experience in this business. Further, acquiring new resources often entails a disruption in organizational routines and a break in the rigidity in mental maps. Therefore, by integrating internal resources with external resources, new ventures usually leverage resource acquiring to move into a new technological trajectory of exploration (Ahuja and Katila, 2001; Phene, et al., 2012). Meanwhile, resource acquiring at a proper level can also fill the persistent resource gaps in new ventures’ existing technological trajectory (Lee and Lieberman, 2010), so new ventures can combine external resources with internal resources to fully exploit the potential of externally acquired resources. Thus, through a proper level of resource acquiring, new ventures can quickly expand their existing knowledge base with the expanded scales and scopes for both exploration and exploitation (Li et al., 2012; Phene, et al., 2012). In particular, new ventures in China lack the market experience and advanced technologies in many new businesses (Li, et al., 2011), and the market share of new ventures is usually small. Facing a fast changing environment, these new ventures can strengthen exploratory capability through acquiring external resources, and then integrate external and internal resources for exploration and exploitation. Hence, resource acquiring can foster the organizational ambidexterity.

However, either too low or too high level of resource acquiring can increase the risk of reduced organizational ambidexterity. In the case of too low-level resource acquiring, there will be too few externally acquired resources to achieve the potential synergy between exploration and exploitation given their inherent tradeoff (in terms of mutually driving-out

effect), thus limited positive effect on organizational ambidexterity (Levinthal and March, 1993; March, 1991). In the case of high-level resource acquiring, there will be too many externally acquired resources to achieve the potential synergy between exploration and exploitation given their inherent tradeoff (in terms of mutually driving-out effect), thus limited positive effect on organizational ambidexterity (Levinthal and March, 1993; March, 1991). In other words, when externally acquired resources are not properly balanced with internally accumulated resources within any firm, there will be little potential for synergy, but high likelihood for tradeoff, between exploration and exploitation, thus low organizational ambidexterity. Therefore, we suggest:

Hypothesis 1: *Resource acquiring will have an inverted U-shaped relationship with the organizational ambidexterity of new ventures.*

Built upon the literatures on organizational inertia and absorptive capacity, we argue that resource accumulating have an inverted U-shaped curvilinear effect on organizational ambidexterity. Different from externally acquired resources, the internal resources obtained through accumulating are the cornerstone of absorptive capacity (Zahra and George, 2002). *Absorptive capacity* is a firm's capability to assess, acquire and apply external resources, so a firm cannot effectively benefit from external resources without the support from absorptive capacity, which is built upon resource accumulating over time, including the accumulated investment in internal R&D and accumulated market experience (Cohen and Levinthal, 1990; Zahra and Hayton, 2008). New ventures can more effectively extend the diversification of internal resources by accumulating to strengthen their absorptive capacity which facilitates the realization of substantial new ideas (Zahra and George, 2002), provides the sufficient expertise to resolve complex or unusual problems (Katz and Preez, 2008), enhances the firm's ability to detect and understand remote technological or market opportunities for their exploration (Chesbrough, 2003). Meanwhile, effective resource accumulating enables a new venture to better understand and recognize the value of technological development in the

existing trajectory that provides insights into how to exploit current knowledge and skills (Zhou and Wu, 2010). By effectively accumulating, firms can resort to more familiar resources for exploitation (Ahuja and Lampert, 2001). Thus, rich, credible, and easily deployable internal accumulated resource portfolios are critical in reducing the resource competing between exploration and exploitation, thus enhancing the organizational ambidexterity.

However, the positive effect of resource accumulating on organizational ambidexterity may decline after it reaches a high level. Because of organizational inertia and myopia, too high a level of accumulating makes new ventures difficult to assimilate new knowledge into existing knowledge base, thus decreasing the potential synergy between exploration and exploitation given their inherent tradeoff (in terms of mutually driving-out effect) (Levinthal and March, 1993; March, 1991). Thus,

Hypothesis 2: *Resource accumulating will have an inverted U-shaped relationship with the organizational ambidexterity of new ventures.*

Compared to established firms, new ventures in emerging economies have insufficient management capabilities (Zhang and Li, 2010). When such new ventures leverage both resource acquiring and resource accumulating simultaneously, the two mechanisms may have a substitutive effect on organizational ambidexterity. First, a high-level reliance on external resources for open innovation tends to reduce a venture's effort to internally develop its absorptive capacity. In this situation, the over-reliance on externally acquired resources tends to reduce the potential synergy between exploration and exploitation given their inherent tradeoff (in terms of mutually driving-out effect), largely because the resources acquired externally cannot be effectively assimilated and applied without an adequately developed base of absorptive capacity. A similar pattern can occur for resource accumulating. A high-level reliance on resource accumulating for absorptive capacity tends to reduce open innovation as the result of organizational inertia and myopia. In this situation, the over-reliance on internally accumulated resources tends to reduce the potential synergy

between exploration and exploitation given their inherent tradeoff (in terms of mutually driving-out effect). In sum, the over-reliance on resource acquiring or resource accumulating will result in an imbalance between exploitation and exploration, thus negative for organizational ambidexterity (Levinthal and March, 1993; March, 1991). Therefore, we suggest:

Hypothesis 3: The resource acquiring and resource accumulating have a substitutive effect as their interaction effect on the organizational ambidexterity of new ventures.

Managerial Ties as a Special Contingency

The effectiveness of resource structuring mechanisms can be influenced by market environment (Sirmon et al, 2007). In particular, new ventures in emerging economies such as China face challenges from turbulent market conditions characterized by rapid economic growth, an unsound legal system, and less than comprehensive institutional support (Li et al., 2009; Li and Peng, 2008). Under this condition, the managers need to enhance the effectiveness of resource structuring mechanisms by use of specific contingent factors (Sirmon et al, 2007). Facing an incomplete formal institution, China's new ventures with insufficient resources prefer to actively leverage managerial ties as a substitution for formal institutions to ensure the effectiveness of resource management (Li and Zhang, 2007).

Managerial ties are built on trust and cooperation, and they are maintained by implicit rules of reciprocity and social obligations (Luk et al., 2008; Park and Luo, 2001), which usually substitute for a reliable government and the established rule of law, and generate institutional advantage (Li et al., 2012; Xin and Pearce, 1996). Meanwhile, because of the traditional business culture (Li and Peng, 2008), new ventures in China emphasize the role of managerial ties as a lubricant in resource structuring processes or nurturing business transactions that reduce transaction costs or increase transaction values (Liu et al., 2012; Standifird and Marshall, 2000). By using managerial ties, new ventures can leverage relational management skills to enhance resource coordination (Sirmon et al., 2007; Stam et al., 2013), and they thus

can improve the effectiveness of resource structuring mechanisms in organizational ambidexterity (Sheng et al., 2011; Xin and Pearce, 1996).

In existing literature, managerial ties include ties with other firms and ties with government (Luk et al., 2008; Peng and Luo, 2000; Li et al., 2012). Because these two types of managerial ties have different attributes (Luk et al., 2008; Park and Luo, 2001), we argue that ties with other firms and ties with the government have different effects on relationships between resource structuring mechanisms and organizational ambidexterity of new ventures. First, in a business community, the ties between firms are horizontal. The non-mandatory relationship facilitates communication and provides the new venture market with resources, and that in turn promotes learning and knowledge transfer and technology acquisition (Sheng, et al., 2011). Whereas the ties between new ventures and government are vertical only the government possesses the right to regulate managers' behaviors, and the ties with the government help new ventures obtain key regulatory resources (Sheng, et al., 2011) This situation, then, improves the new ventures' political legitimacy and helps them access policy information more quickly. Second, the benefits from ties with other firms and ties with the government are not free and the costs of both types of ties are different. For example, establishing and maintaining an extensive network of ties with other firms can cost a lot of managerial time and organizational resources (Zhang and Li, 2010), whereas close ties with the government may involve the "grabbing hand" of the government and could interfere with the firms' internal operations. Thus, we know that both types of ties have different benefits and costs in helping new ventures achieve their ambidexterity. The new ventures need to extend the benefits and reduce the costs of leveraging managerial ties.

When new ventures leverage resource acquiring to achieve the ambidexterity, additional ties with other firms can strengthen the positive effect of the acquiring. First, new ventures with closer ties with other firms possess a wide range of opportunities and options to

obtain external knowledge and information for innovation (Li and Atuahene-Gima, 2002), and they thus have more chance to combine the resources from resource acquiring with the knowledge and information from other firms. Second, closer ties with other firms create more learning opportunities that help new ventures to enhance their absorptive capacity in evaluating, assimilating, and integrating external acquired resources with internal resources, thus reducing dysfunctional resource portfolios and increasing the effectiveness of resource acquiring in affecting organizational ambidexterity. Third, resource acquiring is a high risk economic transaction, and promoting the good ties with other firms can help new ventures obtain high quality resources and good services, and can facilitate the timely and successful integration of acquired resources, generating, as a result, the synergy effect of exploration and exploitation, and thus reducing the inherent risk in resource acquiring (Park and Luo, 2001). Finally, when resource acquiring, the new ventures need to deal with relations with acquired firms' suppliers and customers whom they might not yet be so familiar with. Close ties with other firms make the integration of target firms' suppliers and customers occur more quickly and they decrease the conflict and reduce the switching costs of the value chain. Thus, firms can enhance the effectiveness of acquired resources. Therefore, we suggest:

Hypothesis 4: *Ties with other firms strengthen the effect of resource acquiring on organizational ambidexterity by enhancing the positive effect of resource acquiring on the organizational ambidexterity of new ventures.*

When an institutional system is incomplete, close ties with the government can reduce risks in resource acquiring, improve policy support to new ventures, and help them overcome administrative interventions from the government (Baron and Tang, 2009; Peng and Luo, 2000). This, in turn, enhances the effectiveness and extends the scope of the positive effect of resource acquiring on ambidexterity. First, in China, important resource acquiring activities need the government's approval; thus, closer ties with the government can improve the political legitimacy of this exchange action and reduce the risks while enhancing the effectiveness of resource acquiring. Given the extensive involvement of the government in

resource acquiring, new ventures need to establish ties with government officials and regulators who can assist them in attenuating market challenges (Li and Zhang, 2007). In fact, closer ties with the government can help new ventures get more support in given research project, through information and financing, all of which can enhance the absorptive capacity of new ventures so that they can evaluate, assimilate, and integrate external acquired resources with internal resources more efficiently (Zahra and George, 2002). For example, when Geely as one of the new ventures in the automobile industry acquired Volvo, the government provided the Geely with crucial support in resource acquiring and subsequent integration, which enhanced the effectiveness of Geely in resource acquiring.

Moreover, the government in China strongly encourages new ventures to acquire in order to both strengthen innovation and increase the market share to compete in the international market (Deng, 2009; Li and Zhang, 2007). Facing the high uncertainty market environment, new ventures with closer ties with the government can easily get the support of policies to more effectively leverage the role of external resource acquisition in affecting organizational ambidexterity. This action will extend the scope of resource acquiring in strengthening organizational ambidexterity. Therefore, we suggest:

Hypothesis 5: *Ties with government strengthen the effect of resource acquiring on organizational ambidexterity by extending the positive scope and enhancing the positive effect of resource acquiring on the organizational ambidexterity of new ventures.*

When firms leverage accumulating to developing organizational ambidexterity, ties with other firms can provide the new ventures with external market resources that are complementary to internal accumulated resources, and can enhance the effectiveness and extend the scope of positive effect of accumulating in affecting organizational ambidexterity. First, closer ties with other firms facilitate possible inter-firm collaboration and knowledge sharing between partners (Zhou and Wu, 2010). This open cooperation is more effective in solving complicated and non-routine problems when partners possess a broad resource base,

and thus this cooperation can improve the new ventures' innovation capability and ultimately support exploration and exploitation simultaneously. Second, closer ties with other firms can bring more new ideas and information (Gao, et al., 2008), which provides the new ventures with a wide range of opportunities and options to recombine knowledge resources from accumulating with the knowledge resources from other firms. Third, ties with other firms can make the new ventures understand change more quickly and deeply in new customer demands and market competitiveness (Sheng et al., 2011); based on this deeper understanding, firms can strengthen organizational ambidexterity by leveraging accumulated resources more quickly at lower costs to meet new customer demands. Therefore, we suggest:

Hypothesis 6: *Ties with other firms strengthen the effect of resource accumulating on organizational ambidexterity by extending the positive scope and enhancing the positive effect of resource accumulating on the organizational ambidexterity of new ventures.*

Getting the policy support of the government is particularly important during the new ventures' growth. Because the government still dominates most factor markets in China, once new ventures accumulate internal resources in moderating levels, closer ties with the government will provide these new ventures with crucial access to policy and aggregate industrial information (Sheng et al., 2011), and, thus, make the new ventures' innovation direction more explicit and promote growth in this dynamic environment more quickly. The ultimate goal of the Chinese government is to build globally competitive Chinese firms (Li et al, 2009); thus, closer ties with government can help new ventures obtain key regulatory resources that are complementary to the internal accumulated resources. This complementation can more effectively reduce the resource competition and increase the synergy between exploration and exploitation. Meanwhile, closer ties with the government can mitigate the arbitrary intervention on internal operations (Luk et al, 2008; Shleifer and Vishny, 1998). Further, the interpretation and reinforcement of rules and regulations in new ventures can complement the internal management that improves the relationship between

accumulating and organizational ambidexterity. Therefore, we suggest:

Hypothesis 7: *Ties with government strengthen the effect of resource accumulating on organizational ambidexterity by enhancing the positive effect of resource accumulating on the organizational ambidexterity of new ventures.*

METHODOLOGY

Sample and Data Collection

To test the hypotheses, we used the questionnaire survey method. We first review 5 new ventures, and understand their practice in resource structuring. Then, based on previous literature and specific Chinese conditions, we developed the questionnaire for the survey. A pilot test was conducted with 8 senior managers in China's new ventures, and their responses were excluded from the final study. To make sure every question could be accurately understood, interviewers checked each item with the pilot test participants. After that, interviewers discussed the possible problems identified in the pilot, and they made necessary modifications to the questionnaire. In addition, all interviewers have the knowledge and capability for completing both surveys and research. We have also made sure all the questions are posed to be 'neutral'.

We randomly selected a sample list which includes 350 new ventures from Henan and Shaanxi provinces as well as Shen Zhen, Su Zhou, Qing Dao, Ji Nan and Chang Chun cities in China, with the help of local government offices. The final sample consists of 202 new ventures, for an effective response rate of 57.7%. Non-response bias in the final sample was checked. For the purpose of reducing common method bias, we asked that two questionnaires be completed by different persons of the top management team such as the CEOs or their designees, Chief Engineer, Deputy General Manager and so on (Podsakoff and Organ, 1986; Zhou and Wu, 2010). Furthermore, the interaction effects are robust against common method bias (Evans, 1985; Reinholt, Pedersen and Foss, 2011). We examined the possibility of common method bias via Harman's one-factor test. The results revealed that the 73.7 percent total variance is explained by six distinct factors, and only 25.4 percent of the

variance, which was not the majority of the total variance, is explained by the first factor.

Hence, the common method bias is unlikely to be a threat to the findings of our study.

Measures

The survey items were drawn from existing theory-driven research, and we made necessary modifications to adapt to the Chinese context. All survey items, except those stated as otherwise were measured on 5-point Likert scales, where “1” represented strongly disagreement and “5” represented strongly agreement.

Resource structuring. Based on Sirmon et al. (2007), *resource accumulating* was measured by three items: (1) build installations and equipment by ourselves when developing internal resources; (2) develop intangible resources within the firm when developing internal resources; (3) increase our employees’ skill and knowledge through training when developing internal resources. *Resource acquiring* was also measured by three items: (1) acquire target firms for the tangible resources; (2) acquire target firms for the intangible resources; (3) we acquire target firms for the business and managerial capabilities.

Organizational ambidexterity. Following Cao et al. (2009) and Jansen et al. (2012), we multiply exploration and exploitation to formulate organizational ambidexterity. The measurements for exploration and exploitation are based on existing studies of Atuahene-Gima (2005), Cao et al. (2009), He and Wong (2004) and Yalcinkaya, Calantone, and Griffith (2007). To measure *exploration*, the respondents were asked to rate the extent to which their venture compared competitors by asking themselves, (1) they develop more novel new products; (2) they introduce more novel new functions in new products; (3) and they were the creator of new technologies and processes. To measure *exploitation*, the respondents were asked to rate, to what extent has their venture compared with competitors by asking, (1) they improve more existing process skills and existing products; (2) they leverage more

existing technologies to serve innovation; (3) and they introduce more incremental innovative products into the market.

Managerial ties. Based on the definition and measurement developed by Peng and Luo (2000), Luk et al. (2008) and Li et al. (2011), *ties with other firms* were measured using six items. The respondent was asked to rate, over the last 3 years, to what extent has his/her firm: (1) Had cultivated close connections with our buyers; (2) Had put a great emphasis on understanding our buyers' needs; (3) Had focused on developing relationships with our buyers; (4) Had maintained personal relationships with our suppliers, who are important to the firm; (5) Had invested in relationships with the managers of our suppliers; (6) We understand our suppliers' strengths and weaknesses. Adapting from Li et al. (2009), Li and Zhang (2007) and Li et al. (2011), we measured *ties with government* by using three items. The respondent was asked to rate, over the last 3 years, to what extent has his/her firm: (1) Had ensured good relationships with influential government officials; (2) Had invested heavily in building relationships with government officials; (3) Had improved our relationships with government officials, all of whom have been important to us.

Control variables. To account for alternative explanations, the following variables were controlled. Following He and Wong, 2004, Li and Atuahene-Gima (2002), Zhang and Li (2010), the venture's size, age, ownership are controlled. The *Venture age* was measured by the years since the firm was established. The *Venture size* was measured by the number of firm's full-time employees (1=1-50, 2=51-200, 3=201-500, 4=501-1000, 5=above 1000) (Zahra, Ireland, and Hitt, 2000). *Venture ownership* was measure by a dummy variable, in which 1 represents state-owned, and 0 represents other ownership. Based on Chinese industry division, there are 20 main industries. Our sample ventures spanned 14 industries. *Venture industry* was measure by a dummy variable. 1 = industries labeled A, 2 = industries labeled B ... 14 = industries labeled N). Further, technological dynamics is controlled, because it

reflects the speed of change and predictability about technology and product market conditions in the firm's principal industries (Zhang & Li, 2010). Technological dynamics was measured as the technological change in our industry is faster than other industries.

Reliability and Validity

We adopted several measures to ensure data reliability and validity. All the constructs developed in this study are measured primarily based on previously validated measurement items and were strongly grounded in the literature. In Table 1, Cronbach's alphas range from 0.685 to 0.891, which is higher than the minimum threshold value of 0.6 (Li et al., 2012; Nunnally, 1978).

We examined the factor of loading to ensure construct validity. As shown in Table 2, among the 21 item loadings, except for four items (whose loading values are approximate to 0.7), all the items in the various scales were above 0.7, which indicated that about half of the items' variance (the squared loading) can be attributed to the construct (Fornell and Larcker, 1981; Li et al., 2012). It implied both the statistical significance of relationships between the items and constructs and the reliability of individual items. An average variance extracted (AVE) of 0.50 or greater (Fornell and Larcker, 1981; Li et al., 2012) 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 shown 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 and Larcker, 1981; Li et al., 2012). 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.

Insert Table 1 and Table 2 about here

ANALYSIS AND RESULTS

Testing the main effect. With Hypotheses 1 and 2, we considered the main effects of acquiring and accumulating on organizational ambidexterity. In Table 3, the effect of resource acquiring on organizational ambidexterity is shown in Model 2 ($\beta = -0.150$, $p < 0.001$). Because resource acquiring has an inverted U-shaped effect on organizational ambidexterity, H1 is supported. More interesting, the coefficient of resource accumulating squared is significantly positive rather than negative ($\beta = 0.349$, $p < 0.001$), which shows the relationship between resource accumulating and organizational ambidexterity of new ventures in China is U-shape. Hence, H2 is not supported. Contrary to our expectation, we find a U-shape relationship here, which poses as a puzzle in need of a further explanation. We will try to explain this puzzle later in the section of discussion.

Testing the interaction effect. With H3, we considered the interaction effect of resource acquiring and resource accumulating on organizational ambidexterity. Shown in Model 3, the coefficient of interaction between resource acquiring and resource accumulating is significantly negative ($\beta = -0.124$, $p < 0.05$), thus suggesting the substitutive roles of resource acquiring and resource accumulating. Hence, H3 is supported.

Testing the moderating effect. In H4 and H5, we considered the moderating role of managerial ties between resource acquiring and organizational ambidexterity. Shown in Model 4, the interaction between resource acquiring squared and ties with other firms is negative and significant ($\beta = -0.445$, $p < 0.001$). To clarify the moderating effect, we depict the relationships in Figure 1. Figure 1a clearly shows that with a high level of ties with other firms, the positive slope of the curve becomes much steeper; the negative slope is also steeper. The picture implies that ties with other firms are limited to the level of resource acquiring they can support. It indicates that ties with other firms enhance the positive effect of resource

acquiring on organizational ambidexterity to some extent. Hence, H4 is supported. Also in Model 4, the interaction between resource acquiring squared and ties with government is negative but not significant ($\beta = -0.071, p > 0.1$). We depict the relationship in Figure 1b, which shows that with strong ties with government, the slope of the curve at the left become slightly steeper and the apex of the curve shifts a little to the right, and the slope of the curve with strong ties with government becomes smaller at the right. It indicates that the contingent effect of ties with government between resource acquiring and organizational ambidexterity is equivocal. Hence, H5 is not supported.

In H6 and H7, we assessed the moderating roles of managerial ties in between resource accumulating and organizational ambidexterity. As Model 4 shows, the interaction between resource accumulating squared and ties with other firms is positive but not significant ($\beta = 0.001, p > 0.1$), and Figure 1c shows that the curves of the low and high level of ties with other firms are overlapping. It indicates that the moderating role of ties with other firms on the link between resource accumulating and organizational ambidexterity is equivocal. Hence, H6 is not supported. However, the interaction between resource accumulating squared and ties with government is significantly positive ($\beta = 0.245, p < 0.001$). We graph the moderating effect in Figure 1d, which shows that with a high level of ties with government, the positive slope of the curve becomes much steeper, and the negative slope is also steeper. The picture implies that ties with government improve the effectiveness of resource accumulating in developing organizational ambidexterity among new ventures as the resource accumulating beyond the inflection point, thus in support for H7.

Insert Table 3 and Figure 1 (a, b, c & d) about here

DISCUSSION

The purpose of this research is to explore how new ventures pursue organizational ambidexterity via the mechanisms of resource structuring and managerial ties. By integrating

the perspective of resource management and social capital theory, we propose a conceptual model to explain the nonlinear effects of resource structuring mechanisms on organizational ambidexterity, and also the moderating effects of managerial ties on such relationships. Our findings bear important theoretical contributions and practical implications.

Theoretical Contributions

Our primary theoretical contribution lies in extension of the resource management perspective into organizational ambidexterity by identifying the effects of resource structuring mechanisms, including both resource acquiring and resource accumulating, on organizational ambidexterity. Based on a sample of new ventures in China, we have found that resource acquiring would have an inverted U-shaped effect on organizational ambidexterity. Surprisingly, resource accumulating would have a U-shaped effect on organizational ambidexterity, which is contrary to our expectation. Such results suggest that moderate-level resource acquiring can enable both open innovation and absorptive capacity at the same time for the higher organizational ambidexterity. In contrast, moderate -level resource accumulating would have a negative effect on organizational ambidexterity, while the high-level resource accumulating would enable both absorptive capacity and open innovation for the higher organizational ambidexterity. In other words, the best balance between resource acquiring and resource accumulating for the highest organizational ambidexterity would lie in the mix of moderate-level resource acquiring with high-level resource accumulating; the worst balance for the lowest organizational ambidexterity could be the mix of low- or high-level resource acquiring with moderate-level resource accumulating.

The unexpected U-shaped effect of resource accumulating may derive from the unique nature of resource accumulating for new ventures. When leveraging resource accumulating, new ventures have to confront the inherent weaknesses of small size (thus limited resources and scale diseconomy) and weak market position (thus limited legitimacy

and little market experience) (Li et al., 2012; Zhang and Li, 2010). Even with the increase in resource accumulating from a low level to a moderate level, new ventures remain stuck in the serious disadvantages of small size and weak market position with a weak capability for exploitation. Only when resource accumulating reach a high level can new ventures start benefiting from exploitation as the threshold to begin having a positive effect on organizational ambidexterity. In other words, resource accumulating must reach a certain level as the threshold for resource accumulating to have a positive effect, and this threshold tends to be *higher* for new ventures than for established firms because the former have an extremely weak base of internal capability for exploiting existing resources. However, this explanation focuses only on resource accumulation for exploitation, rather than examining both resource accumulating and resource acquiring in interaction for both exploitation and exploration.

Distinctive from the above explanation, another possible explanation is the interaction effect of resource accumulating and resource acquiring on both exploration and exploitation as organizational ambidexterity, as shown in Hypothesis 3. When new ventures leverage both resource acquiring and resource accumulating simultaneously, the two mechanisms may have a substitutive effect on organizational ambidexterity. First, a high-level reliance on external resources for open innovation tends to reduce a venture's effort to internally develop its absorptive capacity. In this situation, the over-reliance on externally acquired resources tends to reduce the potential synergy between exploration and exploitation given their inherent tradeoff (in terms of mutually driving-out effect), largely because the resources acquired externally cannot be effectively assimilated and applied without an adequately developed base of absorptive capacity. A similar pattern can occur for resource accumulating. A high-level reliance on resource accumulating for absorptive capacity tends to reduce open innovation as the result of organizational inertia and myopia. In this situation, the over-reliance on internally accumulated resources tends to reduce the potential synergy

between exploration and exploitation given their inherent tradeoff (in terms of mutually driving-out effect). In sum, the over-reliance on resource acquiring or resource accumulating will result in an imbalance between exploitation and exploration, thus negative for organizational ambidexterity (Levinthal and March, 1993; March, 1991). In other words, relative to established firms, new ventures tend to suffer much less from organizational inertia, but benefit much more from absorptive capacity due to their “newness” status (Caloghirou, Kastelli and Tsakanikas, 2004; Cohen and Levinthal, 1990).

The above two explanations bear some insightful implications for further research on the exploration-exploitation link in general and the link among new ventures in particular. In the case of exploration-exploitation link in new ventures as compared to established firms, the negative effect of organizational inertia (often caused by the over-reliance on exploitation) is much less acute for new ventures than for established firms, while the negative effect of weak absorptive capacity (often caused by the over-reliance on exploration) is much more serious for new ventures than for established firms. In other words, organizational inertia is much less a problem for new ventures than for established firms, but weak absorptive capacity is much bigger problem for new ventures than for established firms. However, the issue of open innovation as a double-edged sword is the same for all firms, new or old, because a moderate-level open innovation is the best for all firms. Further, for the exploration-exploitation link in general, our findings suggest that a proper mix of resource acquiring (largely for open innovation) and resource accumulation (largely for absorptive capacity) is necessary for an effective balance between exploration and exploitation in terms of maximizing the synergy between exploration and exploitation and also minimizing their tradeoff (cf. Levinthal and March, 1993; March, 1991).

Our second contribution is a salient step forward by showing that theoretically integrating the resource management perspective and the social capital theory is critical and

valid. Our study examined the moderating effects of managerial ties on relationships between resource structuring mechanisms and organizational ambidexterity. Different from most of the existing studies that have focused on the direct effect of managerial ties without any attention to their moderating effect, our study highlighted the roles of managerial ties as key contingent factors in emerging economies, and provided the empirical evidence to support this claim. In particular, we found that stronger ties with other firms can strengthen the positive effect of resource acquiring on organizational ambidexterity by enhancing the effectiveness of lower level resource acquiring, while stronger ties with government can strengthen the positive effect of resource accumulating on organizational ambidexterity. By comparing the different roles of ties with other firms and ties with government in organizational ambidexterity, we shed light on how new ventures can most efficiently leverage resource structuring to enhance organizational ambidexterity contingent upon the additional fit between resource structuring mechanisms and managerial ties. Hence, we contribute to social capital theory by specifying the interaction between resource management and social capital to achieve organizational ambidexterity of new ventures in emerging economies such as China.

Further, given the highly dynamic nature of Chinese market, the operating resources of new ventures can lose their effectiveness or expire quickly. The challenge faced by these new ventures makes managerial ties a critical contingency in leveraging resource structuring. Through examining the complex relationships among resource structuring, managerial ties and organizational ambidexterity of new ventures in China, we extend the implications of the environmental context for resource management literature into the emerging economies. In particular, the nonlinear effect of structuring mechanisms on organizational ambidexterity in new ventures provides some new insights into the complex relationship between resource management and organizational ambidexterity. Further, the significant moderating effects of managerial ties on the relationships between structuring mechanisms and organizational

ambidexterity show the specific roles of managerial ties as key moderators in China's new ventures. Meanwhile, our results show that closer ties with other firms cannot significantly enhance the effectiveness of resource accumulating on organizational ambidexterity. These results reflect the fact that, in a highly uncertain market environment, strong ties with other firms may be too costly for new ventures. Similarly, strong ties with the government have no significant moderating effect on the link between resource acquiring and organizational ambidexterity. This result is also consistent with some managers' statements in interviews: "we want to be close to the government, but we also fear the government". These results also challenge the conventional wisdom that new ventures should build strong social ties actively to function effectively in emerging economies (Financial Times, 2004). Our research enriches social capital theory by showing another potential downside of ties in emerging economies (Li et al., 2009), consistent with the recent evidence that publicly listed Chinese firms suffer from their political connections (Fan, et al., 2007).

Managerial Implications

Our study also provides important managerial implications. First, based on our findings that accumulating has U-shaped effect on the ambidexterity, the novelty of products decrease quickly in the initial stage of new ventures, although accumulated, new ventures do not have enough resources to launch more radical innovation. Thus, the entrepreneurs in new ventures need to focus on internal growth to overcome the threshold level before accumulating can reduce the resources competing between exploration and exploitation.

Second, entrepreneurs need to carefully identify requisite and value-adding resources, and combine internal accumulating and external acquiring during the innovation process to capture the positive effects of each resource structuring mechanism. It requires that new ventures' managers be conscious to their absorptive capacity. Based on our result of the inverted U-shape relationship between resource acquiring and organizational ambidexterity,

new ventures need to moderately leverage resource acquiring to improve their organizational ambidexterity in initial stage. In fact, by moderate resource acquiring, new ventures can make them effectively control risks and obtain more new knowledge from outsider so as to ensure the success of organizational ambidexterity.

Finally, our results indicate that the importance of effective resource management is contingent on the managerial ties in emerging economies. Ties with other firms can enhance the effectiveness of resource acquiring on organizational ambidexterity. Thus, new ventures need to actively build ties with other firms to obtain external resources to increase the recombination scope. Further, firms need to effectively leverage ties with the government to improve the effectiveness of accumulating in affecting organizational ambidexterity. Meanwhile, new ventures need to be cautious when leveraging the ties with the government in resource acquiring and the ties with other firms in resource accumulating, because building and maintaining those ties are costly, and the alignment of resource structuring mechanisms and managerial ties is very important for new ventures in China.

Limitations and Further Research

In addition to the important implications, this research also bears some limitations which should be addressed in the future research. First, we focus on the new ventures, and our data is not suitable for testing whether the relationships between resource structuring and organizational ambidexterity in all kind of firms keep same. Future studies need to compare the resource structuring -organizational ambidexterity relationships in both established firms and new ventures. Further, future research should be carried out in both developed countries and emerging economies and compare the difference in different institution environments so that such research results have more universal implication. Second, although our cross-sectional survey is appropriate for this study, in order to discover a different change process of organizational ambidexterity, future research should use a longitudinal design to

examine the influence process of resource acquiring and resource accumulating in affecting organizational ambidexterity. Furthermore, with the improvement of the market system, the form of leveraging managerial ties and the role of managerial ties may change; thus, we call for a longitudinal study to examine their evolving roles.

Conclusion

This study explores how new ventures pursue organizational ambidexterity through leveraging resource structuring mechanisms and managerial ties. By building the links among resource structuring, managerial ties and organizational ambidexterity, we seek a new perspective to explain how resource acquiring and resource accumulating is able to affect organizational ambidexterity in new ventures in distinctive ways, and also how managerial ties moderate such effects. The results of this study support the new perspective that a well-balanced resource portfolio via resource structuring mechanisms can effectively reduce the resource competition and style conflict between exploration and exploitation, thus improving organizational ambidexterity, especially given the benefits of proper ties with other firms as well as with government. Future research can extend this study into the established firms and also into the advanced economies.

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Table 1 Factor loadings and coefficient alpha

Factors	Items	Loading	alpha
Resource Accumulating (AVE=0.619)	(1) We build installations and equipments by ourselves when developing internal resources	0.717	0.685
	(2) We develop intangible resources within the firm when developing internal resources	0.825	
	(3) We increase our employees' skill and knowledge through training when developing internal resources	0.815	
Resource Acquiring (AVE=0.822)	(1) For the tangible resources, we acquire many target firms	0.906	0.891
	(2) For the intangible resources, we acquire many target firms	0.897	
	(3) For the business and managerial capabilities, we acquire many target firms	0.918	
Exploitation (AVE=0.714)	(1) Compared with competitors , we improve more existing process skills and existing products	0.797	0.797
	(2) Compared with competitors, we leverage more existing technologies to serve innovation	0.867	
	(3) Compared with competitors, we introduce more incremental innovation products into market	0.869	
Exploration (AVE=0.789)	(1) Compared with competitors , we develop more novel new products	0.906	0.860
	(2) Compared with competitors , we introduce more novel new functions in new products	0.910	
	(3) Our company is the creator of new technology and process	0.848	
Ties with Other Firms (AVE=0.543)	(1) We have cultivated close connections with our buyers	0.697	0.828
	(2) We put great emphasis on understanding our buyers' needs	0.807	
	(3) We focus on developing relationships with our buyers	0.799	
	(4) Personal relationships with our suppliers are important to the firm	0.714	
	(5) We have invested in relationships with the managers of our suppliers	0.699	
	(6) We understand our suppliers' strengths and weaknesses	0.694	
Ties with Government (AVE=0.813)	(1) We ensure good relationships with influential government officials	0.883	0.885
	(2) We have invested heavily in building relationships with government officials	0.928	
	(3) Improving our relationships with government officials have been important to us	0.894	

Notes: AVE, average variance extracted

Table 2 Descriptive Statistics and Correlation Matrix^a

	1	2	3	4	5	6	7	8	9	10
1. Firm size										
2. Firm age	.266(**)									
3. Venture industry	-.175(*)	.089								
4. Venture ownership	-.043	-.201(**)	-.256(**)							
5. Technological dynamics	-.111	-.048	.107	.064						
6. Resource acquiring	.027	-.111	-.096	.021	.187(**)	.907^b				
7. Resource accumulating	.000	-.065	.000	.226(**)	.298(**)	.242(**)	.787			
8. Ties with other firms	-.238(**)	.010	-.007	.111	.225(**)	-.040	.165(*)	.737		
9. Ties with government	.022	.059	.085	-.047	.013	.099	.045	.290(**)	.902	
10. Innovation ambidexterity	.063	.039	.031	-.029	-.121	.096	.030	.037	-.037	.750
Mean	1.856	4.715			2.503	2.406	3.522	4.048	3.664	12.074
S.D.	1.046	1.748			.972	.900	.656	.403	.709	4.248

^aN = 202

^b Square root of AVE

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 3 Results of regression analysis

Variable	Innovation ambidexterity			
	Model 1	Model 2	Model 3	Model 4
Controls				
Venture size	.181**	.132*	-.082	.197***
Venture age	.036	.144*	.167*	.002
Venture industry	.143**	.108+	.085	.255***
Venture ownership	.161*	.035	-.097	.132+
Technological dynamics	-.248***	-.263***	-.255***	-.301***
Predictors				
Resource acquiring		.305***	.333***	.250***
Resource acquiring ²		-.150***	-.135**	-.096
Resource accumulating		.288***	.268**	-.113*
Resource accumulating ²		.349***	.323***	.067
Resource acquiring * resource accumulating			-.124*	-.196*
Moderators				
Ties with other firms (TF)				.456***
Ties with government (TG)				-.140*
Interactions				
Resource acquiring × TF				-.367***
Resource acquiring ² × TF				-.455***
Resource acquiring × TG				.262***
Resource acquiring ² × TG				-.071
Resource accumulating × TF				.199***
Resource accumulating ² × TF				.001
Resource accumulating × TG				.133+
Resource accumulating ² × TG				.245***
Test Results				
ΔR-square		.130***	.001	.287***
F-Value	2.613***	2.549***	2.217**	2.791***

+ p < 0.10 , * p < 0.05 , ** p < 0.01 , *** p < 0.001

Figure 1. The moderating effects of managerial ties

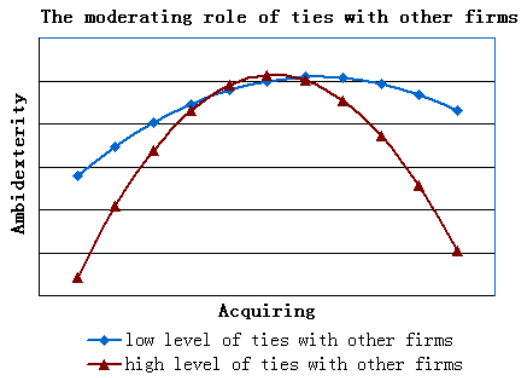


Figure 1a. H3a

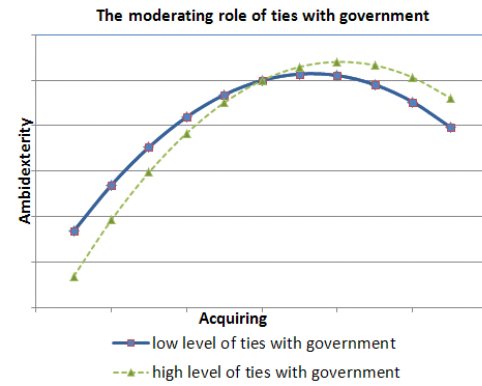


Figure 1b. H3b

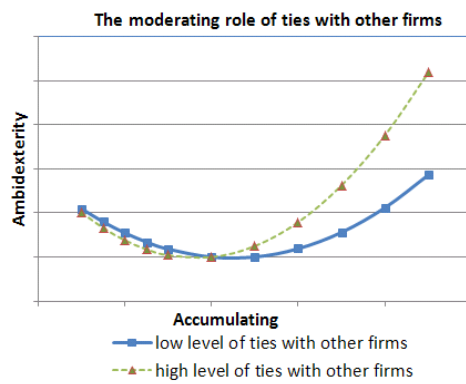


Figure 1c. H4a

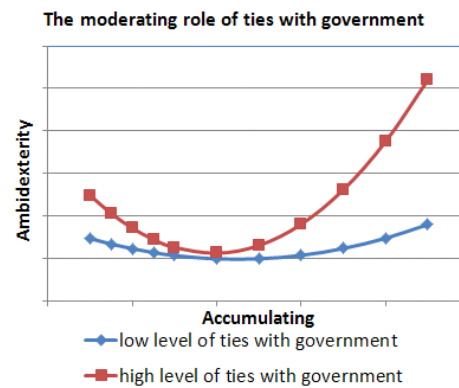


Figure 1d. H4b