Innovation in Outsourcing Alliances: Managing the Prisoner’s Dilemma of Cooperative Competence Building

Marc-Michael Bergfeld ¹ and Benedict C. Doepfer ²

¹bergfeld@courage-partners.com
Munich Business School and Courage Partners, Dr. Appelhansweg 2, D-82340 Feldafing / Starnberger See, Germany
²benedict.doepfer@ku-eichstaett.de
Catholic University of Eichstaett-Ingolstadt, Centre for Entrepreneurship, P.Phil.-Jeningen-Platz 2, D-85072 Eichstaett, Germany

Research of inter-corporate co-operation has discussed that independent companies can reduce costs and foster innovation by sharing their respective competencies in alliance settings. Empirical evidence, however, has shown that inter-corporate innovation is dependent on knowledge and technology transfer which depend on supporting conditions and conscious execution. This work addresses the terms & conditions under which innovation can be successfully created in inter-firm outsourcing alliances.

We concentrate on the game theoretical concept of the prisoner’s dilemma. It serves as a framework to explain the existence of innovation barriers within inter-corporate outsourcing co-operations by integrating current research results from the fields of innovation management, outsourcing and business ethics. Based on existing literature, we propose two future research dimensions which shall identify and systemise the pre-requisites of co-operation for innovation and long-term mutual advantage in outsourcing alliances.

1. Introduction

Traditionally, outsourcing has been seen as a strategic concept to reduce process costs by buying externally developed components instead of leaving them in-house. Outsourcing has been discussed as panacea for improving efficiency along different dimensions of the corporate value chain. This merely transaction cost based approach has been refined to a resource based (Espino-Rodriguez/Padrón-Robaina, 2006) and competence based approach (Quinn, 1999). Lately, even entire business processes have been outsourced to those service providers which hold the respectively best competencies. The practical focus of outsourcing has largely been tied to the cost perspective. Only recently have practical and academic domains looked at outsourcing relationships from an innovation perspective (Quinn, 2000; Howells, 2000). Herein, the importance of partnership quality in outsourcing has been pointed out (Lee/Kim, 1999; Perrons/Platts, 2004). However, research regarding the actual execution of innovations in such partnerships remains to be elaborated. In particular it has been neglected to look at such outsourcing alliances as collaborative innovation ventures which run the risk of failure through e.g. knowledge and technology loss. This work addresses this phenomenon by integrating perspectives from the research areas of:

- innovation management
- outsourcing
- business ethics

The focal research question is: “How inter-corporate competence building can be achieved within outsourcing alliances – esp. in the logics of the prisoner’s dilemma”. Section 2 presents the academic foundation by giving a brief overview of the current understanding of cooperative innovation, innovation outsourcing and business ethics. Section 3 points to the prisoner’s dilemma as a conceptual framework for the three areas and explains the existence of innovation barriers within outsourcing co-operations. Section 4 presents two research areas which need to be elaborated to overcome innovation barriers in inter-corporate outsourcing alliances. Finally, Section 5...
gives a short outline regarding the main goals of future research in the area.

2. Dimensions of inter-corporate innovation, innovation outsourcing and business ethics

Inter-corporate innovation

Research has shown that innovation is no longer an initiative of single corporations or isolated R&D departments, but has become an activity which spans across corporate and international boundaries in an global (Boutellier et al., 2008) and open (Chesborough, 2008) logic.

Increasingly, innovation initiatives do not only root in corporate know how (i.e. corporate resources and competencies), but also in inter-corporate know-who based entrepreneurship (Harryson, 2008). Active knowledge sourcing in international and inter-corporate networks has become a hot topic of practical and academic discussions (Gassmann/Gaso, 2004) and entire innovation projects may be outsourced to partners external to the corporate headquarters (i.e. intra-company networks, Bergfeld, 2009) or external to the respective firm (i.e. inter-corporate innovation networks, Vanhaverbeke/Cloodt, 2006; Gilsing, 2005). The strategic and longterm management of such networks has been identified as essential task for corporate strategy in the future (Bergfeld, 2009).

Within such alliance structures for innovation the challenges of co-operation have been pointed out and brought into the context of game theory and the prisoner’s dilemma (Trott, 2008).

Innovation Outsourcing

The outsourcing discussion provides to dominating motivators for co-operation with an external partner: Efficiency through cost reduction and effectiveness through competence leveraging (Bengtsson/Haartman/ Dabhilkar, 2009).

In cases of strict core competence focus, outsourcing of innovation has been limited to the external acquisition of ready made technology (Quinn, 2000). In these cases, innovation is not executed in co-operative arrangements but only the results are traded between companies. In this rather traditional make-or-buy perspective of outsourcing, the prisoner’s dilemma has already been applied to emphasize the relevance of long-term relationships in outsourcing innovation (Perrons/Platts, 2004). However, the service provider is still interpreted as result delivering party instead of being a long-term partner that co-executed innovation in a repeated game of trust and collaboration.

Equally, game theoretic elements have been applied to prove the existence of a prisoner’s dilemma in international outsourcing co-operations and explain them theoretically via an economic analysis (Marjiit/Mukherjee, 2008).

Business Ethics & Inter-corporate Innovation

The academic domain of business & corporate ethics provides a basic framework in which corporate behavior can be analyzed against the background of corporate conduct, morals and social responsibility (Homann/Blome-Drees, 1992; Crane/Matten, 2004; Homann/Koslowski/Luetge, 2008). More specifically, inter-corporate behaviour and its challenges are explained in the school of economic business ethics (Suchanek/Waldkirch, 2002). Here, the ethical perspectives are integrated to an economic framework through the application of the prisoner’s dilemma.

These concepts have recently been extended in the direction of concepts such as Corporate Citizenship and Corporate Social Responsibility which look at the role of corporations in wider society and their responsibility herein (Habisch/Jonker/Schmidpeter/Wegner, 2005; Conill/Luetge/Schönwälder-Kuntze, 2008).

The role of business ethics and corporate values in entrepreneurial ventures has been touched upon recently (Tokarski, 2008; Timmons/Spinelli, 2007) and trust, risk and control have been recognized by innovation scholars to be important in collaborative technology development (Hoecht/Trott, 1999) as well as service relationships (Coulter/Coulter, 2003). Further, institutions and forms of co-ordination (Nooteboom, 1996) have been conceptually combined with the dimensions of trust, Opportunism and Governance (Nooteboom, 1996). Further, it has been pointed out that relational governance can be a valid inter-organizational strategy to promote entrepreneurial and innovation management (Zaheer/Ventraman, 1995) and might complement the mere establishment of trust through contractual arrangements (Goo/Nam, 2007).

3. The prisoner’s dilemma – an integrative framework for managing innovation barriers in outsourcing alliances

In the traditional view of individual profit maximization by single organizations gives rise to two dimensions of discussion regarding outsourcing relationships:

- The outsourcing party wants to reduce its costs and maximize profits through outsourcing. At the same time, the firm wants to protect its specific firm competencies and transfer the least possible amount of knowledge and technology to the service provider.

- The service providing company, on the other hand, wants to maximize its profits and absorb as much knowledge and technology as possible in the outsourcing relationship to extend its corporate competencies and potentially extend its value chain in the future.

Hence, profit maximization and seeking / protecting core competencies on both sides of the outsourcing alliances hinders knowledge and technology transfer and innovative activity. The outsourcing alliance might be financially sensible but is incomplete in terms of
leverage the innovation potential because both parties fear knowledge & technology leakage (Quinn, 1999; Quélin/Duhamel, 2003) and run the risk of trust abuse & lack of commitment from the respective counterpart (Hoecht/Trott, 2006; Quinn, 1999). In essence, the alliance faces a Principal-Agent-Problem (Akerlof, 1970) and a prisoner’s dilemma. In this context, there are four quadrants of possible development in the outsourcing alliance:

- Both parties collaborate and win from the alliance (i.e. 3/3 points). Ideally, an equal and free sharing of knowledge and technology leads to the creation of new systems, products, processes or services together.

- The outsourcing party collaborates by providing knowledge and technology to the service provider who, in turn, defects and absorbs the received competencies. The service provider learns from the alliance and becomes a competitor to the originally outsourcing parts (i.e. 0 points for the outsourcing party and 5 point for the defecting service provider).

- The service provider collaborates by providing knowledge and technology to the outsourcing party who, in turn, defects and absorbs the received competencies. The outsourcing party profits more from the alliance than the service provider because it uses his specific resources, pays comparatively little for it and internalizes the initially service provider specific competencies (i.e. 0 points for the service provider and 5 point for the defecting outsourcing party).

- Both parties defect, mistrust and try to maximize their knowledge and technology profits from the alliance without contributing their specific competencies. The game is inefficient. Both parties achieve merely 1 point.

In essence, lack of trust and fear of leakage hinder the contribution to the respectively given competencies and a win/win position (i.e. upper left quadrant). On the other hand, both parties are tempted to defect to maximize their individual profits and absorption of knowledge and technologies.

Overall, the game of collaboration in the outsourcing alliance does not reach a win/win position. The maximum of value creation in terms of overall profit as well as knowledge and technology extension is not achieved because hindering factors and defection motivations dominate. Hence, the quality of the partnership is insufficient for inter-corporate value creation (Lee/Kim, 1999).

4. Inter-corporate ventures as model for inter-corporate innovation in outsourcing alliances?

The above elaborated logics of the prisoner’s dilemma in outsourcing alliances give rise to the question “How inter-corporate competence building can be achieved within outsourcing alliances – esp. in the logics of the prisoner’s dilemma”. We propose two areas of research to that might lead to unleashing the potential for innovation in such settings:

Area 1: The co-operation can be interpreted as an inter-corporate endeavour which applies specific institutional settings of economic business ethics to enable continuous win/win situations. Hence, the framework of economic business ethics shall help to conceptualize how inter-corporate competence building may be enabled to translate mere outsourcing partnerships into long-term innovation alliances (figure 2).

Area 2: The application of economic business ethics for outsourcing alliances shall elaborate on various organizational forms (e.g. from project-based collaboration to joint ventures and spin-offs) to establish the institutional settings for win/win situations. Hence, the framework of economic business ethics needs to be
outsourcing alliances. This model relies on the repetitive game, an integrated approach of innovation creation of innovations. Here, an institutional setting from fruitful basis for cooperative competence building and the collaboration relationships should be seen as assets of in the form of institutional settings for such alliances. Emphasizes the necessity of clearly structured guidelines contracts that result in innovation barriers from a new Corporate partners in outsourcing alliances should invest in knowledge and technology transfer into beneficial conditions and incentives for mutual investments (i.e. knowledge and technology transfer) into the outsourcing alliance. The concept offers a dynamic model to enable the creation of cooperative competence building.

5. Conclusions

Corporate partners in outsourcing alliances should approach the problems of hidden agendas and incomplete contracts that result in innovation barriers from a new perspective by perceiving the alliance as a “venture of social cooperation for mutual advantage and long term value creation”. The concept of economic business ethics emphasizes the necessity of clearly structured guidelines in the form of institutional settings for such alliances. Collaboration relationships should be seen as assets of long-term value. Those assets primarily require bilateral investments of the co-operating partners to establish a fruitful basis for cooperative competence building and the creation of innovations. Here, an institutional setting from the economic business ethics can be applied and combined with organizational structures over the long term. Looking at co-operation in outsourcing alliances as a repetitive game, an integrated approach of innovation management, outsourcing and economic business ethics can offer a framework to overcome innovation barriers in outsourcing alliances. This model relies on the establishment of new organizational forms of cooperation, e.g. an inter-corporate venture based on institutional settings which emphasize the perspective of the cooperation as an inter-corporate entity and set beneficial conditions and incentives for mutual investments (i.e. knowledge and technology transfer) into the outsourcing alliance. The concept offers a dynamic model to enable the creation of cooperative competence building.

6. References

Conill, Jesús/ Luetge, Christoph/ Schönwänder-Kuntze, Tatjana (2008, Ed.): Corporate citizenship, contractarianism and ethical theory, On philosophical foundations of business ethics, Ashgate, Farnham, Burlington, VT.