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## **The Role of Interpersonal Trust on Knowledge Creation Outcomes in Teams**

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## About Dialogues Incubator and Dutch-Valley

Dialogues Incubator's mission is to facilitate innovation and entrepreneurship in financial services by providing various services such as corporate venturing, research & development, consulting and training. Dialogues Incubator participates in the network of Dutch-Valley. This initiative inspires people, creates new connections and has a role of a catalyst for the whole network of service innovation.

This white paper displays some of our research areas as Dialogues Incubator. Knowledge creation and the role of trust in an eco system are important areas of interest, in which we have conducted several connected studies. In case you would like to follow up for more information, related products & services, please do not hesitate to contact us.

### Abstract

Knowledge creation is assumed to be very important for the creation of a dynamic knowledge intensive economy. Trust has been often argued as an important factor for the creation of knowledge creation outcomes. Although in the literature the arguments about the role of trust seemed to be contrary.

We have formulated two main conflicting patterns out of literature, which explain how different levels of trust (high and moderate) can lead to knowledge creation outcomes. These patterns were tested to six empirical cases, which were teams in the creative sector.

**The main finding of this study is that higher levels of interpersonal trust seem to lead to higher knowledge creation outcomes at team level.** Next to this, some evidence was found against the presumed theoretical assumption of conflicting variables. In the last chapter theoretical and managerial implications of these findings are given.

Keywords: interpersonal trust, knowledge creation outcomes, knowledge exchange and teams

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## Introduction

According to Hargreaves (2003) we are living in a knowledge society; to be more precise we are living in knowledge economies. These knowledge economies are driven by creativity and ingenuity. The increasing importance of knowledge in our society asks for a shift in thinking for large business organizations (Nonaka, 1994). Therefore questions are raised about how to process knowledge and more important how to create knowledge. A lot of collaborations with the purpose to deliver knowledge creation outcomes have been set up in the Netherlands. Created alliances among government institutes, universities and businesses are often not that successful until now (Knoben, 2010). The targets set by the European Council at the Lisbon Strategy in 2000 where aimed at creating a dynamic knowledge economy (Kan, 2010). The Netherlands have dropped from rank 4 in 2000 to rank 8 in 2010 in the Global Competitiveness Index (2010). This implies that there is still plenty to do if The Netherlands wants to position themselves as one of the best knowledge creating countries in the world.

Country/Economy	GCI 2010		GCI 2009		Change 2009-2010
	Rank	Score	Rank		
Switzerland	1	5.63	1	•	0
Sweden	2	5.56	4	↗	2
Singapore	3	5.48	3	•	0
United States	4	5.43	2	↘	-2
Germany	5	5.39	7	↗	2
Japan	6	5.37	8	↗	2
Finland	7	5.37	6	↘	-1
Netherlands	8	5.33	10	↗	2
Denmark	9	5.32	5	↘	-4
Canada	10	5.30	9	↘	-1

*Global Competitiveness Index (2010)*

Past literature often argued that trust in team members is an important factor for knowledge creation outcomes. This trust among team members can be named interpersonal trust (Abrams, Cross, Lesser and Levin, 2003). Conflicting argumentations about the role of trust in these knowledge creation processes were found in past literature. So contrary argumentation makes it interesting to research which processes underlie this relationship between trust and knowledge creation outcomes. This short introduction of the research problem leads to the following research question:

*How does interpersonal trust among team members influence the knowledge creation outcomes of the team?*

This paper targets at scientists and managers. Recent theoretical arguments about the role of trust in knowledge creation are contrary; therefore it is relevant for scientists to get to know more about the underlying conflicting mechanisms. Further this study is very relevant for managers because it shows the possible importance of trust or lack of trust, which could give important managerial implications.

## **Literature**

Trust is a very complex concept. For this review, trust was viewed as “a

*willingness to be vulnerable to other parties”* (Mayer, Davis and Schoorman (1995, p. 712), which arises from confidence in multiple indicators like intentions, openness, reliability, not behaving opportunistically, competences and capabilities. Trust was viewed as a relational concept and examined in a sociological perspective. The research was designed at the team level of analysis. Therefore this form of trust is called interpersonal trust, which focuses on trust among members in a team.

Knowledge creation outcomes were viewed as outcomes of a dynamic process. More specifically, in this study the concept of knowledge creation outcomes is, based on Nonaka (1994), Landry et al. (2002), Fong (2003) and Rosendaal (2009), defined as “*ideas, products, processes, systems, plans, contracts, proposals and analyses which come from dynamic human team processes of justifying personal beliefs as a part of an aspiration for the truth”*.

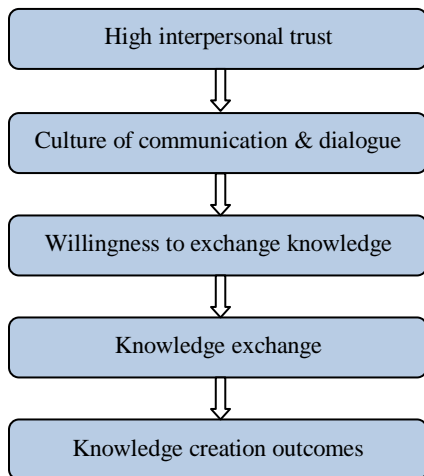
## **Theoretical patterns**

After an extensive literature study of empirical papers between the relation between trust and knowledge creation, two main conflicting patterns have been formulated. These patterns explain how levels of high and moderate trust lead to knowledge creation outcomes.

First high trust within teams leads to a culture with more communication and dialogue among team members (Misztal, 1996; Politis, 2003), which implies that members communicate often and that there is place for dialogue rather than monologue. When people highly communicate and trust each other it is likely that team members are more willing to share knowledge with each other (Penley and Hawkins, 1985; Nahapiet

and Ghoshal, 1998). People in the team are for example not afraid that other members use their knowledge in an opportunistic way. The willingness to share knowledge logically leads to the actual exchange of knowledge, which could be both explicit and tacit (Ring and Van De Ven, 1994; Uzzi, 1997; Jones and George, 1998). This knowledge exchange could give freedom in generating ideas, creative thinking and reducing monitoring costs among team members (Dakhli and De Clercq, 2004). The large extent of knowledge exchange can lead to knowledge creation outcomes because team members receive new knowledge which they can use in their work (Nahapiet and Ghoshal, 1998).

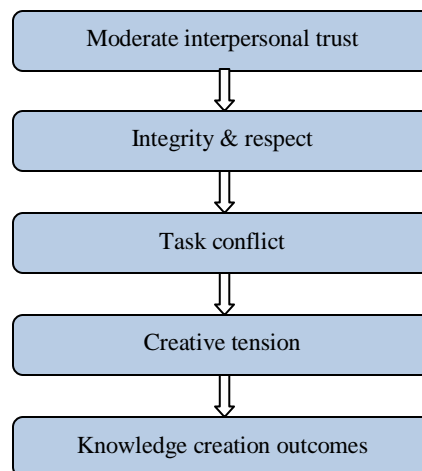
Pattern 1:



The second pattern of moderate trust argues that a certain degree of trust is necessary within a team because it leads to integrity among team members, which for example could be expressed by respectful

behavior towards each other. Therefore tensions in the team do not exist of relational conflicts, because people do know each other to a certain degree (Bidault and Castello, 2010). These conflicts have a task related character, are content driven and arise due to different viewpoints (Amason and Sapienza, 1997). The occurrence of such task conflicts in a team is beneficial for team outcomes (Gordon, in: Cursue, 2007). A certain amount of trust is necessary for gaining the benefits of task conflicts (Simons and Peterson, 2000). According to De Clercq, Thongpanani and Dimov (2008) these conflicts are especially good when trust is not high within teams. These task conflicts make sure that there is a creative tension within the team, which is expressed by group creativity and a critical state of mind to each other (Bidault and Castello, 2010). During this dealing with creative tension, knowledge of different viewpoints is exchanged among team members. The fact that the team is dealing with this creative tension leads to new knowledge creation outcomes (Bidault and Castello, 2010).

Pattern 2:



## Method

The study is executed for Dutch-Valley, a project which aims to stimulate the Dutch innovation climate by making connections among many parties from different industries. Dialogues Incubator participates in Dutch-Valley.

The design of this research is a multiple case study. Six teams in the creative industry were selected for this research, three cases with high trust and three cases with moderate trust. Selection was thus based on the level of trust (survey) and further on the general mission and size of the teams. The teams focus on a stimulation of (regional) entrepreneurship and innovation in the Netherlands and are therefore seen of big importance for future development of The Netherlands as a knowledge intensive country (Kennisinvesteringsagenda, 2010).

A qualitative research approach was used, semi structured interviews were conducted with at least three team members. Data was transcribed and selectively coded. Pattern matching was used as data analysis technique; this method consists of three steps (Yin, 1993). The first step is the formulation of theoretical patterns, which was done in the theoretical framework. It entails how X theoretically leads to Y via certain other variables. Second, empirical patterns are constructed from the empirical data, variables and relationships were valued

according to their presence in the case. The last step is comparing these theoretical and empirical patterns.

## Outcomes

In the result section six empirical patterns were constructed en compared to the two previous formulated theoretical patterns. From the results it can be argued that the empirical cases with high trust offer support for the theoretical pattern. Since two empirical patterns offer fairly strong support and the other empirical pattern also offers limited support for the theory. In general causal mechanisms seem to be in line in these cases, only the relationship between culture of communication & dialogue and willingness to exchange knowledge can be seen as the weakest point in the mechanism. In general it could be argued that the empirical patterns of this study give support for the first theoretical pattern

The second theoretical pattern is not strongly supported by the data, since two empirical patterns only offer some support while the other empirical pattern seem to offer no support. Within the empirical patterns which offer little support, some relationships could not be found and variables were not highly present. So this support is not very strong, since these issues concerns both relationships and variables in the pattern. In the other empirical pattern no real support for theoretical pattern can be found, since the causal direction is not the same and variables are weakly present. These findings imply that the first theoretical pattern seems to be more supported than the second theoretical pattern in this study.

Furthermore some interesting findings were

discovered concerning the conflicting nature of the patterns. The general outcome could be that the theoretical patterns are perhaps not that conflicted as supposed in theory. Two cases with high level of trust gave some indications that creative tension could also be combined with high level of trust, while cases with moderate levels of trust showed that more tacit knowledge sharing could really improve their outcomes. In these cases it was most of the times more about taking time for this exchange rather than their willingness to exchange knowledge.

## **Conclusion**

The main outcome of this study is that high levels of interpersonal trust lead to higher knowledge creation outcomes than moderate levels of trust. Further it could be argued that different levels of trust seem to lead to knowledge creation outcomes at different levels via certain mechanisms.

In all the teams knowledge creation outcomes were present, but the main difference was the level where these outcomes were created at. Teams with high trust created these outcomes more at team level, while teams with moderate trust mainly created these outcomes at individual level. Another interesting finding of this study is that the variables in the theoretical patterns are perhaps not that conflicted as supposed in theory.

It is interesting to discuss how findings would hold if the conditions change. If for example team size increases, perhaps moderate levels of trust become more beneficial since you cannot discuss everything with the whole group and you perhaps need a form of basic level of trust in the team. The mechanism could also be very different in teams in other contexts, because different skills, processes or practicalities could be required in different settings.

Other factors could also partly explain of the results of this study, which are team membership (Bakker et al, 2006), the management of trust in teams (Vangen and Huxham, 2003) and the role of opportunistic behavior in this study.

## **Managerial recommendations**

Based on the finding that different levels of trust seem to lead to knowledge creation outcomes at different levels, managers can choose to promote interpersonal trust within teams if they want more outcomes created by the team rather than by individuals. The building of trust is about a willingness to communicate which provides a basis for repeated interaction (Leifer and Mills, 1996). It is a cyclical process which is reciprocal of nature by ongoing interaction (Rousseau et al., 1998). It was found that teams with high trust took more time to communicate, which finally could lead to higher knowledge creation outcomes. This implicates that time could be necessary to promote the knowledge creation outcomes. So in order to have richer outcomes created by the team you for example need to make time for formal and informal meetings. Some practical recommendations are shared vision making at the start of the project,

definition of clear group and individual goals, organization of away days and the creation of a system for knowledge transfer. If the team does not take the time to communicate with each other, it could be that outcomes are mainly created by individuals rather than by the team.

Although it was argued that it is not only about trust building, but is also about coping with situations where trust is lacking (Vangen and Huxham, 2003). Managers should for example be able to identify different aims of involved people and assess power relations in teams.

Within the knowledge creation process it is argued by Polities (2003) that team leaders should be involved in the learning and creation of new knowledge through becoming insiders in self-managed teams. This was clearly happening in some cases, which also showed higher knowledge creation outcomes than the other cases. Therefore managers are recommended to be highly involved in the knowledge creation processes. This could also increase the exchange of tacit knowledge, which was found to be beneficial in theory and practice (Brown and Duguid, 2001).

### **Managerial Applications**

Dialogues Incubator has already created the foundations in their team dynamics to remain a high trust organization. This seems to be very

important in a dynamic environment like the creative industry, where team knowledge creation can really improve the outputs of the organization.

To wrap up some managerial tools are given to ensure a high trust culture in your teams, which could definitely empower team knowledge creation:

1. Create time for face-to-face meetings (formal and informal)
2. Involvement of leaders in knowledge creation
3. Use of social media tools for the internal team
4. Establish a system for knowledge transfer
5. Ensure shared vision making
6. Organization of away days
7. Ability to cope with situation where trust is lacking

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