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The dynamics of intellectual property rights for trust, knowledge sharing and innovation in project teams

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ABSTRACT

The research question is: How can intellectual property rights (IPRs) influence trust, attitudes, commitment, knowledge sharing, and innovation in inter-organisational project teams?

The four strategically selected team cases include eight global knowledge-intensive industrial oil service companies in Norway. The methodology included 24 in-depth interviews done in 2016.

The study finds that formal intellectual property rights are key to building up and keeping trust in the team and also for building up the right attitudes within the team. The IPRs increased the innovativeness in the team and incremental innovations. The IPRs fostered a unique knowledge sharing in these four teams enabling them to work towards innovative solutions and delivering in time. Formal IPŔs foster informal trust and expertise sharing and by that also the inter- organizational cooperation. The confidence and knowledge sharing strengthen the possibility for future collaboration and innovations both on an individual level and on a corporate level. The theoretical implication of our findings is that IPRs increase the trust, commitment, and attitudes within the team providing knowledge sharing and innovativeness for improved solutions and results. IPRs are positive for collaboration, and they are complementary governance mechanisms.

The practical implication is that IPRs must be defined and accepted before the corporations start up the inter-organizational teamwork. The contract typology should in the start up be sensitizing giving directions and security and in the end definitive.

1. Introduction

Nothing is a resource until actors' discover how to use it and how to benefit from using it. Knowledge has only potential value. It is the collaborative action that gives knowledge value. It creates value and innovations when knowledge is shared and used. Legal contracts play a significant role in clarifying how knowledge creates value and who is to benefit from the generated value. Knowledge is a critical asset and an important source of innovation, but to protect it might be even more critical. The protection might be a requirement for knowledge sharing (e.g., Du Chatenier, Verstegen, Biemans, & Omta, 2009; Nonaka, Toyama, & Konno, 2000). Formal contracts may also have potentially adverse effects on the collaboration and the level of knowledge sharing (Grant, 1996). Thus, knowledge sharing and the conditions for knowledge exchange becomes a major challenge in managing innovations.

One way of creating such conditions is using Intellectual Property Rights (IPRs). IPRs are often introduced to protect and specify ownership to the valuable assets developed in projects. We define IPRs as the rights linked to any product and/or knowledge drawn up in an intellectual process in cooperation between companies. IPRs include the whole development process towards the innovation design and patent phase of a product and/or service.

We refer to IPRs not only as IPRs that are granted and protected by laws, but also knowledge and other intangible resources whose use may be controlled by contracts, policies, organizational routines, and norms, both physically and technically. IPRs include all cooperative innovations and results developed in the inter-organisational project team. There is a gap in understanding how and if the use of formal protection mechanisms affects trust, attitudes, knowledge sharing and innovation in project teams (Aarseth, 2014). The dynamics of IPRs and knowledge sharing in inter-organizational teams are weakly researched (Vaaland & H & kansson, 2003). Inter-organisational project teams are essential for global collaboration and innovation (Scarbrough, 2003; Ring & Van-de-Ven, 1994). Exploring and researching such an IPR context might be the understanding of the future organization of any global business. Our research question is:

How can IPRs influence trust, attitudes, commitment, knowledge sharing, and innovation in inter-organisational project teams?

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2. Theoretical framing and proposition development

2.1. Knowledge sharing and IPRs

The relationship between knowledge sharing and legal contracts regarding Intellectual Property Rights (IPR) has not been extensively investigated (Lee, Gillespie, Mann, & Wearing, 2010). Knowledge integration and knowledge sharing are essential for value creation and thus well researched. There is, however, limited research on the actual mechanisms used in inter-organisational collaborations. There is hard evidence on which types of boundaries trigger different types of knowledge sharing and integration tools (Koskinen, Pihlanto, & Vanharanta, 2003). Researchers have claimed that current research concerning this issue is insufficient and that further research is needed (Bock, Zmud, Kim, & Lee, 2005; Foss, Minbaeva, Pedersen, & Reinholt, 2009). Due to the lack of prior research related to IPRs potential influence on knowledge sharing, we chose to focus on factors known to be necessary for knowledge sharing and which seemed reasonable to be affected by IPRs. Three important factors promoting knowledge sharing in teams are trust, commitment, and attitudes (Fong, 2003). We will investigate how these factors are affected by IPR contracts and the potential consequences for knowledge sharing. Even though the three factors can affect each other (Hislop, 2003), we chose to investigate them separately in relation to knowledge sharing. Foss et al. (2009) concluded that the key to commitment and knowledge sharing is mutual trust.

2.2. Mutual trust and IPŔs

The basis of mutual trust can emerge from different factors and have different effects on knowledge sharing. The relationship between contracts and trust are not well researched. The effects different kind of contracts and IPRs can have on mutual trust are however not set. Contracts and legal and regulatory frameworks can act as antecedents of trust. These structures can also undermine confidence and make it difficult to determine whether or not trust exists (McNeish & Mann, 2010). IPRs can have both a positive and adverse effect on knowledge sharing indirectly through its influence on trust. Trust is a substitute for contracts according to theories on cost transaction economy (Hosmer, 1995). Trust can replace the need to monitor the other partner and reduce the need for safeguards and full contracts (McNeish & Mann, 2010). Increased use of contracts can, therefore, reduce trust, as the introduction of contracts can be seen as a signal of lacking trust and expectations of opportunistic behavior (Gallivan & Depledge, 2003; Kadefors, 2004; Mayer & Argyres, 2004). Kadefors (2004) found that detailed contractual specifications and close monitoring were negative for trust and consequently for cooperation. “The more complete and complicated contracts, the less trust” (, p.111).

Less detailed contracts can act as a trust mechanism and help develop trust by clarifying expectations, roles and responsibilities to the parties (Mayer & Argyres, 2004). Contracting can promote expectations of cooperation and generate a sense of obligation among the project members (Mayer & Argyres, 2004). Members might fear being exploited when sharing knowledge and this fear can be a serious threat to knowledge sharing (Empson, 2001). Contractual agreements such as IPR can safeguard knowledge (Olander, Laukkanen, Blomqvist, & Ritala, 2010) and therefore potentially minimize the risk and fear of being exploited. The IPR contracts can promote stability and predictability (Olander et al., 2010) and have a positive impact on trust (Argyres, Bercovitz, & Mayer, 2007; Blomqvist, Hurmelinna, & Seppänen, 2005).

Trust and contracts are complementary modes of governance that supplement each other. The presence of both is found to increase the knowledge exchange performance (Solitander & Tidström, 2010). Olander et al. (2010) found that trust and contracts had different importance depending on the phase of the project. In the first exploration phase, trust was necessary. In the following development phase, both confidence and governance mechanisms were needed. In the finalization stage, contractual management was more evident. Aalbers (2010) however concluded that IPRs, trust, leadership in teams are working closely together in all innovations phases. Woolthuis, Hillebrand, and Nooteboom (2005) found that IPRs and trust complement each other in project teams. IPRs provided the basis for trust. Less specific IPRs and trust were enablers for completion of detailed legal contracts following the innovation process.

The relationships between mutual trust and contracts are complex and dynamic. The researchers are not in agreement concerning its impact and causality. We conclude that there is support for that IPRs have a positive influence on mutual trust in teams. More research is however needed. We, therefore, suggest as Proposition 1:

a) The IPRs will increase the trust among the members of the inter-organizational project team.
b) The IPRs will increase the collaboration among the members of the inter-organizational project team.

2.3. Attitudes towards knowledge sharing and IPRs

As employees cannot be forced to share knowledge, willingness to share knowledge among the members becomes crucial. Willingness is defined as the extent to which an individual is prepared to grant other team members access to his or her personal intellectual capital and is influenced by employees’ attitudes to sharing (Bock et al., 2005; de Vries, van den Hooff, & de Ridder, 2006). Attitudes towards knowledge sharing are found to influence individuals’ intention to share knowledge, which in turn relate to actual knowledge sharing behavior (Cabrera & Cabrera, 2005). Attitudes towards knowledge sharing are strongly affected by beliefs regarding the outcomes of the actions and an evaluation of these findings (Cabrera & Cabrera, 2005; Liu & Liu 2011; Wang & Noe, 2010). Hence, employees evaluate the benefits and costs related to knowledge sharing. Individuals must be able to anticipate sharing knowledge to prove worthwhile (Schultz, 2001) even if they are uncertain about the outcome (Nahapiet & Ghoshal, 1998). As sharing of knowledge does not come without participant costs (Bock et al., 2005), members will evaluate if they can benefit from the value created by their involvement (Ipe, 2003). IPRs increase the expectations of benefits while the lack of IPRs decreases the expectations (Ipe, 2003). Our No. 2 Propositions are:

a) IPRs will positively influence project members’ attitudes towards knowledge sharing.
b) Those with IPRs will be more willing to share knowledge than those without IPRs.

2.4. Commitment, attitudes and IPŔs

There is found to be a significant positive relationship between organizational commitment and knowledge sharing (Cabrera, Collins, & Salgado, 2006; Hislop, 2003; ; van den Hooff & de Ridder, 2004). Those who are committed may engender beliefs that the organization has rights to the information and knowledge one has created or acquired (Jarvenpaa & Staples, 2001). According to Nonaka (1994) commitment is one of the most critical components for promoting the creation of new knowledge and thus essential for successful inter- organizational projects. The engagement to the team is much stronger than to the corporations involved in the teamwork. It is thus a multidimensional construct where contracts increase the commitment both to the project and corporate goals (Meyer & Herscovitch, 2001).

Cognitive commitment to the project and its aims are characterized by the acceptance of the goals and values of the project and by that the willingness to engage in the project (Mowday, Steers, & Porter, 1979). Affective commitment implies that the member believes in the project and by that contribute to its success (Allen & Meyer, 1990). Olaisen (1984) found the combination of cognitive and affective commitment to