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Interfirms Collaboration - the Basis for Interorganizational Innovation

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Abstract
In the current economic environment, interfirm collaboration for innovation is increasingly present because of the opportunities for growth and development that it offers to the partners involved and it is included in the company's strategy, designed primarily to obtain high competitiveness. This paper aims to highlight the forms/modalities of inter-firm collaboration through which interorganizational innovation is achieved (strategic alliances, strategic entrepreneurship), and organizational levels at which this occur (subsidiaries of multinational organizations, departments of R & D).

Keywords: innovation, interfirm collaboration, interorganizational innovation, co-innovation, incremental innovation, radical innovation, transformational leadership, strategic alliance, strategic entrepreneurship

JEL code: F23, M10, O30

1. Introduction

Innovation is an activity from which results a new or significantly improved product, good or service or a new or significantly improved process, a new marketing method or a new organizational method in business practices, in organization workplace or in external relationship. Innovation is based on new technologies outcomes, new combinations of existent technology or utilization of other knowledge obtained by the organization. The main types of innovation are: product innovation, process innovation, organizational innovation and marketing innovation. (INS, 2009). At organizational level, innovation is defined as „development and implementation of new ideas which peoples engage over time in transactions with others in an institutional context" (Van de Ven, 1986 apud Boboc, 2009). Organizational innovation contributes to organizational change and the more innovation is required in an organization, the more the need for cooperation to cope better with changes. Furthermore, as an organization is opened to collaboration with other organizations, the more it will has to manage the necessary innovation process.

2. The necessity of interfirm collaboration in the global economy

In the literature devoted to innovation, interorganizational collaboration has been considered to be beneficial for firm's capacity of innovation. Companies must consider the concept of a portfolio of interorganizational arrangements when they implement innovation strategies in order to be effective in developing new and improved products and technologies. To the extent that the firms tend to multiple innovative outcomes, their innovation strategy may involve an appropriate and balanced set of arrangements for interorganizational collaboration. If the firms engage in a variety of different inter-organizational collaboration (customers and suppliers, on the one hand, universities and research centers, on the other), the more likely they will create new or improved products which are successfully marketed. This underlines for senior management the relevance of adopting a portfolio approach for interorganizational collaboration in order to achieve results both in terms of existing technologies development and creating some new ones. (Faems, Van Looy, Debackere, 2005)

In the early stages of innovation, knowledge sharing in some industries may be a way through which a company can increase long-term innovative performance, whereas many companies build their strategies for sharing technological knowledge with competitors and those companies that share knowledge with their national innovation system (NIS - National Innovation System) acquire superior innovative performance compared with firms that are not doing this. In addition, companies that interact with their global innovation system (GIS - Global Innovation System) acquire innovative performance higher than firms who deal only with NIS. (Spencer, 2003) These considerations should help managers and researchers to understand how to develop technological strategies in integrated global industries.

3. Organizational structures - frameworks for innovation in collaboration

3.1. Innovation in R& D consortia

The importance of R & D consortia resides in informal interactions between inventors within these consortia on one hand, and those with suppliers and customers, on the other hand, and these interactions influence knowledge creation. These informal relationships can be seen as a part of the firm's strategy to enhance innovation capacity without entering into formal partnership relations that may subsequently arise in a the conflict over property rights.

Measuring and rewarding innovation performance is essential for managers of R & D to be able to encourage employees to develop both incremental innovations and radical innovations because, although radical innovations are typically more difficult to implement than the incremental and also, generating longer-term value, organizations need to invest in them because of the importance of radical innovation for renewing the organization.

In this context, microfoundations emerged as an important theme in strategic management research for its aim to enhance current understanding of several issues, central to strategic management by studying organizations in terms of individual actions and interactions and to strengthen strategic research in many areas of major interest, such as learning organization, knowledge transfer, innovation and competitive advantage. (Felin and Foss, 2006) The key objective is to provide new insights into the use and successful management of interorganizational relationships for creation and exploitation of new knowledge (Roman, 2009), necessary in interorganizational innovation processes.

Then, in accordance with the same approach, a project manager must check before starting an interfirms project the existence of a clear need of the customer, the business viability for both partners, and a clearly defined purpose of the project. (Roman, 2009) Also among the key factors considered by the project manager is specifying clear targets and responsibilities for all participants, and ensuring direct interfirm links between professionals who have complementary knowledge base. Finally, for the complicated technical issues is vital that project managers establish a specialized and heterogenic working group to support the analysis from different perspectives and to recommend appropriate actions to be performed.

An integrated approach to innovation which synthesizes the variables in previous approaches is suggested by Shaista E. Khilji, Tomasz Mroczkowski, Boaz Bernstein in a model that can be adapted in industries where innovation is required as a necessity in the current competitive context and can guide managers to make decisions more effectively in the future (Khilji, Mroczkowski and Bernstein, 2006) (Figure 1). The authors suggest that entrepreneurs can not rely solely on inventions but must invest in a timely application of knowledge to organizational and market forces in order to take full advantage of innovative potential benefits associated with industry.

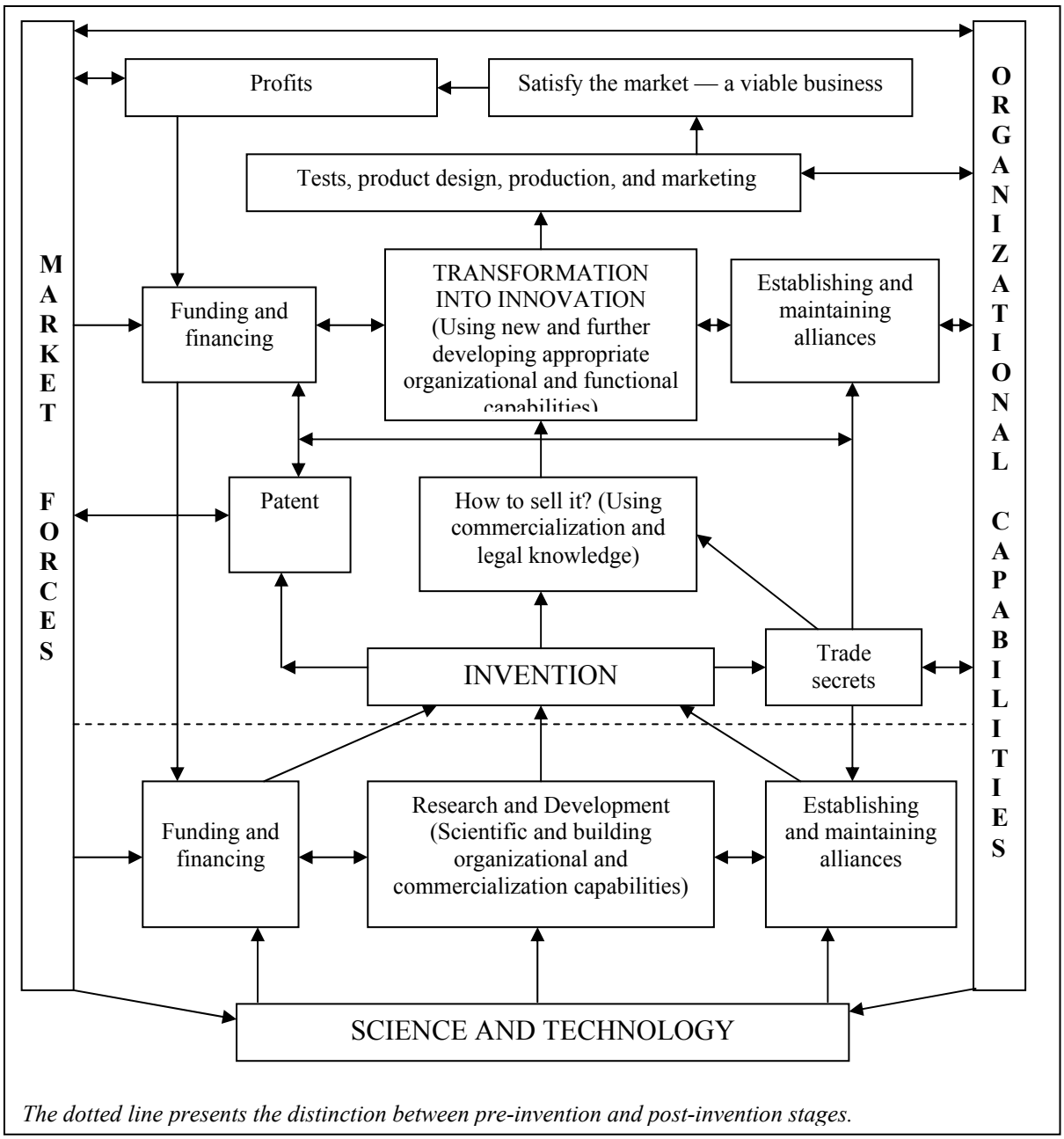

Figure1. A model of integrated innovation management

Source: Adapted by Shaista E. Khilji, Tomasz Mroczkowski, Boaz Bernstein – *From Invention to Innovation: Toward Developing an Integrated Innovation Model for Biotech Firms*, The Journal of Product Innovation Management, J PROD INNOV MANAG 2006; 23: 528–540

3.2. Innovation in MNCs branches

With regard to innovation in the MNCs (Multinational Corporations) innovative research in subsidiaries abroad is driven by the interaction between innovation strategies of the subsidiaries, the evolution of their specific technical competences and "belonging" to the local community that shares knowledge. Although the strategies, specific skills and behaviors are shaped by institutional context firms in which they operate and remain an important frontier for strategic research, one with important implications for both practicing managers and public policy makers, highlighting the location of technical competencies within organizational subunits is vital. Particularly important is the discovery that the majority of specific technological competencies of an organization's tend to a large extent to be build on ideas originating in geographical proximity. (Frost, 2001). Focusing on branches is particularly interesting because they are simultaneously embedded in two contexts of knowledge: (a) the internal environment of MNC composed by headquarters and other subsidiaries and (b) an external environment of the host country or

regional firms. The extent of influences of these contexts on technological innovation in branches depends on knowledge network features (technological richness and diversity) and its subsidiaries knowledge links with other entities. The emphasis on double effects of corporative context and geographical context in influencing corporate innovation leads that (a) subsidiaries of the same company located in different regions or (b) subsidiaries of different companies placed in the same region may develop various specific skills. (Almeida and Phene, 2004). Traditionally, subsidiaries in developing countries were presumed to simply adapt the technology from parent MNCs. But recent studies, reflecting the idea that innovation by multinationals involves more distributed processes of knowledge creation and diffusion, have shown a wider role for subsidiaries' technological activities. (Kuemmerle, W., 2001). These studies recognized that subsidiaries can develop a unique stock of assets – a collection of skills, capabilities, products and know-how on which the rest of the corporation starts to depend. Furthermore, the subsidiaries' development of these unique resources may not always depend exclusively on the MNC's headquarters' decisions. Moreover, subsidiaries may actively seek to attract capacities and resources from the rest of the corporation, and from other international and local companies, as well as invest in developing of their own technological capabilities.

4. Strategic alternatives for collaboration in innovation

4.1. Strategic alliances for innovation

Strategic alliances, as forms of interorganizational collaboration, mainly aimed at/to performance improvement of companies involved. Alliances are access relationships, and therefore the benefits that a contact company can get from a portfolio of strategic coalitions depend on the resource profile of alliance partners. In particular, large companies and those who possess resources such high technology are considered to be most valued partners and organizations with large and innovative alliance partners have better results than other comparable firms that lack such partners. In addition, alliances are more than ways to share resources and know-how; they also can be signals expressing social status and recognition: alliances with well known partners can enhance the reputation of less known partners, in addition to providing access to resources as technological know-how and new customers. Also, new and small firms benefit more from great and innovative partners in the strategic alliance than large and mature organizations. (Stuart, 2000)

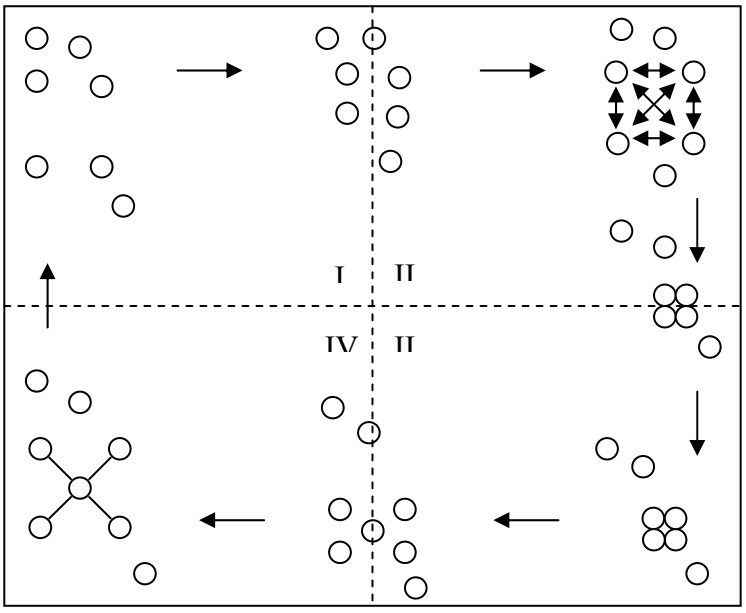

Figure 2. Four stages in the development of co-innovation strategies

Source: Bossink, A.G. B. – *The development of co-innovation strategies: stages and interaction patterns in interfirm innovation*, R & D Management 32, 4, 2002, Blackwell Publishers Ltd, 2002, Published by Blackwell Publishers Ltd, 311108 Cowley Road, Oxford OX 41 JF, UK and 350 Main Street, Malden, MA 02148, USA

More specific, organizations that choose or are forced to innovate in cooperation with other organizations go through four stages of development of co-innovation strategy. These stages are:

(i) achieving autonomous strategy – organizations develop their own strategies, (ii) achieving cooperation strategy – organizations focused on developing innovation strategies in close cooperation with other organizations, (iii) creating an organization for co-innovation – organizations jointly found an organization that develops co-innovation programs, and (iv) realization of innovations – organizations develop innovations based on co-innovation programs and strategies. (Table 1 and Figure 2). When co-innovative organizations are satisfied with the results of innovation, they dismantle the organization created for co-innovation. This places them in a renewed state of the first stage. (Bart A. G. Bossink, 2002) Organizations that want to consolidate or to defend their market positions, partially renounce to their independent position, develop and implement strategies for co-innovation with other organizations and then use the results of these strategies to strengthen their autonomous market positions.

4.2. Strategic entrepreneurship for innovation

Another form of interorganizational collaboration is strategic entrepreneurship which refers to the pursuit of superior performance by firms simultaneously through the search for opportunities activities and search for benefits activities. This requires innovation in collaboration, which is pursuing innovation beyond the boundaries of the firm through dissemination and sharing of ideas, knowledge, expertise and opportunities. Innovation in collaboration can be seen as a means to supplement the efforts of individual firms to innovate in order to maintain continuous innovation, enabling them to bridge the gap between the level of innovation they have and that they need.

Table 1. Co-innovative interaction patterns

Stage	Interaction pattern
I. Autonomous strategy making	- Organizations choose to or are forced to innovate and explore co-innovation possibilities with each other.
II. Co-operative strategy making	- Organizations negotiate about costs and revenues with each other.
III. Founding an organization for co-innovation	- Organizations enter into contact with each other. - Organizations reach agreements with each other. - Organizations develop innovation plans with each other. - Organizations found an organization for co-innovation with each other. - Organizations establish governance bodies in which they are represented.
IV. Realization of innovations	- Organizations come together to realize innovations. - Organizations use management methods to manage the process of innovation realization. - Organizations need innovation champions and leaders that drive innovation creation. - Organizations communicate with the market.

Source: Bossink, A.G. B. – *The development of co-innovation strategies: stages and interaction patterns in interfirm innovation*, R & D Management 32, 4, 2002, Blackwell Publishers Ltd, 2002, Published by Blackwell Publishers Ltd, 311108 Cowley Road, Oxford OX 41 JF, UK and 350 Main Street, Malden, MA 02148, USA

A variety of theories, including networking, learning, resources-based view and real options view argues that innovation in cooperation – creating the innovation beyond the boundaries of a firm through the sharing of ideas, knowledge, expertise and opportunities – can also allow small and large companies successfully engage in a strategic entrepreneurship. (Ketchen, JR., Duane Ireland and Snow, 2007). Transformational leaders are those leaders who transform followers' personal values and self-concepts, move them to higher levels of needs and aspirations, and raise the performance expectations of their followers. This leadership has four components: charismatic role modeling, individualized consideration, inspirational motivation, and intellectual stimulation. Being the fact that organizational innovation was conceptualized as the organization's tendency to develop new or improved products and services and its success in launching these products and services on the market, the transformational leadership as internal support is an important determinant of organizational innovation and encourages managers to employ transformational leadership behaviors to promote organizational innovation. But the support coming from outside the organization, with the purpose of acquiring the knowledge and resources, respectively external technical and financial support, may constitute a more important contextual influence in the accelerated growth of innovation than a national climate favorable to innovation. Therefore, the managers, particularly those of the small and very small companies, should play roles such as overcoming boundaries and building relationships with external institutions that provide financial and technical support because only internal support may not be sufficient to promote

organizational innovation, especially incremental innovation implied by *developmental work*[*]. Moreover, the support received from outside the organization serves as a lever for transformational leadership effect on organizational innovation. (Gumusluoglu and Ilsev, 2009)

5. Conclusions

Interorganizational innovation represents an area of current and future interest that requires different approaches depending on the strategies adopted, the agreements between companies that collaborate and the innovation positive results for all stakeholders. It is obvious that the strategic choices of companies in order to cooperate in innovation can take various forms, which combines modalities presented in this paper, such as a strategic alliance between R & D departments of firms which activate in complementary business areas. Also inter-organizational innovation through collaboration, between private sector and the public sector, is possible and desirable. In any case, the benefits of collaboration in innovation must be at least the following: reducing the risk in the organization, pursuing economies of scale, achieving the benefits from the exchange of technologies, increasing the competitiveness, overcoming investment barriers.

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[*] In the 1990s, the concept of Developmental Work (DW) has shifted the focus of Danish labor market attention from wages and working time toward work and production. For employees, DW promises a range of possibilities both for improving the working environment and for their involvement in strategic decisions, as well as aspects associated with the social responsibility of the firm. For firms, DW promises increased competitiveness and improved products. (Hvid, H., Møller, N., 2001)