

Value perceptions and performance of research joint ventures: An organizational learning perspective

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Abstract

This paper focuses on a knowledge-based view to examine the relationship between the perceived value of a research joint venture (RJV) and its performance (expectation–result relation). Using data from 247 European firms involved in RJVs we identify four groups of RJVs categorized by perceived value and performance of the RJV. The effect of the level of radicalness of research and the learning and knowledge management on this relationship was studied to provide insights into these relationships. Our findings suggest that the relationship between expected value and performance may not be a linear relationship. RJV's level of radicalness of research was found to be a major moderator of this relationship which is a slight adjustment to social cognitive theory's outcome expectations suppositions.

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1. Introduction

Historically, firms organized research and development (R&D) internally and relied on outside contract research only for relatively simple functions or products (Mowery, 1983; Nelson, 1990). Currently, global competition, along with the growth of technological advances and product complexity requires that an organization possesses knowledge and skills in multiple intellectual fields that have to be upgraded constantly in order to meet changes in market conditions and customer expectations. Many companies cannot rely exclusively on their internal skills and knowledge in maintaining innovativeness and demand a range of intellectual and scientific skills that far exceed the capabilities of any single organization (George, Zahra, Wheatly, & Khan, 2001; Iansiti & West, 1997). At the same time, communication, collaboration, and integration are required to maximize the synergy between the various interdependent parts (Hitt, Hoskisson, & Nixon, 1993; Moenaert & Souder, 1990).

This situation has made companies explore innovative ways that embrace and integrate external knowledge in conjunction with internal R&D. In recent decades, there has been unprecedented growth in Research Joint Ventures (RJVs) in order to expand firms' knowledge bases and develop new skills. An RJV is a collaborative agreement in

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which two or more partner organizations decide to coordinate their R&D activities through a cooperative project and to share the knowledge generated from this joint effort. Drucker (1995) has stated that the greatest change in the conduct of business is the accelerating growth of relationships based not on ownership but on partnership.

The increasing importance of RJVs has resulted in growing interest in theorizing on potential causes and consequences. As technology management has become ingrained within the field of knowledge management, so to have RJVs has been viewed and studied from this broader knowledge management perspective. In this context, the emergence of resource-based theoretic approaches – especially those emphasizing the role of knowledge – has provided a broader basis upon which to build a theory of inter-firm cooperation (Grant & Baden-Fuller, 2004).

It is generally presumed that research partnerships result in positive outcomes for member firms and that the long-term success of this strategy depends on the appropriate integration of knowledge and learning developed during the R&D process. In light of the importance of this association it is surprising to find relatively few empirical investigations focusing on how knowledge management and learning are integrated and related to the performance of these research partnerships (Luukkonen, 1998; Sakakibara, 1997).

In this paper, using underlying theoretical foundations from the knowledge base view of firm as our underpinning, we empirically explore the factors that determinate, or moderate, the relation between the perceived value of the RJV and its performance (expectation–result relation). In order to do this, we first study the existing relation between performance and the perceived value of the RJV. Secondly, the effects of the level of radicalness of the R&D project and the learning and knowledge management on this relationship between perceived value and performance results are investigated. The empirical analysis is based on data collected from 247 European firms involved in RJVs.

In doing so, we offer three main contributions to the literature of RJVs. First, we suggest and find that the relationship between expected value and performance may not be a linear relationship, and moderate social cognitive theory's outcome expectations suppositions. Second, RJV's level of radicalness of research is found to be a major moderator of this relationship. Thus, without previous knowledge related to the R&D project, firms show more difficulties in correctly valuing benefits of the RJVs. And third, we establish that the adoption of learning and knowledge management practices that include close interaction through joint research tasks and encouraging more informal communications among partners may all help in improving the expectation–result relation.

2. Theoretical framework

We have defined an RJV as a collaborative agreement in which two or more partner organizations (firms and/or public research organizations) decide to coordinate their R&D activities through a cooperative project and to share the knowledge generated from this joint effort. Each partner within an RJV brings their own relative expertise to the newly created project in the hope that this combination of skills will produce benefits for all those concerned. By firms joining with different skills and knowledge bases, an RJV creates unique and usually synergistic learning opportunities for the partners (Inkpen, 1998). We can thus define an RJV as a complex agreement between organizations whereby learning takes place.²

RJVs are mechanisms enabling firms to learn and enter new technological areas and to deal more effectively with technological and market uncertainty. Characterized by a network organization, its learning is described by a collective acquisition of knowledge among a set of organizations. This characteristic supports the concept that learning is a social construction process (Brown & Duguid, 1991). A synergistic characteristic of knowledge is that its value increases when it is shared and integrated with others. Consequently, other RJV members will enhance an individual firm's learning. Larsson, Bengtsson, Henriksson, and Sparks (1998) described this inter-organizational learning as distinct from organizational learning by including the learning synergy or interaction effect between the organizations that would not have occurred if there had not been any interaction.

In effect, the formation of a RJV is an acknowledgment that a RJV partner has useful knowledge. If the knowledge were not useful, there would be no reason to form the alliance (Inkpen, 1998). Economic analysis of technological innovation would argue that the motivation leading private profit-oriented firms to enter into an RJV is to gain access to basic knowledge (a knowledge resource-based theory), especially when internal incentives to invest is low.

² In some cases, the shared resources are strictly financial, limiting partner-learning opportunities; but in this paper we focus on RJVs, collaborative agreements in which firms gain access to their partners' skill and knowledge.

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