Dynamics of Interorganizational Learning

Florian Kapmeier
Universität Stuttgart
Betriebswirtschaftliches Institut
Lehrstuhl fuer Planung und Strategisches Management (Prof. Erich Zahn)
Keplerstr. 17
70174 Stuttgart
Germany
Phone: +49 – (0)711 – 121 – 3465
FAX: +49 – (0)711 – 121 – 3191
Email: florian.kapmeier@po.uni-stuttgart.de

Abstract
This paper proposes a model that gives deeper insights into the dynamics of interorganizational learning specified for the example of alliances. Current alliance research tends to neglect a feedback-perspective which might be the reason why certain behavioral effects cannot be explained. However, based on alliance research, three different major feedback-loops that influence interorganizational learning dynamics are identified in this paper: first, a reinforcing loop called 'trust drives learning'. It shows that trust between the coworkers in an alliance has a positive impact on learning. Second, a balancing feedback-loop named 'inertia cuts trust' states that organizational inertia hinders the development of trust between coworkers. Third, a positive feedback-loop called 'let's learn together' underlines that two parent companies aim for common learning instead for learning from the partner when forming a learning alliance. The model offers new insights into alliance learning as well as insights into how specific influencing factors interrelate with each other.

Keywords
Interorganizational Learning, Learning Alliances, Alliances, Cooperations, Learning, Knowledge, Trust, Alliance Outcomes

1. Introduction

Over the last decade, alliances have become one of the most important organizational forms to gain competitive advantage. Worldwide, more than 20,000 reported alliances have been formed within a period of only two years (Anand, Khanna, 2000). Abstracting from some differences in the definitions, an alliance can be understood as an interorganizational co-operation of at least two companies that are legally and – under certain conditions with some constraints - economically independent. In order to implement common objectives within determined areas of mutual interest, the parent companies accept a certain restriction of their freedom of choice (Pausenberger, 1989). The motives for companies to form alliances are situated, e.g., in the development and conquest of new markets, in the concentration of core competencies, in the concentration of market power, or in the acquisition of knowledge (Lane, Salk, Lyles,

2001; Zahn, 2000; Prange, 1996). Often, however, it seems like alliances are frequently terminated early due to management's short term views.

Especially among those alliances that concentrate on the acquisition of knowledge, so-called learning alliances, substantial deficits exist regarding the evaluation of the alliance's long-term benefits. On the one hand, a short term static viewpoint still seems to dominate the managers' decision-making processes. This perspective strongly contradicts the benefits of a learning alliance mostly in the long-term. On the other hand, accurate metrics are missing for measuring alliance performance. Such metrics should evaluate the current alliance progress towards alliance objectives. In addition, metrics should be regarded as the basis for further purposeful decision-making (e.g. regarding a meaningful resource allocation). Due to these deficiencies, management often makes sub-optimal decisions in respect to whether or not continuing a learning alliance.

Even though learning alliances have been subject to recent research, most studies focus on specific questions in the field of alliance learning (e.g., Ahuja, 2000; Doz, 1996; Larsen et al, 1998; Ring, van de Ven, 1992). Some imply a dynamic approach (like e.g., Lane et al, 2001; Khanna et al. 1998; Kumar, Nti, 1998), but the models being designed often concentrate on specific building blocks of the field of research on learning alliances and/or neglect a feedback-loop point of view. This might lead to a short-term perspective. In order to show long-term effects of decisions, it is valuable to close and create feedback-loops. Feedback loops take into account delays and therefore exhibit long-term effects of present decisions. This makes it possible to explain certain behavior, effects and dynamics. Feedback-loops are also essential to define a dynamic hypothesis and to show, model, and illustrate dynamic behavior (Sterman, 2000). In the following the research methodology is presented. Based on this methodology, a model representing the dynamics of learning alliances will be developed.

2. The Model

2.1 Conceptual Background

A dynamic approach provides an ideal tool for analyzing the dynamics of learning alliances. It would be able to capture the changes that develop over time by simulating the evolving behavior of variables that interrelate with each other. System Dynamics (Forrester, 1961) offers such a simulation technique. It is well suited to support decision-making and learning processes through the variation of time and space. This allows modelers and users to analyze different scenarios in a short time. The possibility to run different scenarios shows decision-makers the effects of decisions. These might refer, e.g., to the resource allocation in terms of whether or not to continue a learning alliance.

2.2 Research Findings

Recent research on alliance learning (e.g., Inkpen, 2000; Arino, de la Torre, 1998; Khanna, Gulati, Nohria, 1998; Kumar, Nti, 1998) and organizational change (e.g., Sastry, 1997; Tushman, Romanelli, 1985) concentrate on a certain number of variables that influence interorganizational learning dynamics. These variables and the

relationships between these variables stand in the focus of the model presented in this paper.

2.3 Hypothesis and Content of the Model

The paper's general hypothesis is that companies in learning alliances that follow short-term-oriented metrics more often quit their alliances than companies that work with long-term oriented measures. In order to emphasize this hypothesis, a model is designed that captures the situation of two companies founding an alliance. The companies' common goal is to learn from each other. Consider the example of an alliance, i.e., in the form of a joint venture, between Company 1 and Company 2. The alliance only receives resources from its two parent companies. Company 1 is technically advanced and Company 2 is located in a developing country – meaning that is has a specific market knowledge that Company 1 is interested in. In turn, Company 2 wants to learn about Company 1's advanced product and/or process knowledge. The purpose of the model is to illustrate only the decision-making structure of the alliance and of one parent company. The reason not to include the second parent company is that Khanna et al. found out that only the alliance outcomes, called common benefits, or the company-specific private benefits are relevant to the individual firm's decision whether or not to continue the alliance. Accordingly, the decision does not include the perceived private benefits of the other parent company (Khanna, Gulati, Nohria 1998). It is subject to further research whether or not it is important for analyzing alliance dynamics to include both partners.

Different knowledge bases, first, the knowledge base of one parent company, second, the knowledge base of the alliance itself, and interpartner trust were identified as major levels in the model. In addition, three major feedback-loops that dominate the structure of the system were identified: first, a reinforcing loop that shows that 'trust enhances learning'; then, a balancing loop that exhibits that 'inertia hinders trust'; finally, a reinforcing loop that underlines that the partners want to learn together. In the following, these loops will be described in more detail.

Inkpen (Inkpen, 2000) and recently Lane et al. (Lane, Salk, Lyles, 2001) state that interpartner 'trust enhances learning'. A certain alliance outcome is achieved through activities based on the shared knowledge base. It is assumed that in the beginning phase of an alliance the workforce primarily consists of employees of both companies. Employees might doubt that the alliance goals could be reached. These goals may be measured by either objective metrics like termination, duration, financial gains, expected duration of alliance, dissolution, or subjective measures, e.g., goal attainment, satisfaction, learning, or competence building (Ho Park, Ungson, 2001). The disbelieve in the alliance has something to do with missing trust between the employees. They might ask themselves why they should collaborate with somebody who is not from their own company. This behavior can be compared to the 'not-invented-here-syndrome". As soon as there are certain alliance outcomes and these alliance outcomes are close to the goals aimed for (Kumar, Nti, 1998), people start to trust each other. In turn, the more they trust each other, the more they are willing to share information. And the more they are willing to share information, the more they finally exchange knowledge. Consequently, taking into consideration a certain (relative) absorptive capacity (Lane, Salk, Lyles, 2001; Lane, Lubatkin, 1998; Cohen, Levinthal, 1990), the shared

knowledge base increases through learning. A higher knowledge base in turn increases the alliance outcome. This, again, builds up trust. Therefore, it can be concluded that trust between employees enhances alliance learning.

At the same time, the gap between the actual alliance outcome and a certain desired alliance outcome shows the parent company's and the alliance's management the alliance progress in respect to the goals. According to the proposition, based on the perceived alliance progress, the parent companies' managements decide whether or not to keep the alliance alive. Depending on the magnitude of the gap (that may be either positive or negative), the past development of the gap (whether it has increased or decreased), and the managements' decision-making time, it might decide on ending the alliance. Alternatively, a continuation of the alliance would result in spending more of the parent company's resources on the alliance. This is as the parent company's management believes that it can accomplish higher values with the alliance than with alternative organizational arrangements (Arino, de la Torre, 1998). With spending more resources on the alliance, consequently, the desired alliance outcome may increase. Again, the desired outcomes are compared to the actual outcomes, which in turn determines future investment decisions. This implies a policy where the alliance progress regulates the parent company's investments in the alliance.

Secondly, a balancing feedback-loop illustrates that 'inertia cuts trust'. This statement derives from research findings based on the theory of punctual change (e.g., Sastry, 1997; Tushman, Romanelli, 1985). These insights can be applied to learning alliances as inertia – one of the main aspects of punctual change – arises in any kind of organization. Over time, with increasing openness, increasing knowledge exchange, and an increasing shared knowledge base, employees get to know each other better and better. Employees have taken along their working routines from the parent company. Due to copying their colleagues' working routines, co-workers follow theses routines. As time goes by, it happens that people get smugly and do not question their routines anymore. Their mental flexibility diminishes in respect to problem solving, hence, inertia increases. Due to inertia, if outcome gaps are being noticed, the ability to adjust the alliance outcome decreases. As a consequence, the outcome gap rises even more, resulting in less interpartner trust and less perceived alliance outcome by the parent's and the alliance's managements. Thus, one can conclude that inertia cuts trust and therefore hampers learning.

Finally, the second positive feedback-loop can be traced back to Khanna et al. and underlines that both parent companies want to learn together in the alliance (Khanna, Gulati, Nohria, 1998). The authors have pointed out that the amount of resources spent on the alliance by the parent companies heavily depends on the ratio of private to common benefits by the alliance parents. Private benefits arise when the parent company picks up skills from the alliance and applies them to its own operations in areas unrelated to the alliance activities (Khanna, Gulati, Nohria, 1998). This would refer to Company 1 introducing a product not related to the alliance in Company 2's market after having learnt enough about the market from Company 2. Common benefits accrue to each partner in an alliance from the collective application of the learning in the alliance. With a higher ratio of private to common benefits, the management of the parent company is willing to continue the alliance with an even higher interest. At the

same time, with more resources being spent on the alliance, the desired alliance outcome increases. Here, we notice a link to the reinforcing trust-enhances-learning-loop explained above. Summarizing, the parent company's perception of private benefits determines the spending of resources and further, the outcome gap which influences the trust between the employees and the willingness to share information and hence the alliance learning.

3. Concluding Discussion

The paper identifies some deficiencies of current research on the dynamics of interorganizational learning in alliances. Feedback loops are essential to understanding the implications of alliance dynamics. Present research tends to neglect those feedback loops. In this paper, three major feedback loops are illustrated – 'trust enhances learning', 'inertia cuts trust', and 'let's learn together' - that influence alliance dynamics. All three loops consist of different minor loops that interact with each other. Nevertheless, it may be stated that two of the major loops drive and reinforce alliances learning and one loop balances it. However, findings are only preliminary. The research in this field is not completed yet and the development of the model is still in progress. The final model will give decision-makers a tool for a better understanding of long-term effects of their present decisions in respect to keeping a learning alliance alive.

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