

## **The competitive factor in knowledge sharing networks**

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### ***Abstract***

This paper discusses the competitive factor in knowledge sharing networks. Organisations are dependent on other, often even competing organisations for their knowledge. When competing organisations co-operate in alliances to be able to learn from and with each other it becomes likely that they meet an interorganisational learning dilemma (Larsson, Bengtsson, Henriksson & Sparks, 1998); will each organisation put their own learning goals above the mutual learning goals by risking the success of the interorganisational alliance? In this paper we argue that knowledge processes and learning in (competitive) alliances should not only be considered or analysed at the interorganisational but (also) at the interpersonal level. At this latter level it might be that the interorganisational learning dilemma and competition are perceived differently.

One interpersonal setting in which knowledge can flow between different organisations is in knowledge sharing networks. These are interpersonal networks or groups that are long-term oriented, with a purpose to exchange, acquire and create knowledge around a certain 'practice'. The group consists of individuals with a shared identity, although coming from different competing organisations. These knowledge sharing networks are important settings for knowledge sharing or creation and learning activities among individuals. This interpersonal learning can become an input for (inter) organisational learning (Inkpen & Crossan, 1995). Based on insights from literature and two examples from casestudies in The Netherlands we argue the following: while most literature mainly concerns analysis at the interorganisational level, providing insights in factors and reasons for co-operation in alliances, the actual (success of) learning and knowledge processes largely depends on interpersonal factors. The results are preliminary, since the PhD-research is still in progress, nevertheless, some lessons could be learnt from these practical illustrations about conditions for successful learning in interpersonal networks where interorganisational competition is an important factor.

### ***1. Introduction***

From a strategic perspective it is important for an organisation to have the adequate knowledge 'available' in order to develop and maintain a strong competitive position. As Powell (1998) states: "the core capabilities of organisations are based increasingly on knowledge-seeking and knowledge-creation" (p. 228). However, not all knowledge can be found (easily) inside the 'own' company. Focusing on their core competencies, organisations therefore seem to have grown more dependent on each other for their knowledge (Khanna, Gulati & Nohria, 1998). Organisations expect to gain competitive advantage from exchanging

and creating (new) knowledge, even with competitors (Mowery, Oxley & Silverman, 1996; Hamel, Doz & Prahalad, 1989). Organisations need other, even competing organisations to increase their competitive advantage, by learning from and with them while participating in alliances with them (Hamel, 1991).

The co-operation between (competing) organisations can have many forms. Often is spoken of (strategic) alliances (Inkpen, 1998), although other interorganisational network forms are mentioned as well, such as hybrid organisations, clusters, dynamic or strategic networks or clans (Powell, 1990; Miles & Snow, 1992; Thorelli, 1986; Gulati, 1999; Ouchi, 1980). In this paper we will further refer to 'alliances' when speaking about co-operation between competitive organisations, specifically with learning aims. These organisations are competitors because they produce and market products or services in the same market. These products or services can vary, although they are often the same 'type' of (complementary) products or services<sup>1</sup>.

Larsson, Bengtsson, Henriksson and Sparks (1998) suggest that the success of such alliances largely depends on the way organisations manage the collective learning processes. Based on game theory, they argue that organisations most likely meet an interorganisational learning dilemma when they are in alliances with the purpose to learn from and with each other. For each individual organisation it is 'rational' "to pursue the maximum organisational share of the joint learning by taking more than it gives". While at the same time, this lack of openness towards the other reduces "the total amount of joint learning from which the organization attempts to appropriate its share" (p. 288). Thus, the collective knowledge development in the alliance is limited by (natural) opportunistic behaviour of organisations.

Whereas literature can provide insights on (inter) organisational learning in alliances that consist of competitive organisations, it does not explain in detail how this learning, especially of tacit knowledge, takes place. While it provides insights in organisational reasons for co-operation in alliances, it does not give actual conditions for 'successful' knowledge sharing and development at the interpersonal level in the context of co-opetitive (simultaneously competing and co-operating) organisations in alliances. Especially tacit knowledge transfer or learning processes take place between individuals (Inkpen & Crossan, 1995; Inkpen & Dinur, 1998). The settings where people in alliances meet people from the other organisations are in groups such as platforms, (multi-disciplinary) projectteams, expertise groups or communities of practice. These are the settings in which people can 'transfer' (tacit) knowledge about their daily practice, for instance. In this paper we refer to knowledge sharing networks to describe some of these settings. We define knowledge sharing networks as interpersonal networks or groups that are long-term oriented, with a purpose to exchange, acquire and create knowledge around a certain 'practice'. The group consists of individuals with a shared identity, although coming from different competing organisations. Thus they have a sense of belonging to that group and recognise each other as 'members'.

In order to understand how people actually learn and (successfully) share and develop knowledge in alliances, it seems that additional analysis at this interpersonal level is required. In this paper we would thus like to analyse knowledge and learning processes in knowledge sharing networks. We specifically aim to find conditions for learning in alliances where competitive organisations co-operate. This paper tries to explore how the interorganisational learning dilemma is perceived and dealt with at the interpersonal level, and how simultaneous competition and co-operation is an issue in knowledge sharing networks.

The paper starts with a literature review on learning in alliances. We then explain the interorganisational learning dilemma. We specifically discuss knowledge sharing networks in the fourth section, before presenting some conditions for learning and knowledge sharing

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<sup>1</sup> In the Delta casestudy presented in section six for example, all of the services are related to hydrological research and every organisation in the alliance sells products such as knowledge, techniques, methods or instruments in the area of hydrological research.

and development. Although using literature on the levels of alliances and organisations, we will particularly look at the interpersonal level as well. This is the level that can provide additional and more detailed insights in how the competitive nature of the organisations in the alliance is an issue for learning in the alliance. We primarily do this in the sixth section where we illustrate the conditions with examples from two casestudies performed in The Netherlands. We conclude with providing some implications for management and theory, including limitations and questions for further research.

## **2. Learning and alliances**

Many insights have developed on learning and knowledge processes within alliances. Researchers have discussed the issue of (organisational) knowledge transfer in alliances (Inkpen & Dinur, 1998, e.g.). Organisations can learn from other organisations how to improve their operations, strategy, competencies or capabilities (Huber, 1991). As Mowery et. al. (1996) put it: "Alliances have advantages over conventional contracts or markets for (...) the acquisition of new technical skills or technological capabilities from partner firms, because firm-specific technological capabilities frequently are based on tacit knowledge and are subject to considerable uncertainty concerning their characteristics and performance" (p. 79). Inkpen and Dinur (1998) also provide examples of the types of knowledge organisations can transfer, such as knowledge on how to manage product development cycles, or knowledge in the areas of manufacturing process and human resource management. However, whereas some consider knowledge as embedded in a specific context (Hamel, 1991), it can also be said that "firms may seek access to other firms' knowledge and skills, but without necessarily wishing to internalize the knowledge in their own operations" (Inkpen and Dinur, 1998: 455).

Others have specifically focused on learning capabilities of the alliances themselves (Lane & Lubatkin, 1998; Kraatz, 1998). Some of these authors feel they can no longer look primarily at knowledge transfer in a single organisation, but need to focus on interorganisational knowledge transfer and learning, by adopting a boundary-bridging perspective (Levinson & Asahi, 1995). Khanna et. al. (1998) specifically refer to common benefits as those benefits that each organisation in an alliance can 'earn' "from the collective application of the learning that both firms go through as a consequence of being part of the alliance" (p. 195).

Third, learning about alliances and how to collaborate as a means for improving competitive advantage of an organisation is also discussed in literature (Gulati, Nohria & Zaheer, 2000). Powell (1998) for instance states that (successful) participation in, and management of alliances are "key drivers of a new logic of organising" (p. 231). Thus, organisations might want to acquire knowledge that can be used for the management of alliances in general. This can also help them in the design of new future alliances (Lyles, 1988).

In sum, much research on knowledge processes and learning in alliances has focused on organisational and interorganisational (alliance) learning, especially from a strategic perspective. Organisations can learn *IN* alliances, together they can learn *AS* alliance, or they can learn *ABOUT* alliances. However, this does not sufficiently explain *how* people and organisations (successfully) learn in alliances. It merely focuses on *what* can be learned in alliances. It neither explains how tacit knowledge particularly is shared at the interpersonal level. It is said that precisely this tacit knowledge is often hard to transfer from the individual to the organisational level (Inkpen & Dinur, 1998; Inkpen & Crossan, 1995). Further, as said, the organisations in the alliance are competitors and might therefore also meet specific challenges in knowledge transferring.

### 3. *Interorganisational learning dilemma*

It can be said that many organisations follow a 'co-opetitive' strategy by simultaneously combining competition and co-operation with other organisations in the alliance (Brandenburger & Nalebuff, 1996). Competitive advantage for instance, can often only be accomplished by co-operation and mutual learning. However, this same co-operation can either provide (new) knowledge that can be used for opportunistic activities, or it becomes threatening for organisations to 'lose' their knowledge while willing to 'take' external knowledge, which might both frustrate the co-operation. Thus, organisations somehow have to manage their sharing of knowledge while competing.

In a situation of co-opetition, organisations can thus meet an '*interorganisational learning dilemma*', following Larsson et al. (1998). This dilemma specifically focuses on learning between organisations. On the one hand co-operation is found necessary in order to learn from each other and reach synergy by exchange and development of both explicit and tacit knowledge. Here, knowledge equals *strength*. On the other hand however, parties may feel the urge to 'exploit' the other parties involved by maximisation of the own organisational benefits of co-operation, which means: 'take but rather not give'. Thus, an organisation is not willing to share its own knowledge because it is considered of great strategic importance and value. This latter behaviour will frustrate the mutual learning and will probably even destroy the alliance or co-operation at all. In this case, knowledge is considered as *power*.

Larsson et al. (1998) present at least six reasons why they think the inter-organisational learning dilemma is likely to occur. Some factors involve a low willingness or ability barrier to co-operate and learn from each other. These include: "receptivity<sup>2</sup> is constrained by the organisation's availability of organisational slack as well as its absorptive capacity (p. 291)". Second, this receptivity can also be harmed by a false or low motivation (or strength of the intent) to learn. Further, transparency can not always be achieved, while a lot of knowledge is tacit, cultural or social embedded or otherwise difficult to make 'explicit' or transparent. This illustrates the situated-ness of knowledge. And finally, individuals in an organisation tend to be rewarded more often for 'taking' in stead of 'giving'. These four factors are partner-specific and their effect can therefore be reduced when a different partner is chosen.

But there are other reasons as well for a high likeliness of an inter-organisational learning dilemma to exist. Because the bargaining position of an organisation will change after the organisation has 'taken but not given', its payoff will be higher than that of the 'loosing' organisation. This is called '*power dynamics*', according to Hamel (1991). This phenomenon causes the 'knowledge collecting' organisation to enhance its position toward the 'knowledge providing' organisation. Further, time also has an important role in explaining why the inter-organisational learning dilemma will probably exist. Time makes it possible for situations to evolve from mutual collaboration towards mutual avoidance. All of these factors mentioned, together with opportunism and suspicion will probably hinder inter-organisational learning.

There are also factors that can enhance co-operation and learning among organisations by decreasing the dilemma (Larsson et al, 1998). These constructive dynamics include prior relations and co-operation between the partners. When organisations have experience with co-operation or with a specific partner, co-operation is likely to come about easier (Axelrod, 1984; Gulati, 1999). Second, empowerment can be enhanced through increasing or high learning stakes. And finally, trust and a long-term orientation of the co-operation. Trust and recognition are important factors that ease learning from each other (Larsson et al., 1998). It further seems that learning is also enhanced by an unlimited 'shadow of the future' (Axelrod, 1984; Parkhe, 1993).

So, there are many reasons given that make a reasonable case for an interorganisational learning dilemma to occur. However, as von Hippel (1987) reasons, at the

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<sup>2</sup> Receptivity refers to an organisation's ability to actually absorb skills from its partner (in an alliance). Transparency refers to openness of an organisation to its partner (in an alliance). Both terms are further explained in Hamel (1991).

interpersonal level other dynamics might be 'stronger' or more decisive than the interorganisational level. How is this learning dilemma therefore perceived at the interpersonal level and what conditions can be found for actual (successful) learning? In the next section we will describe knowledge sharing networks as important settings for interpersonal knowledge transfer and development.

#### **4. Knowledge sharing networks**

The actual co-operation between organisations in alliances can take place primarily at a strategic level of (top) managers. Often however, other settings are required to enable knowledge to transfer among the organisations. Because individuals are the actual knowledge workers, the settings where knowledge processes take place are interpersonal groups such as (multidisciplinary) project teams, job-groups, networks of expertise, or communities of practice (CoPs). Here, people from the different organisations meet each other. Especially those interpersonal settings that have knowledge transfer and development as their main goal and activities, such as CoPs, can be considered as knowledge sharing networks as defined in our introduction. In these knowledge sharing networks people tend to learn the essentials of their daily work by participating in them, or develop new knowledge in their practice. Here, particularly tacit knowledge is likely to be transferred or developed. Therefore we propose to look specifically at this interpersonal level when trying to find conditions for (successful) learning and knowledge processes in alliances.

Thus, knowledge sharing networks might provide a necessary link between the individual and organisational level of knowledge exchange and development. As Lofstrom (2000) states, "future research on alliances (...) would benefit from a multi-level approach". And "adding the micro-level factors of individuals' networks and knowledge increases our understanding of what leads to learning in alliances" (p. 22). This is also argued by Inkpen and Crossan (1995), who suggest that the different levels of learning (individual, group and organisational) should be embedded in a higher concept of learning level. "At each level of learning, different learning processes are at work" (p. 598). Inkpen and Dinur (1998) additionally propose that if the tacitness of transferred knowledge is high (for example in firm-specific technological capabilities (Mowery et. al., 1996)), it is more likely that individuals are the primary knowledge transfer agents. Thus, it seems necessary to study knowledge processes in the context of co-opetitive organisations in alliances not only from an interorganisational, but particularly from an interpersonal perspective.

Von Hippel (1987) studied rival or competing organisations where people in informal networks appeared to trade their know-how among each other. These informal trading networks develop between engineers from different competing organisations who have a professional interest in common. These are interpersonal networks that can be considered as knowledge sharing networks. His study argues that these informal networks have their own dynamics, which in a sense seem 'stronger' than the rivalry among the organisations. Individuals in such an informal group tend to exchange and develop knowledge more easily, even though their organisations are highly competitive. Whether an individual engineer in fact 'trades' his knowledge depends on if that knowledge is 'only' considered useful, though not crucial for the competitive position of his own organisation. Then the knowledge will be shared. Especially if the other individual (to whom knowledge is traded) is considered a "useful and appropriately knowledgeable expert who may be of future value to (the seller)" (p. 5). Kreiner and Schultz (1993) add that these (informal) relations are often ignored because "they did not comply with the forms considered by common consent to be legitimate and efficient" (p. 191).

Bengtsson and Kock (2000) have seen an additional interpersonal effect in their casestudies on co-opetition in business networks. Their article suggests that individuals might find it hard to simultaneously co-operate and compete with another person, although organisations as a whole can favour from it. Therefore, individuals and groups are said to be better off in specialising either in competition or co-operation with a particular relation. Although their study does not specifically focus on learning processes, this might imply that

individuals perceive a learning dilemma less 'problematic' than it seems at the interorganisational level.

### 5. Conditions for learning and knowledge processes

In this section we list some conditions for learning and knowledge processes in alliances as mentioned in literature, in addition to those mentioned in the previous section. Thus, what factors influence learning in alliances? These factors are combined in the following matrix, which we will shortly discuss below. It presents several authors and the conditions they mention. Although this list is not exhaustive, it does include the most 'relevant' factors mentioned.

**Figure 1. Overview of conditions for learning and knowledge processes**

	Authors	Condition
1	Axelrod (1984) Gulati et. al. (2000)  Hamel (1991)	If the <b>(expected) pay-off</b> is <b>high</b> , it becomes more likely for <i>co-operation</i> to occur in future.  For instance, <b>power dynamics</b> (first 'taker' increases its pay-off) matters.
2	Axelrod (1984) Larsson et. al. (1998)  Von Hippel (1987)	Long-term orientation, or <b>unlimited shadow of future</b> makes it more likely for <i>co-operation</i> to occur in future.  More specific, individuals who <b>value the other individual</b> in informal network to be <b>of future importance</b> more likely share knowledge.
3	Axelrod (1984) Larsson et. al. (1998) Inkpen & Dinur (1998) Kogut & Zander (1992)	<b>Positive former experiences</b> with a certain partner (other organisations) in the past, or with co-operation in general, makes it more likely for <i>co-operation</i> to occur in future.
4	Bengtsson & Kock (2000)	The <b>closer an activity to a client</b> , the more likely <i>competition</i> instead of co-operation occurs.
5	Powell (1998)	Organisations' <b>ability to access knowledge</b> matters for <i>learning</i> in alliances.
6	McEvily & Zaheer (1999)	If an organisation maintains alliances <b>rich in bridging ties</b> and sustains ties to regional institutions, it will have a better <b>access to knowledge</b> .
7	Lofstrom (2000)	The <b>knowledge and personal networks of key individuals</b> influence learning in alliances.  More specific, networks <b>rich in non-redundant ties</b> provide greater info <b>access</b> benefits. And, networks <b>rich in strong trusting ties</b> also facilitate <b>access</b> to valuable external info.
8	Zander & Kogut (1995)	<b>Nature of knowledge</b> matters for learning.
9	Larsson et. al. (1998)	<b>For instance, tacit-ness</b> of the knowledge influences if learning is likely to occur.
10	Zander & Kogut (1995)	<b>Degree to which the knowledge is codified and taught</b> influences if learning is likely to occur.
11	Von Hippel (1987)	Individuals who value knowledge as useful to own organisation are more likely to share in informal networks (if crucial, not sharing). Thus, the <b>degree of perceived usefulness or cruciality</b> of the knowledge matters.
12	Lofstrom (2000)	The <b>knowledge and personal networks of key individuals</b> influence learning in alliances.  More specific, networks <b>rich in redundant ties</b> are likely to provide <b>similar or overlapping info</b> .

		And, networks <b>rich in non-redundant ties</b> provide <i>new or novel knowledge</i> .
13	Hansen (1999)	<b>Strong ties</b> are better for transfer of <b>complex knowledge</b> .
14	Larsson et. al. (1998)	Organisational availability of organisational slack and <b>absorptive capacity</b> matters for learning.
15	Lane & Lubatkin (1993)	<b>Relative absorptive capacity</b> determines how much an organisation can learn from others. This is influenced by (partner characteristics) similarity of: <ul style="list-style-type: none"> <li>• organisations' basic knowledge</li> <li>• lower mgt formalisation</li> <li>• research centralisation</li> <li>• compensation practices</li> <li>• research communities</li> </ul>
16	Larsson et. al. (1998) Klein Woolthuis (1999)	<b>Trust and recognition</b> in other organisations matters for learning. Whereas ' <b>initial</b> ' trust is considered to be important for <i>initialising co-operation</i> , <b>affective trust</b> has proven to be of most importance of the <i>continuance in co-operation</i> processes.
17	Von Hippel (1987)	Individuals with a <b>common professional interest</b> still share in informal networks.
18	Kraatz (1998)	Organisational (social) learning can occur from <b>imitation</b> of other organisations.
19	Zander & Kogut (1995)	<b>Degree to which there is a threat of market preemption</b> influences if learning is likely to occur.
20	Zander & Kogut (1995)	<b>Nature of industry competition</b> matters for capability transfer (or learning).

The first four factors, mostly originating from gametheory, concern those that influence co-operation in general. Number five to seven are factors that indirectly influence learning in alliances through access to knowledge. Number eight to eleven concern the nature of knowledge as important factors to influence learning in alliances. The structure of networks and the nature of knowledge are combined in factors twelve and thirteen. Number fourteen and fifteen concern (relative) absorptive capacity as important conditions for learning and knowledge processes. Other factors, such as trust, are mentioned under the remaining numbers.

In sum, some authors present factors that influence co-operation in general, and others more specifically describe conditions for learning. In general however, most of the factors mentioned concern 'reasons' for co-operation in alliances in the first place; such as better access to knowledge, for example. These are conditions for co-operation, but they do not explain if and how successful learning or knowledge processes occur. For many other factors it remains unclear *how* it exactly matters; such as nature of industry competition, nature of knowledge or trust. Thus, although some of the factors slightly explain how can be learned in alliances, they do not provide insights in the success of learning and knowledge processes. Therefore, in the next section we will present illustrations from practical casestudies in The Netherlands. Here we have found that interpersonal factors were mentioned as the most important conditions for successful learning in alliances.

## 6. Lessons learnt from casestudies

This section presents insights from two casestudies (KITE and Delta) in knowledge sharing networks. They serve as illustrations for interpersonal learning and knowledge processes in a

context of co-opetition in alliances. We will describe each case-organisation in general before discussing some conditions found for knowledge sharing and development.

KITe is an example of a knowledge sharing network that consists of people from very diverse organisations. However, all of them are commercial organisations. This is different from Delta, where mostly researchers and some engineers co-operate, often from organisations that have had former experiences with co-operation. Another difference between the two cases is that in KITe only one knowledge sharing network existed, that therefore coincided with the alliance as a whole. In Delta several knowledge sharing networks exist, of which we discuss only one. In general, KITe was much smaller than Delta.

## Example 1: KITe

### *Introduction*

This alliance was organised as a formal foundation and consisted of twelve organisations, at time of the study in 1999. These were all organisations that had knowledge management as their core business. However, their actual daily business could concern training, consultancy or the selling of products or other services for knowledge management. Thus, they all had their own particular view on and interest in knowledge management. The participating organisations also varied in their size and motivations for participation. Some organisations consisted of only one employee, while others had 30 to 50 employees, complemented with a few large multinationals, who could easily have more than five thousand employees worldwide.

KITe was founded in 1997 as a knowledge platform in which participants could share experiences, do business together and as a platform, be a clear identifiable partner for knowledge management products or services. KITe had the goal to encourage research and consultancy being done in the area of knowledge infrastructures and management in their own and other Dutch organisations. Activities in KITe consisted of regular meetings (both processual and around a certain content-related topic), organising and hosting a conference, publishing a book, and have orienting meetings with potential customers. Co-operation and activities took place in a knowledge sharing network in which one to four individuals from each organisation in KITe participated. Although membership of KITe could only be on organisational basis (including a contribution), not all participating organisations were equally involved and active. Some (larger) organisations were represented by a sales manager, whereas others by a top-level manager.

### *Motives for co-operation*

In the literature three very important key-motivations for organisations to join an alliance are mentioned, i.e. risk and cost sharing and market dominance or entrance (Harrigan, 1988). Further, "one of the most widely cited motives for co-operation (...) is the acquisition of new technical skills or technological capabilities from partnerfirms" (Mowery et. al., 1996: 79). Although one of the central goals of the knowledge sharing network in KITe was to share experiences and knowledge, it proved that all of the organisations had different motivations for participation in the KITe alliance. Especially the larger organisations were principally interested in the marketing and public relational outcomes of the alliance, whereas the smaller organisations considered the sharing of experiences the most important motivation to join. It appeared that the larger organisations did not consider KITe as an important source of knowledge (partners). They stated to have their own networks of peers for sharing or developing knowledge and do joint projects. The smaller organisations on the other hand, were mainly interested to assess their knowledge level by comparing their ideas with those of larger organisations. Thus, the fact that goals for participation in the alliance varied between the organisations caused some uncertainty in what people could expect from the knowledge sharing network and was expected from them.

### *Conditions for knowledge processes*

Several (interpersonal) factors were mentioned that influenced the success of learning and knowledge processes in KITe. Below we will list most of them.



**Active behaviour and commitment.** Because KITE was organised rather 'loosely' (based on voluntary participation), there were no formal regulations or agreements on intellectual property, revenues or leads to potential projects. The differences in how active some people contributed effected other people as well. As one respondent explained: *"In the beginning I was quite enthusiastic and active, with high expectations. These have 'decreased' and now I act less active"*.

The extent to which people were active members or not seemed to relate to the commitment of the organisations. The people who were most active had a formal commitment of their organisations for participation and spending time on KITE. In these organisations there more people than the participating individuals in the knowledge sharing network alone were aware of organisational participation in KITE. In case of a lack of commitment of the organisation, learning never reached the organisational level. Thus, the organisation could not fully benefit from the knowledge an individual had learned in the knowledge sharing network. Colleagues simply were unaware of KITE participation of their organisation.

**Voluntary individuals.** Although it might depend on one's goals, most respondents in KITE agreed that participation in the knowledge sharing network was and could only be voluntary. If too many regulations were necessary, the network was doomed to fail. *"a dynamic needs to develop (...) and you need to have a very clear joint mission as well."* It was also said that 'bounding' (cohesion) could only happen based on personal goodwill. Trust for example, could only be aimed at a person, not at the organisation behind him or her. *"Although agreements were made to do something together, one person went behind our backs to that potential client. This diminishes your trust in him/her"*.

**Active co-operation.** Respondents stated that they could learn most from the other participants during co-operative activities, such as the organisation of a conference or the publishing of a book. Then discussions became concrete and people needed to know and understand what the other meant. Thus, this concerned learning by doing.

People who attended meetings, especially those in which presentations were held about a methodology or instrument for instance, said to learn from them. However, it particularly concerned individual learning; they could mainly use the knowledge for personal goals and development, such as their personal career. The organisation as a whole did not benefit from it.

Most respondents agreed that the co-operation had not (yet) reached the stage of real knowledge development. Even knowledge sharing seemed to happen less frequent than anticipated and expected. Especially during the organisation of the conference, it appeared that commercial interests were more important for some organisations than learning goals. These organisations mainly wanted to use the conference as a 'sign board' (as a marketing tool).

**Personal judgement.** Subjects that people did not want to discuss with others were for example information about (potential) clients, opportunities for new projects or methodological issues (such as the development of instruments). One director of a small organisation said their methodology was strategically very important for his organisation. Therefore it could not be shared with others in KITE. He added that it had taken too much time to develop, and he did not want to help others saving time, neither to reassess and discuss the methodology again, for that would take even more time. Another respondent referred to the (strategic) importance of a large client: *"If this is our most important client, I do not feel the need to introduce others to it (...) this could be a large threat to us"*. Especially people from the smaller organisations felt a larger 'threat' to share knowledge, because their organisations were 'niche-players', compared to the larger less specialised organisations.

## Example 2: Delta

### *Introduction*

Delta is a consortium of five knowledge institutes in The Netherlands that focuses on research into sustainable river-delta development. This alliance was formally established in 1999 and is partly sponsored by the Dutch government for at least four years (with a long-

term plan of 12 years). The sector for, with and in which Delta works is that of Civil and Hydraulic Engineering. It consists of investors and managers of public and private infrastructures, organisations in construction and engineering. Delta is structured around seven 'themes' (content-related topics of expertise in Delta, such as the Coast and River Theme). Each theme has defined several projects in which interested sector organisations can participate. The projects contribute to the overall Delta goal to strengthen its knowledge and position in the field of sustainable river-delta development. Delta has the ambition to develop into an international renowned knowledge centre in the sector of Civil and Hydraulic Engineering. The knowledge sharing network in Delta concerns researchers and engineers in the practice of hydrology. They are spread among three Themes and are often highly experted people.

#### *Competitive co-operation*

Often it is said that parties will exchange certain information or knowledge because they see it as their competitive advantage to do so. However, there might be a difference between the academic world and the more commercial world. In the latter, it is often said that the organisations and institutes are more focused on competition and survival. As an academic said: *"A dredger who has developed a new method for dredging must even try harder to protect that, because it is his competitive advantage. Our competitive position will particularly be strengthened when we have as much up to date knowledge as possible, and the fastest way to have that is through co-operation"*.

Respondents often appear to consider another organisation a 'real competitor' when it is fighting for the same job, money, task etc. (by submitting competitive proposals, international tenders or quotations for example). However, if parties who are competitors in the commercial settings, but co-operate in pre-competitive contexts, they do not discuss, or even mention these competitive activities (propositions they have submitted or won, e.g.), as one respondent said.

One issue that a respondent would never share with his 'competitive colleagues' is his vision (how he sees the market developments and his plans in this). He will not show his cards, except in a situation in which the parties have a third, mutual interest (usually a commercial goal). As he said: *"I would not tell my plans I have for it. Or how I assess a certain development in the market. If no competitors are present at your discussion table, it is pleasant that you can do this: then you can assess how the other feels about it, whether you are in the same wavelength"*. And: *"Then you don't speak your mind. Except if it serves, for instance a coalition for a project or 'business' that you have together. As long as there is a mutual commercial goal that you agree on"*.

A clear necessity for co-operation might also influence the success of the co-operation positively. This success can be caused by a high complexity of the 'problem' or issue (the other party has knowledge you can never develop yourself), or because a third party (such as a client) asks for the parties to co-operate. However, a party that is very large and a monopolist, is less dependent on a small party than the other way around. Further, co-operation does not automatically entail knowledge sharing or learning. *"(the work) is often of strategic importance to the country. This asks for openness". "If you are certain to get the job by co-operating, you will co-operate"*.

#### *Conditions for knowledge processes*

In this sub-section we will list the most obvious factors mentioned that influenced the learning and knowledge processes in Delta.

**Personal level contact.** *"You don't trust an organisation. You only trust people"* Many people state that if it doesn't work at a personal level, it will not work at all. This can include both affective trust (whether people like each other) and personal contact (do social activities together). Someone said that co-operation only works if personalities (or characters) matched and if there was enough of mutual respect. Then, knowledge sharing is said to occur almost automatically.

**Comparable as peers.** The people interviewed said they would be (more) willing to co-operate and share knowledge with peers, because they are peers or specialist in a certain, very small area. There is recognition and they are happy to share their thoughts with other specialists, they say. *“The thing that binds them is that they are complete hydrology-freaks.”* And because they have a comparable level of knowledge in the same practice, this can even create a certain level of energy to improve each other. *“Because you are ‘co-opetitors’ you want to show that you are at least as good. So putting them together causes that they try harder”.* This also implies that parties need to have a similar level of knowledge; in the sense of how good one is (comparable results). If one party continuously is the better one, while the other can never reach that level, they are not peers (and are not a fine match). But, because it is only a small world of peers and specialists (or highly expert people), who always seem to be able to find each other, this also asks for people to have high integrity standards and be loyal.

**Personal reputation.** These specialists are invited (by clients, e.g.) because of their personal reputation and knowledge level. Therefore, most of the respondents state that they are not afraid to openly discuss their knowledge, because they have invested too many years in building that particular knowledge. It cannot be transferred that easily, they believe. However, this is only true when the demand for these specialists is larger than the supply.

**Composition of the group.** Most respondents also mention the composition of the group as an important factor for success and potential for knowledge sharing. Some explain this by mentioning the size of the group as important. A group must not be larger than 15 people in order to be able to learn, they say. Others feel that the group should be composed of people who complement each other. Individuals therefore need to be different (some explain this as differences in personal character). Some respondents state that people probably find each other because of their shared background, humor or other interests. Thus, when they have a shared identity they can easily form a group, but in order to stay a group in which learning occurs, diversity is required as well.

**Shared interests.** Another important factor mentioned for people to share knowledge and co-operate is whether the parties involved have shared interests, or as some refer to it: goal. This can involve the feeling of: ‘us’ *against* ‘the (third) other’. Or, *for* the (third) other (as a opdrachtgever). In this latter case, the interest of the client is the primary one. Further, at least, as someone said: it should be clear that the interest of one could not harm the interest of the other party. This might also be enhanced by the fact that many people in DC have overlapping memberships (work for more than one employer). However, while in the first instance they have the same goal, in the second instance, each party will try to compete with the other in the market.

## **7. Concluding remarks and discussion**

If one of the most important reasons for organisations to co-operate in alliances is learning and acquisition, sharing and development of knowledge, the success of an alliance can also be valued in these terms. So, if much learning occurs, an alliance might be successful. Therefore, much has been written on learning in alliances, as discussed in section two. But, while competing organisations co-operate in alliances, they most likely meet an interorganisational learning dilemma, as explained in section three. However, while individuals are the actual knowledge workers and tacit knowledge is best shared at the interpersonal level, we argue to analyse learning and knowledge processes in knowledge sharing networks. This is the topic of section four. In the fifth section we gave several factors or conditions that influence learning and knowledge processes. However, these mainly concern either ‘general’ factors, without real explanation of *how* the factor influences the processes, or factors that are not specifically influencing learning, but merely co-operation in general. Most of the factors concern reasons for organisations to participate in alliances, instead of providing real insights in the actual learning. Because most (tacit) knowledge is actually shared at the interpersonal level, we have presented two casestudies in section six that illustrate that the interpersonal level should indeed be considered. Differences between

KITe and Delta are that the former in general is 'less developed'; there is few trust, few real active participation and interaction, and few insight in the other party (where it is supplementary). In KITe there are large differences in knowledge level and goals for participation. And further, learning mainly occurred at the individual level.

Some limitations of this research can be mentioned as well. Firstly, the conditions presented in the table in section five are not finite. We have selected some of the most obvious factors. Secondly, the casestudies are still in progress, therefore, at time of writing of this paper, only few material was available to us. Therefore, in further study we can improve our reliability of our arguments.

## Managerial implications

As the cases show, it seems two trajectories for co-operation in alliances can be followed. Learning in alliances is considered an important strategic factor to improve the competitive advantage of an organisation. This causes the top-management in an organisation to 'construct' certain settings for co-operation. However, these do not automatically guarantee successful learning and knowledge processes in the alliance. Another trajectory can be seen in 'spontaneous' co-operation among individuals who feel the need for knowledge acquisition and development with people from other, competing, organisations. They can do this in knowledge sharing networks, for instance.

The conditions mentioned in section five, but especially in section six can be considered as important lessons into how to (successfully) manage alliances in which learning is an important goal. A personal assessment whether co-operation involves a risk (threat) for the organisation influences whether people are open to share their knowledge. Risks or the threat of knowledge 'leaking' from an individual depends (however) on the personal reputation of that person. Those who feel they have a high reputation feel less threatened to share their knowledge. They often even feel 'proud' to do so. The (active) attitude of other individuals in a knowledge sharing network also influences learning behaviour. When people consider themselves as peers from and with whom they can learn (now or in future), they tend to share more easily as well. And, they need to have a good idea of who the other person is (personal level contact) in order to be able to have (build) trust. Further, the size of the organisation seem to relate, at least in KITe to the type of goals they have in an alliance. It seems that in order to be able to (successfully) learn, the organisations should at least have the goal to learn in an alliance.

If the interpersonal level actually is that important for the actual sharing and creation of (tacit) knowledge and learning, it needs to be considered (as such). Because it is either undesirable for knowledge to 'leak' and disappear, or it is desirable to learn from competitors, or both. Because in knowledge sharing networks people can learn and share or develop (tacit) knowledge in their daily practice, these are important settings for learning and knowledge processes in alliances.

## Theoretical implications

In this paper we have presented additional factors that appear to be important conditions for the actual occurrence and success of learning and knowledge processes in alliances. Whereas most literature focuses on (inter) organisational learning in alliances we also consider interpersonal learning, because people are the actual knowledge workers who can share and develop tacit knowledge. While existing literature has presented many insights mainly in reasons for organisations to participate in alliances and why they could learn from that, we argue that the success of alliances, or more specific, whether learning actually occurs, mainly depends on factors on the interpersonal level. This is based on two empirical studies in addition to literature. Whereas an interorganisational learning dilemma might seem an issue at the (inter) organisational level, it appears that at the interpersonal level people do not feel that 'torn'. They seem to have a different dynamics that influences their learning.

However, whereas existing literature provides insight in learning reasons for participation in alliances, and our paper explains how learning can (successfully) occur, we

have not yet explained why some conditions in some situations are actually successful. Thus, the situatedness of the conditions mentioned remains an important subject for future research.

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