Partner Enterprises Selection for Innovation Alliances: A Reviews Perspective

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Abstract: *Considering the importance of selecting a 'right' partner or cooperation enterprises, numerous domestic and overseas academic scholars have done research on the topic, including corresponding factors, criteria, motivation and so on. Therefore, the paper reviewed key literatures related to influencing factors in partner selection mainly for innovation alliances separately from the intra-enterprise, extra-enterprise and inter-enterprise perspectives, achieving internal and external integration and hoping to guide practical activities on partner selection more smoothly and successfully especially for innovation alliances. Finally it's concluded the majority of authors have focused on the influencing factors like resource, technology, system, strategy, experience, reputation, etc; some have noticed institutional environment (notably, economic, policy, culture, law, etc) from external perspective; and the rest have stressed mutual confidence.*

Keywords: *innovation alliances, partner selection, intra-enterprise, extra-enterprise, inter-enterprise*

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1. INTRODUCTION

Numerous domestic and overseas academic scholars have done research on partner selection, especially in the area of strategic alliances (or ISAs, namely International Strategic Alliances), such as selecting partners or cooperative enterprises for Joint Ventures (Notably International Joint Ventures-abbreviation in IJVs), Supply Chains, Virtual Enterprise (VE) and so on. Noticing foreign mainstream literatures on the research of factors influencing partner selection, the majority of authors have concentrated on internal factors from enterprises. Some have turned to external enterprises, focusing on institutional environment of host countries especially in multinational cooperation. The rest have stressed mutual confidence or mutual trust between partners from inter-firm relationship perspective, which is actually important and necessary for interaction or successful cooperation. Therefore, the paper reviewed key literatures related to influencing factors in partner selection mainly for innovation alliances, separately from the intra-enterprise, extra-enterprise and inter-enterprise perspectives, achieving internal and external integration to guide practical activities on partner selection more smoothly and successfully.

2. FROM THE INTRA-ENTERPRISE PERSPECTIVE

All kinds of knowledge, technology, and information, or resource, capability, and relationship from the internal enterprise, whether hard or soft, can be complementary advantages in cooperative innovation for both sides, which have been paid attention to widely. Excessive relevant researches show factors influencing partners' selecting are in the form of criteria. The topic of partner selection criteria covers almost every aspect of a firm, from financing, marketing, manufacturing, technology, and product, to goals, commitment, size, culture, management, and pasties with partners (Das and He,

2006). Geringer (1988, 1991) has advanced a distinction between task-related selection criteria and partner-related selection criteria. In the opinion of Dacin et al. (1997), one of the first to systematically conduct an in-depth study of partner selection criteria was Geringer. He found that a partner's national culture, past experience, size and structure were as important in partner selection as task-related criteria, such as, partners' technical know-how, financial assets, managerial experience and access to markets (Geringer, 1988).

Das and He (2006) also give a list of the common criteria that have been deemed as important in the alliance partner selection criteria literature, such as "Task-related criteria: complementary products or skills; financial resources; technology capabilities or uniqueness; location; marketing or distribution systems, or established customer base; reputation and image; managerial capabilities; government relationship, including regulatory requirements and government sales; help in faster entry into the target market; and industry attractiveness." It's obvious the authors above have considered factors of culture or government relationship related to external environment when selecting right partners. While task-related selection criteria of Dong and Glaister (2006) emphasize the resources and capabilities that the focal firm currently lacks in order to compete effectively, and conceptually are underpinned by the resource-based view of the firm and organizational learning theory.

According to four Cs of Brouthers et al. (1995), strategic alliances should be utilized when: complementary skills are offered by the partners; cooperative cultures exist between the firms; the firms have compatible goals; and commensurate levels of risk are involved. Especially among them, skills have been given more extensive implications, including technology, skill or know-how, management, marketing, resource, knowledge, experience, capability, and even potential. Brouthers et al. (1995) insist "The first step in finding a partner with complementary skills is to conduct a comprehensive search. Partner selection based solely on the size of the financial contribution to the alliance is risky. The basis of review should include an examination of skills, technologies, and markets. In addition to assessing what a potential partner can produce, a firm should consider the partner's experience, capabilities, and potential for making a real contribution." While Luo (1998) has classified the partner selection criteria into three categories related to: tasks or operations; partnership or cooperation; and cash flow or capital structure.

In Luo's (1998) opinion, "Operation-related criteria are associated with the strategic attributes of partners including marketing competence, relationship building, market position, industrial experience, strategic orientation, and corporate image. Cooperation-related criteria often mirror organizational attributes such as organizational leadership, organizational rank, ownership type, learning ability, foreign experience, and human resource skills. Cash flow-related criteria are generally represented by financial attributes exemplified by profitability, liquidity, leverage, and asset management." A partner's strategic traits influence the operational skills and resources needed for the joint venture's competitive success, organizational traits affect the efficiency and effectiveness of inter-firm cooperation, and financial traits impact the optimization of capital structure and cash flow (Luo, 1998). Later in 2002, Luo further finds that "a foreign partner's strategic attributes, namely technological capability, foreign market power, and international marketing expertise, and its organizational attributes, including managerial skills and organizational reputation, are positively associated with ICV (International Cooperative Venture) performance as perceived by Chinese firms. By contrast, financial attributes are not important to Chinese partners."

Cummings and Holmberg (2012) presents a new conceptual comprehensive partner selection framework that includes dynamic partner selection considerations. Developed and tested with input from over two hundred alliance managers, the comprehensive partner selection framework includes

new perspectives and an analysis of four critical alliance partner selection criteria, or critical success factors (CSFs): task-related CSFs-factors that facilitate or inhibit the successful completion of desired alliance objectives; learning-related CSFs-critical, desired attributes in potential alliance partners that enhance learning outcomes; partnering-related CSFs-relational factors that can enhance or inhibit how the alliance unfolds and therefore affect its outcomes; and risk-related CSFs-factors that arise from the interdependent nature of alliances, which are often neglected in practice. In contrast, Cummings and Holmberg (2012) analyze learning-related CSFs as a separate CSF category, expressly including learning considerations in all partner selection evaluations, and break out risk-related CSFs into a separate CSF category to assist managers/companies in developing more comprehensive risk assessments and assumptions to better evaluate potential alliance partners, such as performance risks, relational risks, shared risks, emergent competition risks, quality risks, and customer relationship risks.

3. FROM THE EXTRA-ENTERPRISE PERSPECTIVE

Usually culture could affect one's thought, idea, manner, behavior and so on. It will become relatively complex under the situation of transnational cooperation. Brouthers et al. (1995) present, "Cooperative alliance cultures can become especially difficult to maintain between firms originating in different countries. Americans tend to be individualistic. They are not, generally, group-oriented. Unlike the Europeans, their business culture is not as responsive in its approach to alliances involving firms from other countries. This individualistic attitude is in sharp contrast to that of the Japanese, whose entire cultural direction is oriented toward participation within the group context." Thus, alliances based on cooperative cultures are more likely to be successful whereas alliances without this cultural connection tend to fail (Brouthers et al., 1995). They maintain "Cooperative culture is a prerequisite for a successful strategic alliance." And the first key to creating cooperative cultures is the concept of symmetry. Strategic alliances work better when there is only a small difference in the size of both firms. Similarly, financial resources and the internal working environment of firms should be comparable (Brouthers et al., 1995). The great contribution of Brouthers et al. is their focus on certain social environment or cultural background, though it's never enough for selecting partners (notably multinational cooperation).

There are still more other external factors to be considered, like politics, economy, law and so on, called institutional environment. It's proved in the research on international strategic alliances of Li and Ferreira (2008). Firm behavior is embedded in the broader political, economic, and social context that shapes actions (Dacin, et al., 1999; Kostova, 1999; Stinchcombe, 1965). Institutions matter and differ between countries, underlining the importance of institutional distance, which refers to the degree of difference between regulatory, cognitive and normative institutions of the two countries (Kostova, 1999). Institutional distance has been viewed with respect to three main dimensions: cognitive, normative, and regulatory (see, for example, Kostova, 1999; Scott, 1995; Xu, Shenkar, 2002). Among them, laws are formalized in rules and procedures, and this pillar is easiest to observe and understand for multinationals. Inter-country differences in these dimensions are partly responsible for how and why firms act in a certain manner (Li, Ferreira, 2008). Not only institutional environment, but also institutional distance can influence partner selection, especially in cooperation activities or international alliances. Simultaneously, some academic scholars have done research on impacts from dynamic environment. Such as, Luo (1997) states that "In a dynamic, complex, or hostile environment, the importance of local partner selection to IJV success is magnified because the right partner can spur the IJV's adaptability, strategy-environment configuration, and uncertainty reduction."

Dacin et al. (1997) have analyzed the impacts which cultural heritage, economic development, government support and foreign investment policies put on the alliance process or partners selection. They find "First, cultural heritage has been found to have a strong effect on executives' strategic orientations. Differences in national culture result in the formation of differing managerial ideologies which, in turn, have the potential to affect strategic decision processes in firms (Chung, Lee, 1989). Second, differences in level of economic development can produce differences in alliance motives. The objectives of alliances partners often differ when one partner is from a developed country and the other is from a lesser developed or developing country. Finally, differences in government support and foreign investment policies can influence the alliance process. Government support in the form of national and industrial policies can motivate certain forms of industrial development. Foreign investment policies that require a significant amount of local investment constrain the pool of available partners and influence the decisions of foreign firms with respect to the capabilities they seek in a partner." In summary, there are differences in cultural, economic, and institutional forces between developed and newly developed or developing countries leading to different priorities for firms headquartered in separate countries (Dacin et al., 1997).

Some others think institutional environment affects partner selection criteria. For example, Dong and Glaister (2006) contend, "The institutional milieu facing domestic firms in an emerging market has a bearing on the relative importance of these firms' motivations for alliance formation and partner selection criteria." Indeed, it is unlikely that alliance partners will have complete agreement on alliance objectives and expected benefits because the institutional context in which the alliance is embedded varies by country (Dacin et al., 1997). And generally, it is more difficult to find compatible partners in cross-border alliances because firms based in different countries may have largely different criteria in selecting partners and thus seek different benefits from the alliances (Dacin et al., 1997). Roy (2012) provides new insight into the interplay between partner- and institution-level bases of trustworthy behavior in IJVs, based on survey and archival data collected on 144 IJVs established by American and Canadian firms across six Asian countries, revealing that host country governance quality directly and positively influences IJV partner trustworthy behavior, and weak host country governance undermines the effectiveness of certain partner selection criteria in serving as a tool for establishing an IJV with a trustworthy partner.

Notably, Li and Ferreira's (2008) analyses of 286 ISAs between a US MNC (Multi-National Corporation) and a local firm in emerging economies reveal that US MNCs are more likely to select prior partners for ISAs when there is a larger institutional distance between the partners' countries of origin. They hold "Minimizing internal risks is even more important for ISAs in emerging economies because the institutions in place are ineffective in protecting alliance partners' resources/knowledge." Establishing relationships with prior partners has been recommended as a manner to ease knowledge transfer between partners and reduce potential transaction hazards stemming from opportunism (Li, Ferreira, 2008). Meanwhile, Li and Ferreira (2008) maintain, "The formal protection of intellectual property rights varies across countries and is typically weaker in emerging economies than that in developed countries such as the US and Western European countries. A clear solution to overcome these hazards, at least to some extent, may well be deepening the relationship with already known firms (i.e., repeated partnerships)." Yet, conflicts may arise as a result of different norms and values between ISA partners, leading to miscommunication and mistrust and perhaps, even, to the termination of the alliance. Thus, selecting partners with which MNCs have established trust and mutual understanding accelerates decision-making and reduces termination hazards between partners (Li, Ferreira, 2008).

4. FROM THE INTER-ENTERPRISE PERSPECTIVE

Not only for relationship governance, but also for partner selection, mutual confidence or trust between partners is inevitably important, which has been supported by many scholars related. Brouthers et al. (1995) regarded the strategic alliance as a way of sharing risk. In their words, "The strategic alliance, as a way of sharing risk, is becoming increasingly a necessity as certain industries move faster than individual firms can keep up." "By forming an alliance and sharing the risks, each firm could benefit while reducing their overall level of risk. Not only are financial risks shared in this venture, but competitive risks are also shared." "The fact that successful alliances must share risks also means that this sharing and equality of risks must be maintained. If one firm learns substantially more than the other firm, risks will no longer be in balance and the alliance will quickly dissolve, leaving one firm at a substantial disadvantage over the other in the marketplace." Actually internal risks in strategic alliances or cooperation can arise from the partners' opportunistic activities or opportunistic behaviors, such as that of ''free-riding'' on the partners' knowledge or of inappropriately capturing proprietary technologies (Li, Ferreira, 2008).

While through repeated interactions, partner firms are able to develop trust, understand each other's goals better, and manage their cooperative efforts more effectively (Doz, Hamel, Prahalad, 1989; Gulati, 1995a). Therefore, selecting a trustworthy ''old friend'' lowers the risk that partners will intentionally misbehave (Li, Ferreira, 2008). Bierly and Gallagher (2007) present that "Trust can be a substitute for formal control mechanisms, reduce transactions costs, facilitate dispute resolution, and allow more flexibility in an alliance." (Bierly, Gallagher, 2007) And social networks, cultural and organizational similarity, reputation, and propensity to trust will influence the degree to which a firm is trusted (Bierly, Gallagher, 2007). Brouthers et al. (1995) also state "Alliance partners should possess a mutual sense of trust. This trust is more likely to occur when complementary management styles simplify working contacts between operation staffs."

Especially when the partner selection decision is made under conditions of limited information, perceived trust of potential partners becomes an important issue (Bierly, Gallagher, 2007). And generally, the uncertainty associated with limited information creates opportunities for partners to act in an opportunistic and unfair manner, since written contracts and control mechanisms are less effective under conditions of uncertainty. Trust at either the individual or the firm level reduces the risks of opportunism (Bierly, Gallagher, 2007). Because when trust among partners is high, partners have more confidence in each other and the probability of opportunism decreases (Bierly, Gallagher, 2007). Li and Ferreira (2008) state "In higher risk, higher uncertainty environments, it is more efficient for MNCs to limit the search for partners to those familiar firms, probably prior partner, that they already know (Podolny, 1994)." "Forming ISAs with 'old friends' can effectively lower miscommunication between ISA partners and reduce internal risks associated with the ISAs."

Moeller (2010) also highlight partner selection as a means of minimizing opportunistic behavior by building trust in and commitment to a network that influences network performance. Simultaneously, he provides insights into partner selection as a management control mechanism, which controls the behavior and network performance of business network partners. Dong and Glaister (2006) maintain "partner-related selection criteria stress the compatibility and trust between partners and are largely related to transaction costs concerns." Shah and Swaminathan (2008) define trust as consisting of two dimensions: benevolence and competence. In their words, "Benevolence-based trust focuses on the motives and intentions of the alliance partners. It exists to the extent that partners in an alliance will act in a manner that shows their reliance on the partner's goodwill and avoidance of opportunism.

Competence-based trust exists to the extent that partners consistently exhibit traits such as credibility and expertise. As such, competence-based trust reflects the degree to which partners are willing to rely on each other's expertise, capabilities, and judgments."

Roy (2012) has agreed to such classification about trust of Shah and Swaminathan, and given more careful explanation. He presents "Benevolence captures the 'will-do' component of trustworthiness by describing whether a partner (trustee) will choose to act in the best interest of the focal firm (trustor)." "Benevolence delineates only a firm's intention to make things work, rather than its ability to accomplish that goal." "By comparison, competence captures the 'can-do' component of trustworthiness by describing whether the partner has the skills and abilities needed to act in an appropriate manner. A competent partner consistently exhibits credibility and expertise, as well as provides the competencies required for achieving the venture's tasks. Competence is concerned only with the ability to do appropriate things, not the intention to do so." Furthermore, through distinguishing between two dimensions of trustworthiness (benevolence and competence) Roy (2012) demonstrates that partner benevolence is facilitated by relationship-oriented criteria, whereas partner competence is facilitated by task-oriented criteria.

5. CONCLUSION

The paper has reviewed mainstream literatures related to influencing factors separately from the intra-enterprise, extra-enterprise and inter-enterprise, which affect partner selection mainly for innovation alliances, achieving internal and external integration. It's concluded the majority of authors have concentrated on all kinds of factors from internal enterprises (e.g., resource, technology, reputation, experience, strategy, culture, mechanism, structure, size, etc); some have turned their eyes to external enterprises, paying more attention to institutional environment (e.g., political, economic, cultural or social context) of host countries or institutional distance between partner countries especially in multinational cooperation; the rest have emphasized mutual confidence or mutual trust between partners from inter-firm relationship perspective, which is actually important and necessary for interaction or successful cooperation. Obviously, international scholars have been focusing on factors or criteria influencing alliance partners or cooperation enterprises selection for a very long time, which to some extent is the great contribution to the relevant research areas or fields.

Certainly some have adopted several methods like analytic hierarchy process (AHP), analytic network process (ANP), fuzzy approach, etc, or their combination, among which, Chen et al. (2010) applied AHP approach to selecting an R&D strategic alliance partner, Wu et al. (2009) used ANP approach for partner selection criteria in strategic alliances, Sarkis et al. (2007) developed a decision model using ANP methodology, Chen et al. (2008) established a mechanism for partner selection via adapting relative weights of criteria through ANP approach, Erkayman et al. (2012) proposed a fuzzy multi-criteria decision making (MCDM) approach to effectively select the most appropriate provider (using fuzzy analytical hierarchy process (AHP) technique to determine the selection criteria weights and applying fuzzy technique for order preference by similarity to ideal solution (TOPSIS) to obtain final rankings for providers), and Liou et al. (2011) combined fuzzy preference programming and the analytic network process (ANP) to form a model for the selection of partners for strategic alliances.

Comparatively, domestic authors, especially from Chinese mainland, have paid more attention to the selecting process and approach maybe called path or route in innovation cooperation activities. Notably Ye and Zhou (2004) explored the process of selecting the cooperation partners of virtual enterprise with quantitative selection method based on genetic algorithm. Su et al. (2006) presented an improved genetic algorithm. Zhang et al. (2007) adopted a modified grey multi-hierarchical

comprehensive evaluation method to give an overall and systematic evaluation for a three-level index system, deciding index weights through AHP and entropy approach. You and Huang (2014) established a grey fuzzy evaluation model to analyze partners of radical technological innovation. Dai et al. (2011) constructed a model about choosing partners with Theil index of non-equilibrium and fuzzy comprehensive evaluation method. Some authors have even introduced mutualism theory (Xue, Zhang, 2010; Liu, Wu, 2012), among which, Xue and Zhang (2010) analyzed conditions of mutual symbiotic relationship of high-tech enterprise alliances and employed the method of hybrid genetic algorithms.

Some like Yuan et al. (2004) applied game theory and model in the condition of asymmetric information and studied separating Perfect Bayesian Equilibrium and its influence. Sun et al. (2011) studied relationship between the selection of collaborative innovation partners and innovation performance based on innovation network theory. Others have still applied theories and methods in Extenics. For example, Meng and Deng (2005) proposed an extensive comprehensive evaluation approach and presented a comprehensive partner evaluation based on Extension Theory. Nie (2006) put forward a hierarchy variable weight priority degree evaluation method, whose agility and validity in application was further indicated with demonstration study. Several scholars of mainland in China have explored factors impacting partner selection for innovation alliances or R&D cooperation (Wang et al., 2013; Lu et al., 2006; Li, Luo, 2013). The empirical study based on questionnaire surveys has been adopted, verifying the relation between corresponding factors and cooperation satisfaction.

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