How to Evaluate the Prospective Partner in Inter-firm Cooperation in Innovation

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Abstract

Because innovation is costly and inherently uncertain, firms cannot always innovate alone. Searching for a partner is thus crucial. This requires understanding the criteria used by managers of innovating organizations in selecting collaborators. However, if in previous research there are sufficient studies of partner selection criteria and their influence on the alliance performance and on selection uncertainty, there is less about innovation context and how to evaluate the prospective partner. This research examines the context of innovation partnerships. It explores, especially, the mechanisms used by managers to assess their future partners. It is based on fieldwork at ten organizations in France. The results of the fieldwork show that four mechanisms can reduce uncertainty and help managers select appropriate partners: (1) relational, (2) contextual, (3) internal and, (4) contractual mechanism.

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Introduction

Partnerships are defined as "collaborative projects implemented by firms. Although cooperating with one another, the partner firms in such alliances retain their strategic autonomy. This definition, therefore, excludes mergers and acquisitions, that lead to loss of autonomy by at least one partner" (Dussauge and Garette, 1997). This definition of partnerships is consistent with that of many other authors. Stuart (1998) defines them as "contractual asset pooling or resource exchange agreements between firms".

Nowadays, firms are often unable to innovate alone. Indeed, innovation is a complex process, expensive and characterised by a high degree of uncertainty. For this reason, firms, in order to produce a new product, service or process, might search for a partner. However, previous research shows that there is a high degree of alliance failure. One of the factors that could be crucial to alliance performance is alliance formation, especially partner selection. This point is critical because characteristics of partners influence the degree of resource complementarity or indivisibility, and the extent of organizational and strategic fit (Luo, 1997).

The research to date has focused almost wholly on alliance formation and on partner selection criteria. Authors have reached an agreement that there are partner-related and task-related criteria. The importance of the criteria depends on the context of the partnership. Criteria for emerging market firms are not the same as those for developed market firms (Hitt *et al.*, 2000; Arinõ *et al.*, 1997; Beamish, 1987), nor are those for equity joint ventures the same as those for non-equity joint ventures (Geringer, 1991). So there is research into partner selection criteria, but more is required to explain how managers select and how to be sure of their decision. Therefore, in this research we examined partner selection in innovation alliances. We focused on methods that firms use to be sure of selecting the right partner. These mechanisms help to assess the prospective partner and to reduce partner selection uncertainty.

The main goals of this paper are thus:
1. to identify the most important partner selection criteria in the context of innovation.
2. to provide methods which can help managers choose the right partner and reduce selection uncertainty.
3. to formulate hypotheses about the relationship between partner selection criteria and satisfaction of the focal firm, methods used and uncertainty.
The paper is organized as follows. The next section reviews the literature on partner selection criteria in the context of innovation. The main part of the paper develops the hypotheses.

1. Background Literature

In this contribution, it is supposed that, cooperation, partnerships and alliances mean the same thing. They are "inter-organizational cooperative structures formed to achieve strategic objectives of the partnering firms" (Iyer, 2002). Alliances are viewed as vehicles to achieve individual and collective objectives, especially in terms of innovation. In many cases, "joint innovative activities and the sharing of knowledge are expected to generate higher innovative performance than when firms follow an individual innovation strategy" (Duysters *et al.*, 2003). There are many governance structures of alliances, including equity and non-equity joint ventures, R&D partnerships, licence agreements and manufacturing alliances.

Although research on alliances has dealt with the process of cooperation (Doz, 1996), less attention is addressed to the ex ante process, before alliance formation. Hitoshi (2002), by conducting fieldwork at twenty biopharmaceutical organizations in the United States, has identified phases of alliance formation processes: (1) defining alliance opportunities, (2) identifying prospective partners, (3) making contact, (4) due diligence process, and (5) making deals. In this paper, more attention is paid to the phase of identifying prospective partners.

Prior research on inter-organizational partnerships has suggested that the choice of a particular partner is an important factor that can influence the alliance performance (beamish, 1987; Geringer, 1991; Arinõ et al., 1977; Hitt *et al.*, 2000), and joint venture performance in particular "since it influences the mix of skills and resources which will be available to the venture and thus the international joint venture's ability to achieve its strategic objectives" (Geringer, 1991).

In the literature on inter-firm cooperation, the criteria used for selecting a specific partner seem to vary depending on the specific context of the alliances. That is to say that those selection criteria in international joint ventures (Geringer, 1991) are different from those in local partner research (Bailey *et al.*, 1998), and in R&D partner selection criteria (Hakanson, 1993). In the innovation context, we suppose that there are specific partners to choose prospective partners.

2. Methodology

This research set out to develop a model of partner selection that identifies the most important factors of the decision by doing fieldwork at ten organizations in France. This methodology is chosen because little is known in previous literature about cooperation in the specific context of innovation. Managers of innovating firms are interviewed about alliance formation, criteria of partner selection, uncertainty and how to assess the prospective partner. All ten organizations are located in the south of France. Of the ten, one is a non-profit, one a laboratory, two are public entities helping firms innovate, and others are industrial or commercial firms. They cover such domains as electronics, consulting, aviation and aerospace.

Initially, information about firms to interview was found on web sites. Managers are then contacted, first by email and then by phone to make appointments. Ten of sixteen managers agreed to be interviewed.

The interviews were semi-structured. They last from half an hour to one hour. I used tape recorders at nine interviews with the permission of managers. Only one manager did not want to be recorded.

Table 1. A description of organizations included in the fieldwork

N°	Firm	Interviewee	Domain
1	A public centre for innovation and technology transfer	President	Biotechnology
2	A private consulting firm	Director	Innovation and Business
3	A public centre for scientific research	Director	Electronics
4	A public centre for aeronautics	Director	Aeronautics
5	A public centre for innovation	Director	Intermediation – support firms to innovate – search for partners
6	A private research firm	President	Electronics
7	A public laboratory	Director	Electronics
8	A private firm	Engineer	Mechanics
9	A private firm	A manager	Electricity
10	A private firm	President	Electronics

3. Propositions

The dependant variable is alliance performance. This variable is defined according to whether there was mutual agreement between the focal enterprise and its partner regarding its behaviour and overall performance of the alliance. Arinõ (2003) proposes a definition of strategic alliance performance that encompasses both outcome and process performance. For her, "strategic alliance performance refers to the degree of accomplishment of the partners' goals, be these common or private, initial or emergent (outcome performance), and the extent to which their pattern of interactions is acceptable to the partners (process performance).

3.1. Partner Selection Criteria

The typology of criteria suggested by previous literature is based on the distinction between partner-related criteria and task-related criteria.

3.1.1. Partner-related criteria

Partner-related criteria have to do with the efficiency and the effectiveness of the prospective partner. As shown in the table below, trust and commitment are the most important criteria for all interviewees. After all, innovation is an expensive activity and firms should be engaged at long-term perspective to fulfil their innovative objectives

Table 2. Most important partner-related criteria according to the fieldwork

Case Study:	1	2	3	4	5	6	7	8	9	10
Trust	X	X	X	X	X	X	X	X	X	X
Commitment	X	X	X			X	X		X	X
Matching aims		X	X			X	X	X	X	X
Cultural compatibility						X		X	X	X

One of the interviewees said that:
"*Initially, the question is: Does the partner react when an alliance is proposed? Certainly, motivated partners, in general, are always the first to answer, and those who consider the project not important take a lot longer to answer. Thus, the motivation is a criterion correlated with the commitment of the prospective partner to the proje*ct".

And another commented that:
"*To chose the right partner, firstly we should discuss, communicate so that we know if we have the same objectives for entering the future alliance or not. I think that it is the initial step to take when we seek a partner. That is, although partners can have different activities, they could cooperate if they have the same or, at least, compatible objectives*".

Proposition 1: Trust, commitment and compatible objectives are the most important partner-related partner selection criteria in inter-firm cooperation in innovation.

3.1.2. Task-related criteria

Task-related criteria are "associated with the operational skills and resources that a venture requires for its competitive success" (Glaister and Buckley, 1997). Thus, they are variables which refer to the viability of the alliance. It appears that financial resources are crucial to the success of the project.

Knowhow and technological competence are also important. The partner's willingness and ability to supply technical and financial resources are seen as important (Bailey *et al.*, 1998).

Table 3. Most important task-related criteria according to the fieldwork

Case Study	1	2	3	4	5	6	7	8	9	10
Financial resources	X	X	X	X		X	X	X	X	X
Competence and knowhow		X	X	X	X	X	X	X	X	X
Technical capabilities			X	X		X	X	X	X	X

When asking about resources of prospective partner, a director of a public organism commented that:
"*The financial soundness of the partner is, of course, the most important resource. It is something very important especially for innovation projects, which are, in general, costly*".

Proposition 2: Financial resources, technology and competence are the most important partner-related partner selection criteria in the context of innovation.

3.2. Partner Selection Uncertainty

Selection uncertainty "depicts a condition in which firms do not know a priori which alliance partners will best serve their interests" (Hitoshi, 200). Consequently, it is crucial for managers to reduce selection uncertainty prior to alliance formation. In previous research, there are many studies about alliance risk and uncertainty. It is known that there is a relational risk and a performance risk in alliances (Das and Teng, 1996, 1998, 1999), but less is known about the risk and uncertainty before alliance formation. Concerning the components of selection uncertainty, Hitoshi (2002) suggests three parts about (1) technological competence of prospective partners, (2) behaviour of prospective partners, and (3) commercial success.

First, because technology is crucial in innovative collaboration, it is important to know whether prospective partners have the technological ability to achieve the objectives of the future partnership. Second, it is important to reduce the ambiguity about the future behaviour of prospective partners. And, finally, firms should attempt to determine the future commercial success of the innovation project, the purpose of the alliance.

3.3. Evaluation and Uncertainty Reduction Mecanisms

How to assess the resources of prospective partners has been somewhat neglected by recent research into partner selection. However, companies should conduct projects to ascertain how well they could work with potential partners (Bailey, Masson, Raeside, 1998). Based on some studies, an evaluation framework has been developed.

3.3.1. The relational mechanism

Because the search for partners is costly and time-consuming (Duysters, Hagedoorn, Lemmens, 2003) and because of the inherent uncertainty of R&D and innovative collaborations (Hakanson, 1993), firms are inclined to collaborate with partners with which they have had favourable past contacts. Hence, social capital is an important driving force in the alliance formation process (Chung, Sing, Lee, 2000). It is evident that managers who have personal and social relationships are better able to transmit detailed, timely, accurate, and reliable information. "Ties and personal rapport enable firms to collect information about the technological competence of prospective partners, and thus contribute to the reduction of selection uncertainty (Hitoshi, 2002).

When asked about how to be ascertained with the partner selected, a director replied:
"*In my activity, I work with a network. Thus, I know all the members of the network because I have met them at least once. Therefore, I identify, for instance, which company has the competences I need because I met people and I know what they do in their organizations. Thus, I know the competences of the prospective partner because either I already worked with the company or I once had a relationship*".

Proposition 3a: Partner-related criteria trigger the relational mechanism.
Proposition 3b: Previous favourable relationships between firms reduce partner selection uncertainty.

3.3.2. The internal mechanism

This mechanism involves the focal firm's collaborative knowhow and "boundary-spanning" (Hitoshi, 2002).

We suggest that firms that have collaborated actively in the past know how to proceed with future alliance formation and, more crucially, how to evaluate information about prospective partners and then to find the appropriate partner.

It is also raged, in organization research, that boundary spanning agents are necessary to gather the new information, especially in turbulent environments (Hazy, Tivman, and Schwandt, 2003).

In this study, boundary spanning is a means of knowing about prospective partners. It involves web sites, patent databases and commercial databases that help the firm to collect information about which firm has what technology, which firm has financial resources, and so on. One of the directors commented that:

"*Sometimes, for a small structure, a start-up, which is seeking a competence in a particular field, in general, it is via Internet that we find it. Thus, a structure like ours has web sites. We look after them so that other managers can visit them and find crucial information. So there are webmasters who are managing them. Our aim is to help companies that are looking for support and to inform them about our competences, knowhow and talents*".

Proposition 4a: Collaborative knowhow and boundary-spanning are mechanisms to assess task-related selection criteria.
Proposition 4b: Collaborative knowhow and boundary-spanning reduce partner selection uncertainty.

3.3.3. The contextual mechanism

In a world where information is imperfect, the reputation of prospective partners can be a means of reducing uncertainty. After all, "positive reputation signal past performance, positive attributes, and expected future behaviour" (Podolny, 1994). It conveys an idea of a partner's product quality, relationships, success, patents and publications, and also of its history of alliances. A president of a private company, for instance, commented that:

"*Businesspeople know each other, and know companies which have good reputations. We know their activity and managers' behaviour in this specific activity from international publications, from the quality of their products, from the history of collaboration contracts they have entered into*".

Proposition 5a: Reputation is a contextual mechanism to assess partner-related criteria.
Proposition 5b: Reputation reduces partner selection uncertainty.

3.3.4. The contractual mechanism

The analysis of Hakanson (1993) shows that, in R&D cooperation, contracts and agreements should avoid detailed specification of procedures to be followed. Although contracts may reduce the flexibility of collaboration, they regulate task sharing and provided legal safeguards. A president of a private firm commented that:

"*The contract is an obligation. In innovation we are never sure, so we sign a contract which contains the schedule, and in which we can explain in detail the way we will go together. That should be presented initially in the contract. It also contains financial aspects, patent rights aspects and intellectual property clauses so that all the fields in which there could be conflict are not resolved, but regulated from the start*".

Proposition 6a: The contract is a mechanism to assess both partner-related and task-related partner selection criteria.
Proposition 6b: Contract design reduces partner selection uncertainty.

Conclusion

This study explored the relationships between various aspects related to partner selection in collaboration in innovation. Fieldwork done at ten innovative organizations in France suggests that the key results of this work are propositions about the most important partner selection criteria: trust, commitment and compatible aims on one hand, and financial, technical resources and competences of the prospective company, on the other. Four methods of assessing future partners and reducing uncertainty are also identified: the relational, contextual, internal and

contractual mechanisms. However, we ignore if in fact the selection of a partner with the criteria listed above makes the alliance successful. This suggests that a critical area for future research is to test, empirically, the influence of these criteria and of the four mechanisms on alliance performance. Future quantitative research will provide more information about partner selection.

Indeed, the second phase of this research a survey of a wide range of European companies involved in innovative activities and are or were partners to inter-firm collaboration.

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