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Knowledge Sharing: The Issue of Trust

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Abstract

This paper addresses two main issues that have been raised again in the scientific research in the past few years, and these issues are trust in knowledge sharing, and sharing knowledge between organizations. The paper aims to provide a basic overview of trust in knowledge sharing as it is presented in current research, specifically in scientific articles, and is structured into three sections in order to provide a brief review of selected research that dealt with these issues. The first section concerns new findings about trust as such, the second section offers the results of research that was conducted in the construction industry, and the third part brings a review of trust in inter-organizational relationships in short. The research deals with long-term relationship as the necessary background of trust, which is especially important to consider in project management. Project team members are more likely to develop trustful relationship when they already worked together in the past and if they are likely to work together in the future. Knowledge sharing happens on the individual level, the macrolevel initiatives only support individuals. Tacit knowledge is shared only on condition that trust is present. And last but not least, time pressure is a great obstacle for knowledge sharing not only on the individual level, but organizational as well.

Keywords

knowledge management; knowledge; trust; project management; civil engineering

Introduction

Knowledge management is a concept that has gained a wide popularity, and many organizations implement processes and systems that support knowledge management initiatives. However, many organizations are not successful in motivating employees to share their knowledge. Managing knowledge in its explicit and tacit form involves other disciplines such as organizational learning (or learning organization), competency-based management, information management (technology), or differences in managing individuals, groups, companies, and inter-organizational relations.

Currently, the literature agrees on what knowledge management is and what it is not [e.g. 1; 13]; that there are misunderstandings concerning the role of information technologies – knowledge management uses information technology, but information technology should not rule over knowledge management [6]; that knowledge management shows differences from learning organization [13] or competency-based management; that there are different types of knowledge (explicit/tacit, technical/administrative) and so forth.

Literature and scholars agreed on definitions of knowledge, gave frame ideas of how to manage knowledge within organizations, explored processes of knowledge creation, provided ideas of how to facilitate knowledge sharing within companies and between team members, and became concerned about the question of how to build trust between workers in the company [1; 7; 9; 13; 14; 15; 19]. Many of the approaches are of eastern origin; the researchers are from Japan, Taiwan, China, Hong-Kong or other countries in the region [e.g. 14].

In the earlier stages of knowledge management research (as well as its implementation into companies and its practical use), trust between members of companies was considered as somehow natural or as something that does not need further detailed explanations. We may speculate that this was given by the roots of some of the well-known and widespread literature by authors of Japanese, Taiwanese or Hong-Kong origin (for example Nonaka, Toyama and Konno [14]). However, the characteristics of e.g. Japanese and North-American work contracts and employment habits are very different. Japanese workers aim to start working for the best possible and recognized employer right after their studies, and tend to spend their whole career with one employer. They also value work very high and do not hesitate to work overtime. (Perhaps we can also mention the Japanese word that has no equivalent or translation into English: *Karoshi* as the death from being overworked.) On the contrary, North-American workers tend to get as various experiences after graduation as possible. Employment contracts are perceived more as economic transaction than commitment, and changing employer several times during one´s career is considered as normal, even desirable both for the individual and for the next employer.

Hence, this article addresses two main issues that have been raised again in the scientific research in the past few years, and these issues are sharing knowledge between organizations and trust in knowledge sharing. Though the boom of knowledge management research peaked around the year 2004, when most scientific articles were published, it seems that these two issues were not resolved sufficiently and some researchers are cautiously raising these questions of trust in different organizations, under specific circumstances, and particularly, in different cultures. This paper therefore aims to provide a basic overview of trust in knowledge sharing as it is presented in current research, specifically in scientific articles.

Methodology

This paper represents a literature based survey on knowledge management that addresses the issue of trust, both trust in knowledge sharing between individuals and between organizations. Since trust in knowledge sharing has not been a subject to extensive research so far, a very broad search terms were employed to explore online databases of academic peer-reviewed journal articles. These databases included Web of Science, Scopus, and EBSCO, and were reached through CTU (the Czech Technical University in Prague) access to Summon, the search engine of academic sources of information. The search terms included *knowledge sharing, knowledge management* or *trust* in the heading, subheading or keywords of an article. Articles were then assessed concerning relevance to management in general or to civil engineering, and concerning the year of publication in order to include as recent research as possible. Nevertheless, this initial phase of research led to the revealed need to employ also the snowball technique, when the sources of information mentioned in the researched articles needed to be obtained. The collection of the secondary articles was done through the same databases as the initial search.

Results

In knowledge economy, a company is highly dependent on captivating knowledge from its external environment in order to stay competitive. It is not enough to build on current knowledge, though developing it and learning from it. It is necessary to bring new knowledge into the company [e.g. 10]. Most leaders perceive knowledge management as a source of superior productivity and essential to success in todays´ changing markets [13]. However, there are some areas that have not been researched sufficiently so far and therefore have not been explained well yet. Some of the underexplored areas may be the reason that knowledge management initiatives failed in some organizations. Among the issues, that have not gained enough attention, are, i. a., trust in temporary project management teams and trust between organizations, which can be perceived as critical for civil engineering industry. Construction industry is now based largely on project management and extensively uses the services of subcontractors in order to be capable to fulfill their projects.

This paper is therefore structured into three sections in order to provide a brief review of selected research that dealt with these issues. The first section concerns new findings about trust as such, the second section offers the results of research that was conducted in the construction industry, and the third part brings a review of trust in inter-organizational relationships in short.

Trust

Recent research has adopted the definition of trust as positive expectations about the partner and a willingness to accept vulnerability [e.g. 3].

There are different forms of trust, as is now recognized in knowledge management literature [e.g. 3]. Firstly, Meyerson [12] proposed that there exists a certain kind of trust that he called *swift trust*. This is a form of shared belief that people who were brought together to work on a task are really willing to achieve the goal. This confidence is natural for the majority of people and without this personality feature people would not practice any kind of cooperation, regardless of its form (from settlements and joint hunting to federal governments). Sometimes trust can also be based on recommendation from a person we know personally and whom we trust, may it be a friend or a boss or a colleague. If a person is nominated into a project team by an authority, other team members are likely to trust him, even when having no previous mutual contact. Swift trust is also derived rather from the role of a person, his or her expected professional competencies, and also from the function of the person, when the particular person in question is not known well yet.

Secondly, Lewicki et al. [9] built upon their previous research and introduced three roots of trust: *calculus-based trust, knowledge-based trust, and identification-based trust*. Calculus-based trust is represented by economic exchange, usually appears in early stages of conditional links when there are more benefits than costs in a business partnership, and is based on belief that people will stick to their word. People assess the other party´s competence and integrity. Usually more formal, explicit knowledge sharing is preferred in this phase of trust. Knowledge-based trust, as the next stage, is then developed as a result of longer relationship or mutual contact, when the other party becomes more familiar and predictable. In the phase of knowledge-based trust, we usually understand other people´s motivation and intentions and understand their actions and behavior. This phase is characterized by more effective personal communication and tacit knowledge sharing. Finally, identification-based trust occurs when the personal relationship becomes emotional, when the people share their values, identify with each other and expect the partner to be considerate. Identification-based trust is unconditional, benevolent, and requires only a minimum control, if any. Therefore Lewicki et al. [9] state that developing such ties, where trust is undoubtedly in the background of all mutual actions, is a very slow and lengthy process, and this process transforms the ties from calculative over personal to emotional.

Trust in a project team has also another feature that goes beyond current project, and that is, surprisingly, continuation. It encompasses previous experience, but also expectations for the future. If team members have met sometime in the past and have already worked together and if they are very likely to become team colleagues again in the future, they are inclining more to trusting one another and are more willing to accept someone else´s knowledge (advice) and provide their own experience, knowledge, and advice [8; 16]. This finding has a considerable impact for construction industry: project managers should consider past good and bad experience with team members and should think very carefully about changes in their next project team – not to overvalue colleagues who became friends but also keep the team as stable as possible and not tolerate previous bad behavior. If the project managers form a new project team, they should be aware that trust between team members has to be re-established and let the team members get to know one another (in the initial phases of the project). In other words, spare some time for socializing, and think more to the future.

Both barriers to knowledge sharing and factors that facilitate knowledge sharing are being researched lately. Knowledge management activities often fail due to inappropriate hierarchical structure of an organization, due to competition between different divisions within an organization, due to inappropriate processes or technological equipment. Lack of time and shortage in monetary resources are factors that do not contribute to effective knowledge management, and lack of time is perceived as the barrier on both employees´ side and organization´s side [e.g. 7]. Many employees also hesitate to ask someone for advice and bother other people or thus admit they are not competent enough. Some employees are also convinced that they hold a unique know-how, and they do not want to share it, because they fear of being replaceable. If knowledge is *power*, why would they give the power up. Concerning civil engineering, the greatest obstacle for knowledge sharing is the nature of project management that focuses on performance under limited time schedule [7].

Factors that contribute to effective knowledge management are both the opposites of barriers and personal ones. An individual is motivated to share knowledge by altruistic and egoistic reasons, when altruistic is natural to a social existence, and egoistic is based on rewards, including non-monetary rewards such as esteem or social role persistence. Employees would share their knowledge if they perceive confidence and trust, if they think their knowledge is valuable, if they are capable to use a knowledge management system, if they can understand the knowledge, and if they want to share it [7].

This article intentionally omits the question of power. The research building on Foucault-Habermas duality is continuing and taking rather a philosophical direction. Moreover, issues concerning power are neither researched sufficiently in knowledge management literature, nor connection of knowledge management to power in organizational theory, see e.g. [13], and the question of knowledge-power would deserve more space.

However, Newman & Newman [13] argue that there are circumstances when power cannot be omitted when concerning trust and knowledge sharing. Nevertheless, as mentioned above, question of power-knowledge relation has to be answered yet. As Newman & Newman [13] noticed in their literature reviewing article, knowledge management keeps encountering the following issues: an individual, ordinary member of an organization will never have access to all organizational knowledge - some information will always remain a privilege for a restricted group of users/recipients. So, knowledge management in fact means only management of sharing recipes for best practices. Pressures for knowledge management advertising and implementation in the company, managerial control or exercise of authority lead to makeup of a survival knowledge and resistance strategies among employees. Organizational hierarchical structure influences power and authority, and how organizations exercise power over their members. Since trust is usually a mutually reciprocal relationship, power should be exercised cautiously and with respect to individual. In order to achieve power, most people are taught to accrue knowledge, so to them, knowledge sharing equates to losing power. Moreover, given power can make recipients even more powerful. Or to put the same into other words, managers who control knowledge management processes (or storage facilities) have more power over those who contributed into the system by sharing their knowledge. All these are the reasons why trust for knowledge sharing is probably the most complicated side of knowledge management activities [13].

Trust and knowledge sharing in construction industry

As concerns civil engineering industry, there have been found two specifics for knowledge sharing that arise mainly from the project-based nature of today´s civil engineering. Firstly, it is how prior ties influence trust among team members, and secondly, what motivates people to share their knowledge.

Prior ties have been researched in a case-study from Norway by Buvik and Rolfsen [3]. They were interested in the question of trust in project teams. Since project management has now become a very popular form in civil engineering, and since it is specific in developing a unique, non-repetitive project, it also has certain differences in knowledge management and sharing knowledge based on trust (and trust is a necessary ingredient for the willingness to share knowledge [15]). Project teams have to develop trust differently from stable work groups, and moreover, contrary to work groups based usually on a shared agenda, project teams are formed to cover all the necessary functions in order to accomplish the project successfully. Team members hold different knowledge, expertise and skills and a temporary project team has to integrate all these different backgrounds as effectively as possible in order to lead the project to a successful end. Though trust is now recognized as a necessary ingredient for a successful team [19], project management devotes only limited attention to development of trust in project teams [11]. When there is an extensive time pressure, there is hardly any time for establishing relationships or even for testing reliability and trustworthiness of the other team members. As people usually derive their trust from previous experience and build their expectations on it, it becomes a challenge in a temporary project team. Buvik and Rolfsen [3] researched a project team with previous experience with team members and found out that initial phases of trust building were considerably shorter than in other project teams. Integrative work practices were established quickly and role expectations were clear, norms of behavior and common philosophy were created in the initial phase easily, the overall climate enabled open communication and feeling of confidence. Their case study suggested that trust in the particular team enabled the team to develop a shared philosophy, which increased team cohesiveness and identity and the team was thus acting as one entity when dealing with external partners. The climate of open communication and confidence permitted the team members to ask questions without hesitating whether it is appropriate or not, therefore clarifying many doubts and preventing many potential mistakes. Open communication facilitates revealing sensitive information, no matter what it means – from being less competent than everyone else in the team thought, over admitting that one made a mistake, to revealing that somebody else made a mistake. All these issues are very sensitive, and we may presume that usually people tend to hide these problems that can potentially rise to greater consequences if they are not resolved at the very beginning. And moreover, all these issues can be understood differently than they were meant especially in an environment, where team members lack previous mutual experience, and where there is hardly any trust among team members. The ability to discuss potential drawbacks and their solutions openly is important generally, but it is especially important in a project team in construction industry, where there are so many uncertainties and very high level of interdependence, as Buvik and Rolfsen [3] argue. In such a case when one member of a team withholds information, it may cause negative consequences to the successful execution of the project and endangers the rest of the team. Further they found out that trust was the foremost determining factor of commitment, and that goal (or project) commitment was a good predictor of overall team performance, and trust and project commitment contributed to the motivation of team members, even if the circumstances were not positive. They recommend stressing out social integration of team members as without social bonds the team may remain fragmented and may not become united. So, this is why prior ties, even in project management in civil engineering, are that important.

The second research concerning civil engineering organizations and their knowledge sharing promotion was conducted by Javernick-Will [7], who noticed that many organizations hope to get a competitive advantage from knowledge management activities. So they implement these initiatives into the company´s practice with the vision of capitalizing on knowledge, because knowledge is now perceived as a source almost as valuable as capital. She focused on factors that facilitate knowledge sharing rather than concerning factors that are barriers to knowledge sharing, because she was convinced that failures of knowledge management initiatives in companies are caused on microlevel, not macrolevel. As knowledge resides with people, not with companies, it is worthy to focus on ways to facilitate knowledge sharing between employees. Javernick-Will [7] states that most research addressed organizational procedures and processes to transfer knowledge, or examined knowledge sharing in a group or network, but there is a lack of research that would focus on an individual. She argues that only individual employees can provide knowledge to others and only individuals reuse existing organizational knowledge, so that specifically only the individual level has an impact on knowledge sharing within an organization. This research aimed to answer the question why employees share their knowledge, and it has found out that it is above all the social motivation that facilitates mutual exchange of information and knowledge. The social motivations included factors such as: *“reciprocity, conformity to corporate culture, mimicking the behavior of leaders, peer recognition, honoring knowledge sharing commitments, and perception of the value of organizational knowledge”* [7, p. 193]. Reciprocity means not only the feeling of obligation that if someone helped us we should help him/her to pay back, but also showing gratefulness for longevity of employment with the organization, both back to past and forward to the future. Organizations with the “hire and fire” image cannot count with as loyal employees as organizations that retain employees even in worse times. Conformity to corporate culture appears both consciously and unintentionally, but most people purposely strive to be a part of a certain social group and to get the approval of others, and this also means behaving according to the rules of the group and conforming to group norms. If the knowledge sharing behavior becomes a norm in the company, it is likely that everyone would follow. Moreover, the rules and norms should include sharing both success stories and *mistakes* as well, though it may be tough for some people to admit their lessons learned. Mimicking the behavior of leaders is effective when the leaders are influential respected people, not purely mentors or teachers. Peer recognition deals with esteem. People like to be acknowledged for their professional qualities and contribution to organizational success. Honoring knowledge sharing commitments means that once a person voluntarily commits to follow knowledge management activities, he/she is more likely to sustain the commitment as it is the case of honor; and he/she is even more likely to sustain it if having been rewarded for the commitment. Further, three other factors were identified that eased knowledge sharing, and these were intrinsic motivation, resources (above all the time), and global incentives. Intrinsic motivation is the human nature to improve everything around us, and there are people who prefer talking to others to searching databases (extraverted people), and Javernick-Will [7] also mentioned that women tend to share knowledge based on intrinsic motivation more often. However, some people are not motivated by inner drives and need external stimuli. Extrinsic global incentives should be, though, linked to the overall success of the whole company, not just individual performance (or the team´s performance), because this may lead to withholding information within the team and competition between teams. Organizations should not overload their employees to the extent that they did not have the time to think twice before doing something or that they would be reluctant to help their colleagues simply because they are short of time.

Trust and knowledge sharing between organizations

Vaara et al. [18] researched knowledge sharing in companies after international acquisitions and warn that it is the organizational culture, not national culture that affects social conflict, contrary to expectations and contrary to the research of national cultures´ differences. And of course, social conflict is an obstacle for knowledge sharing. Negative integration outcomes are more often caused by organizational cultural differences than differences in national culture, but research and practice often do not distinguish between these two factors and puts them together.

Ashnai et al. [2] attempted to fill a gap in the research of trust as a predictor of knowledge sharing behavior and they were partially successful – they proved that interpersonal and social relationships with emotions and feelings as the source of interpersonal trust significantly affect business relationships, but the role of opportunistic behavior in business deserves more attention yet. They recommend to managers of organizations to focus on commitment and trust, because employees who deal with outsiders significantly affect the business relationship, its outcomes, value, investments etc. Inconsistency between company and staff attitudes has a negative impact on inter-organizational relationships. However, inter-organizational relationships involve mainly managers [10] (particularly in current research; relations between customers and staff were not concerned; and knowledge sharing of strategic importance between employees of competing companies is not the issue of this paper). Managers need to establish good relations with suppliers and therefore they are highly advised to devote time and effort to establish shared goals, because this facilitates sharing knowledge as well. Formal contracts contribute to sharing explicit knowledge, but shared goals and trust in business relations facilitates tacit knowledge sharing [10]. Cheng & Fu [5] also recommend that collaborative relationships can be established by focusing on activities that improve relationship and *institutional* orientation and avoid activities that may underpin relational risk behaviors. Chen et al. [4] constructed a model of knowledge sharing in the supply chain and elaborated on relational perspective, particularly shared goals, relational embeddedness, and influence strategies as basic determinants of inter-organizational trust. They suggest that contracts as legal protection enhance inter-organizational trust and highlight the importance of social, institutional, and cultural factors in inter-organizational interaction.

Sánchez de Pablo González del Campo et al. [17] proved that in inter-organizational relationships, both partner´s reputation and previous experience with the partner positively influence trust, and that the prior experience and partner´s reputation has strong, positive, and significant impact on success of cooperation agreements. Organizations usually establish business relationships in these consequent steps: first they contact a company, on which they obtained a good reference from someone they trust, and secondly, if they are satisfied, they are likely to continue in this cooperation. First own mutual experience becomes stronger predictor of trust and successful cooperation than the former referencing partner. A very simplified model of success of business agreement is illustrated in figure 1 below.

Figure 1: Trust as mediator in business agreements, simplified model (source: Sánchez de Pablo González del Campo et al., p. 713)

Finally, Maurer [11] comes to the same conclusion as mentioned above: selecting the team members for a project can facilitate development of trust even in inter-organizational projects. Contract design and measurable and objective rewards reduces suspicion and smooths establishment of trust and thus eases knowledge sharing.

Conclusion and discussion

The paper concerned some new findings about trust as such, offered the results of research that was conducted in the construction industry, and the last part shortly reviewed the issue of trust in inter-organizational relationships. The current research in scientific articles deals with long-term relationship as the necessary background of trust, which is especially important to consider in project management. Trust in the original research in knowledge management was understood as a matter-of-course, but now is a subject of more attention. This may be caused by different cultural backgrounds of eastern and western environments; however, the research continues and promises to bring answers. Project team members are more likely to develop trustful relationship when they already worked together in the past and if they are likely to work together in the future. Knowledge sharing happens on the individual level, the macrolevel initiatives only support individuals. Tacit knowledge is shared only on condition that trust is present. And last but not least, time pressure is a great obstacle for knowledge sharing not only on the individual level, but organizational level as well.

The research of trust is of a great importance for managers and knowledge management practitioners. For example, this paper mentioned several times how important it is to devote considerable time for establishing relations between team members, project partners, or even inter-organizational business partners, because sharing knowledge requires trust, and because trust is developed only by getting to know each other well, otherwise only swift trust or calculus-based trust occurs, and these two forms of trust are the least reliable.

Open communication is necessary to lead a project to successful end. If a member of a project team withholds information, it may negatively affect the whole outcome. The reasons for not sharing knowledge may vary from perceived loss of power to embarrassment of revealing own or someone else´s mistake, which is always sensitive. However, may the reasons be egoistic or altruistic, organizations should promote the atmosphere of trust and motivate employees to share their knowledge.

This paper was based on scientific articles obtained through search databases by searching for *knowledge sharing, knowledge management* or *trust* in the heading, subheading or keywords of an article. It is possible that some groundbreaking articles were omitted, or that the selection of search terms was not appropriate. Apparently articles addressing power – knowledge relation include trust as well, but these were excluded intentionally, and may it be that the very new research goes in the power direction only. The research of trust, knowledge sharing motives and inter-organizational knowledge sharing should continue, because there are so many fundamental questions remaining, and only some of them could have been mentioned in this paper.

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