

ANTECEDENTS OF EMPLOYEES' KNOWLEDGE SHARING INTENTIONS: AN INTEGRATED PERSPECTIVE OF INTERPERSONAL TRUST AND CONFLICTS

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Abstract

Facilitating knowledge sharing among employees across different units in an organization is crucial in terms of facilitating collaboration for developing competitive advantages. While a significant numbers of previous studies have examined the facilitating and inhibiting factors of knowledge sharing among employees in organizations, very few of them have empirically examined the individual effects of different types of interpersonal conflicts on interpersonal trust and, consequently, on their knowledge sharing intentions. Data collected from 224 employees of organizations in the manufacturing industry in Taiwan was analyzed to examine the proposed theoretical model using the technique of component-based structural equation modeling. The results indicate that both relationship and task conflicts have significant indirect effects on employees' knowledge sharing intentions via interpersonal trust. The theoretical and practical implications of this work are discussed.

Keywords: Knowledge sharing, Interpersonal conflict, Trust.

1 INTRODUCTION

In the contemporary knowledge-driven economic environment, the development and management of critical knowledge have become a critical and challenging task for managers to acquire sustainable competitive advantages of their organizations. To acquire sustainable competitive advantages, encouraging employees in different units to actively share knowledge with one another to enable them to develop skills and competences is a vital prerequisite. However, managers find it practically difficult to facilitate effective interpersonal knowledge sharing activities among employees in organization because of a variety of human and organizational/environmental factors, including concerns related to interpersonal relationships, self-interests, and organizational incentives (Yang & Wu 2008). Therefore, researchers have intensively investigated the human and organizational factors that influence individuals' intention to share knowledge among one another in various organizational contexts (Bock et al. 2005; Bock et al. 2006; He & Wei 2009; Kankanhalli et al. 2005; Leonardi & Treem 2012; Lin et al. 2009). Therefore, additional research that investigates how organizations may establish an environment that motivates knowledge sharing behaviors from a holistic perspective is necessary in order to enhance the organizations' ability to plan for, evaluate, and, justify their efforts to encourage employees' knowledge sharing behaviors.

While prior studies have identified various human and organizational factors that is critical for facilitating individuals' knowledge sharing behaviors, including various forms of trust, self-efficacy, and tangible and intangible rewards (Chang & Chuang 2011; Chiu et al. 2006; Hsu et al. 2007; Kankanhalli et al. 2011; Wang & Haggerty 2009), there have been very few studies that specifically investigate this issue from a subtle perspective of conflicts among entities (Liang et al. 2007). Research indicates that different forms of conflicts among individuals in a group or an organization can lead to different manners to which the individuals share and use the knowledge, which may, in turn, lead to different performance-related outcomes (Jehn 1997). An individual's perception of the trustworthiness of others are influenced by the elements of the communication processes, such as conflicts (Nevo et al. 2012). Thus, effective mechanisms or operational procedures should be developed to help preventing undesirable conflicts that may hinder individuals from effectively sharing their knowledge with one another (Merminod & Rowe 2012). Additionally, although trust and conflict are considered to be inherent issues for knowledge sharing in any social settings, very few knowledge-sharing studies have simultaneously investigated the relationship these two factors and their effects of individuals' knowledge sharing behaviors (Bandyopadhyay & Pathak 2007; Cheng et al. 2008; Panteli & Sockalingam 2005). Overall, the discussion presented above indicates that the interactions between interpersonal trust and conflicts regarding knowledge sharing and the effects of these factors on the individuals' knowledge sharing behaviors is a topic that is critical but has not yet been intensively researched by academics. Prior research indicates that the decrease in the conflicts in a relationship between two parties may result in the increase in their mutual trust and lead to intensive knowledge sharing behaviors, while overemphasis of position statuses/authority may decrease interpersonal trust and inhibit knowledge sharing behaviors (Cheng et al. 2008; Riege 2005). Thus, this study develops a theoretical model based on an integrated perspective of interpersonal trust and conflicts for examining employees' knowledge sharing intentions, and then empirically validates the proposed model using the technique of component-based structural equation modeling in order to acquire empirical support for the effects of interpersonal conflicts on interpersonal trust and individuals' knowledge sharing intentions at workplace.

2 THEORETICAL BACKGROUND

2.1 Interpersonal conflicts

Pondy (1967) argues that conflict can be understood more appropriately if it is considered a dynamic process that underlying a variety of behaviors, and indicates that a conflict relationships between two parties can be analyzed by a sequence of inter-related episodes that includes antecedent condition (e.g., policy differences or resource scarcity), affective state (e.g., stress, tension, and anxiety), cognitive state (i.e., individuals' perception or awareness of conflict situations), and conflictful behaviors (ranging from passive resistance to overt aggression). Although conflicts among parties are constantly treated as disruptive, deviant, and unproductive activities, they can be beneficial to the parties by balancing power relationships among these parties, promoting flexibility and adaptiveness, and facilitating effective decision making through challenging complacency illusions of invincibility (Putnam 1994). In this study we define interpersonal conflict as phenomenon that takes place between two individuals when they encounter negative emotions caused by perceived disagreement and interference with the attainment of their interests, value, and goals (Barki & Hartwick 2001).

Researchers tend to comprehend and investigate interpersonal conflicts in terms of their various forms to address a fundamental question of whether different types of conflicts eventuate in different degrees of consensus or disagreement and, thus, different consequences or behavioral patterns of individuals. The answers to this question would enable meaningful comparison of different social contexts in which those conflicts occur (Guetzkow & Gyr 1954). Consequently, there are many typologies of interpersonal conflicts in the literature. Based on the results of a literature review, we found that interpersonal conflicts can be generally grouped into two primary types of conflicts, which are task conflicts and relationship conflicts (Jehn 1995; Jehn & Bendersky 2003). Relationship conflict is defined as a conflict that derives from interpersonal incompatibilities that typically include tension, animosity, and annoyance among individuals. Additionally, task conflict is defined as a conflict that derives from disagreements among individuals regarding viewpoints, ideas, and opinions about the content of the tasks being performed. In this study, we will adopt this typology of interpersonal conflicts to examine the influences of different types of conflicts on employees' knowledge sharing intentions. As previous research that investigate conflicts in corporate settings tends to focused on the average level of conflicts and thus may over-aggregate individuals' perceptions, the adoption of the typology of task and relationship conflicts can help researchers take into considerations the influence of the asymmetry of perception regarding conflicts on individuals' behaviors (Jehn et al., 2010).

2.2 Interpersonal trust

Trust generally refers to an individual's confidence that the behavior of other individuals will be benevolent toward others and be consistent with his or her expectations. Nonaka (1994) claims that trust between two individuals may help to create an atmosphere/environment that facilitates knowledge sharing in a particular social context, such as a team/group or an organization. Cockrell and Stone (2010) indicate that a strong knowledge sharing culture is characterized by a high level of trust. Yang and Wu (2008) also imply that whether an organizational climate involves interpersonal trust is critical to predicting interpersonal knowledge sharing in the organization. In summary, trust represents individuals' assumptions about the intentions of other parties in a specific environment, and thus provides them with a frame of reference for determining the most viable and beneficial behaviors. This indicates that trust among individuals in organizations help create a learning culture that facilitates interpersonal knowledge sharing (Hsu & Sabherwal 2012).

In this study, trust is defined as the degree to which an employee believes that his or her colleagues will act in his or her best interests (Bhattacharjee 2002). Research indicates that trust may facilitate individuals' knowledge sharing behaviors (Bakker et al. 2006; Hsu et al. 2007; Yang & Wu 2008), since it encourages the disclosure of knowledge to others and reduces the screening of knowledge received (Boh 2007; McEvily et al. 2003). Trust is frequently discussed based on its characteristics/dimensions (Doney & Cannon 1997; Gefen 2002; Gefen & Straub 2004; Mayer et al. 1995; McKnight & Chervany 2002). By considering the nature of interpersonal interactions and the working definition of trust, this study adopts the trust characteristics presented by Mayer et al. that have been used in many other studies (Benamati et al. 2010; Bhattacharjee 2002; Komiak & Benbasat 2006; Nicolaou & McKnight 2006; Suh & Han 2003) to measure this construct. These trust characteristics are as follows: ability (the trustee has the ability to do what the trustor needs done), integrity (the trustee is honest and faithful, acts ethically, and fulfills promises), and benevolence (the trustee will act by considering the trustor's best interests aside from any egocentric stimuli).

3 RESEARCH MODEL AND HYPOTHESES

Based on the implications acquired from existing literature of trust, conflicts, and knowledge sharing, this study develops a theoretical model that depicts the relationships among two primary forms of interpersonal conflict, interpersonal trust, and knowledge sharing intentions (see Figure 1). The development of the research hypotheses associated with the proposed research model is discussed in the following sections.

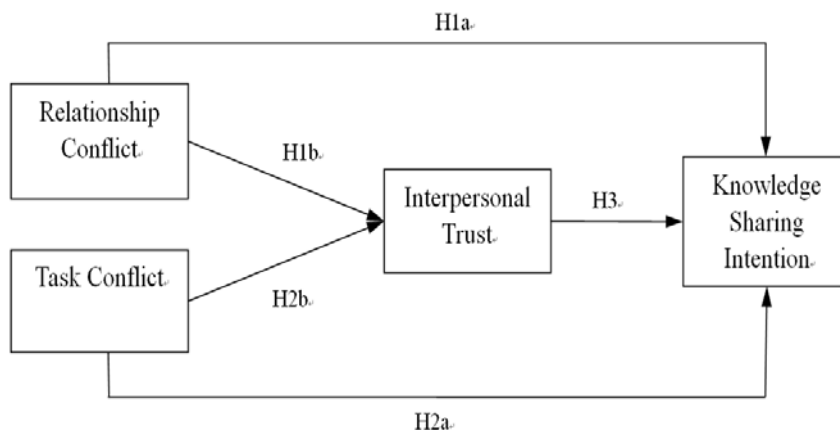


Figure 1. The research model

3.1 Interpersonal conflicts, interpersonal trust, and knowledge sharing intentions

Research indicates that relationship conflicts among individuals in a group tend to be accompanied tension, animosity, and annoyance within the group, and thus can hinder them from sharing knowledge with others because such conflicts may diminish the commitment that the individuals have toward each other (Amason & Sapienza 1997; Jehn 1995; Shih et al. 2008). Additionally, from a cooperation perspective, some prior studies imply that when dysfunctional, emotional-oriented conflicts are poorly managed, people may remain distant, skeptical, and angry, which may lead to weakened relationships and disintegrated trust among one another, and thus they are less likely to devote efforts into sharing knowledge with others (Bandyopadhyay & Pathak 2007; Panteli & Sockalingam 2005).

Simons and Peterson (2000) imply that relationship conflicts may cause individuals to perceive the others' conflict behaviors to be malicious in intent and convey distrust through their personal conduct, while the others may, consequently, reciprocate with distrust on their ends. Cheng et al. (2008) indicate that the enforcement of coercive-based power in a group represents a power struggle that may increase relationship conflicts, and, in turn, result in decreased level of interpersonal trust. Lau and Cobb (2010) argue that relationship conflict is characterized by competition caused by affective reasons over conflicting values, attitudes, and interpersonal evaluation, and thus has a negative impact on interpersonal trust by weakening the affective bonds among individuals.

Based on the discussion above, the following hypotheses are developed:

H1a. Relationship conflict negatively influences employees' knowledge sharing intentions.

H1b. Relationship conflict negatively influences employees' trust in the others.

Tjosvold and Deemer (1980) argue that task-related conflicts, as a result of incompatible ideas regarding the task, may stimulate individuals' curiosity and their dedication to searching for more information and knowledge to resolve the uncertainty. Some other prior studies also indicate that moderate task conflicts in a group increase the perceived necessity of individuals to better understand the thoughts of the others through sharing knowledge and information to enhance the quality of group decision making (De Dreu & Weingart 2003; Shih et al. 2008; Simons & Peterson 2000). Additionally, Zahra et al. (2007) implies that when conflicts of opinions and ideas (i.e., task conflicts) occur in a group under a harmony atmosphere, individuals tend to engage in more intensive sharing of knowledge and information to reconcile individual differences regarding the task, and they are thus likely to benefit from these constructive exchanges.

Prior studies on conflicts and task performance imply that task conflicts can stimulate constructive discussions among individuals, and thus improve decision-making quality and work performance, which, in turn, may lead to the increase in the level of interpersonal trust (Jehn 1997; Jehn & Shah 1997). Additionally, Simons and Peterson (2000) indicate that a beneficial effect of task conflict in a group is the formation of individuals' desire to stay in the group because such conflicts facilitate productive communications that lead to the increase in intragroup trust. Panteli and Sockalingam (2005) also indicate that task-related conflicts, if properly managed, can provide individuals with the foundation for developing mutual trust by enabling and facilitating constructive interpersonal communications.

Based on the discussion above, the following hypotheses are developed:

H2a. Task conflict negatively influences employees' knowledge sharing intentions.

H2b. Task conflict negatively influences employees' trust in the others.

3.2 Interpersonal trust and knowledge sharing intentions

Trust is considered as essential to enabling various kinds of behaviors involving interpersonal interactions (Konovsky & Pugh 1994; Schurr & Ozanne 1985). A significant number of studies indicate that trust can facilitate individuals' knowledge sharing behaviors (Bakker et al. 2006; Hsu et al. 2007; Lin et al. 2009), since it encourages the disclosure of knowledge to others and reduces the screening of knowledge received (McEvily et al. 2003). Additionally, Nonaka (1994) argues that the establishment of interpersonal trust can facilitate collaborative interaction, and thus create an atmosphere that encourages knowledge sharing. Furthermore, the existence of an environment of high trust can promote knowledge sharing behaviors, since it encourages individuals to freely interact with each other without hesitation for the purpose of sharing and exchanging knowledge (Chang & Chuang 2011; Chiu et al. 2006; Staples & Webster 2008; Wang & Haggerty 2009). Chou and He (2011) also

indicate that a high degree of trust in others will increase individuals' intention to accept and share knowledge with each other. The following hypothesis is thus presented:

H3. Employees' trust in the others positively influences their knowledge sharing intentions.

4 DATA COLLECTION AND ANALYSIS

4.1 Development of survey measures

To develop an effective survey, 21 items relevant to the four constructs of the research model were adapted from the existing literature and refined based on the specific topic of this study. To determine the characteristics of the construct of interpersonal trust, the four criteria for distinguishing formative constructs from reflective constructs suggested by previous researchers were applied (Jarvis et al. 2003). Interpersonal trust was eventually identified as a second-order formative construct measured by the three first-order sub-constructs of ability, benevolence, and integrity (Doney & Cannon 1999; Gefen 2002; Gefen & Straub 2004; Mayer et al. 1995; McKnight & Chervany 2002).

All of the survey items were pilot-tested with 31 individuals who had experience in using Web 2.0 collaborative tools to perform inter- and intra-organizational knowledge sharing behaviors. The internal consistency and reliability were examined using Cronbach's alpha coefficient analysis. The questionnaire was further refined based on the results and feedback from the pilot test. The final questionnaire consisted of 21 items used to assess the six first-order reflective constructs of the proposed research model. Items included in the final revised questionnaire were considered highly reliable because the individual Cronbach's alpha coefficients of all the first-order constructs reached the recommended level of 0.7 (ranging from 0.85 to 0.95). The items in the survey were measured using a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree.

4.2 Data collection

The data for this study were collected using a survey questionnaire. A list of the Top 500 corporations in the manufacturing industry in Taiwan was acquired. We randomly selected 100 companies, and representatives of these companies were contacted by phone and/or personal visits to explain the purpose of the research and to inquire whether the company would be willing to participate. Finally, 26 companies agreed to participate in this study. The names of these companies are withheld due to a non-disclosure agreement with their executives. The liaisons from these participating companies were asked to randomly distribute the questionnaires. Of the 256 questionnaires received, 32 responses were later removed due to the respondents' failure to complete all of the survey questions or to pass the examination of the reverse questions that were purposely included in the survey, yielding 224 valid responses and a valid return rate of 87.5%.

4.3 Data analysis

Given the existence of multiple relationships between the dependent and independent variables in these sorts of research models, the technique of the component-based structural equation modeling (SEM), namely the partial least squares (PLS), was adopted for the data analysis procedure of this study because of the concern regarding the use of the second-order formative construct, interpersonal

trust, in the proposed research model. It has been frequently demonstrated by researchers that the covariance-based SEM may suffer from identification problems associated with formative constructs, making it difficult to obtain a solution to the research model under analysis. Although methods have been developed to enable researchers to avoid the identification problems associated with the evaluation of formative constructs when using the covariance-based SEM technique, these methods are difficult to use in various situations. These situations include those in which a formative construct is measured purely by formative indicators, has a single subsequent variable, or is the ultimate dependent variable in the research model analyzed (Jarvis et al. 2003; MacKenzie et al. 2005; Qureshi & Compeau 2009). The use of PLS can prevent the problem of identification completely (Chin 1998). Based on the discussion above, the technique of PLS was thus adopted for data analysis in this study.

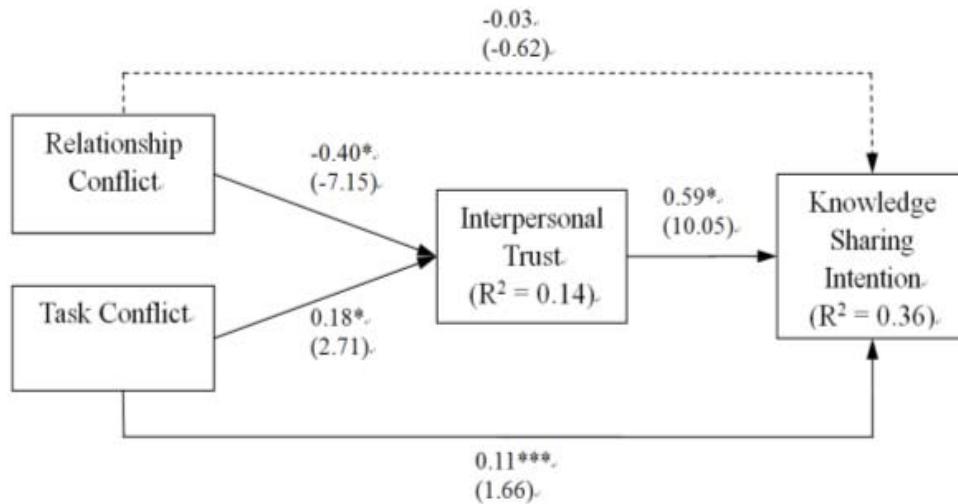
The reliability of the measures for each of the six first-order constructs was first tested by examining the individual Cronbach's alpha coefficients. For the seven first-order constructs, all of these were greater than the recommended level of 0.7 or higher (ranging from 0.83 to 0.92). Then, using the SPSS and SmartPLS 2.0 software packages, the psychometric properties (i.e., construct validity) of the measurement model were assessed in terms of convergent and discriminant validity (Fornell & Larcker 1981; Hair et al. 2010).

Three primary measures were used to evaluate the convergent validity of the measurement model: (a) the factor loadings of the indicators, which must be statistically significant with values greater than 0.6; (b) composite reliability (CR), with values greater than 0.6; and (c) average variance extracted (AVE) estimates, with values greater than 0.5. The results of our analysis indicate that all factor loadings (ranging from 0.63 to 0.94) of the measures used were statistically significant, and all were larger than the restrictive criterion of 0.6. Additionally, all CR values (ranging from 0.88 to 0.93) were higher than 0.6, indicating a reliable measurement model. Finally, the AVE values ranged from 0.57 to 0.87, indicating that each construct was strongly related to its respective indicators. Overall, the measurement model exhibited adequate convergent validity.

Finally, the discriminant validity of the measurement model was determined to be satisfactory, since the squared correlations between constructs were smaller than the corresponding AVE estimates (Fornell & Larcker 1981). To conclude, the measurement model was adequate.

By adopting the PLS technique using the bootstrapping procedure, the structural model was evaluated for hypotheses testing. The fit of the structural model was assessed by the explained variance (R^2) for endogenous constructs and a global fit measure, namely the goodness-of-fit index (GoF), specifically for PLS path modeling (Tenenhaus et al. 2005; Wetzels et al. 2009). The proposed model explained a considerable proportion of the variance of endogenous latent constructs (0.14 and 0.36 for interpersonal trust and knowledge sharing intentions, respectively), as depicted in Figure 2. Additionally, the geometric mean of the average communality (for exogenous constructs) and average R^2 (for endogenous constructs) were calculated and were found to be 0.75 and 0.25, respectively. A GoF value (as the square root of the product of the average communality and average R^2) of 0.44 was obtained, which is larger than the cutoff value of 0.43 for large effect sizes of R^2 (Wetzels et al. 2009). These results indicate support for the fit of the structural model.

Given an adequate structural model, bootstrapping of the 224 cases (the same as the original sample size) was conducted with 1000 samples to evaluate the significance of the proposed research hypotheses. Figure 2 presents the standardized path coefficients and t values, the significance of the paths, and the coefficients of determination (R^2) for each endogenous construct. As shown in Figure 2, all the hypotheses were supported by the data, except for hypothesis H1a, indicating that relationship conflict does not have a direct significant effect on employees' knowledge sharing intentions.



Note 1: Standardized path coefficients are reported (t values in parentheses).

Note 2: * $p < 0.01$; ** $p < 0.05$; *** $p < 0.1$.

Figure 2. Hypotheses testing results

5 DISCUSSION AND CONCLUSION

This study has developed and validated an integrated model for explaining employees' knowledge sharing intentions at workplace by adopting an integrated perspective of interpersonal trust and conflicts. Relationship conflict, task conflict, and interpersonal trust were all found to be significant factors in determining employees' intentions to share knowledge with their colleagues. The research findings can thus provide managers in organizations with significant insights into the management of the communication processes among their subordinates in order to facilitate moderate task conflicts and to eliminate relationships among them. These efforts may, in turn, enhance the level of interpersonal trust among the subordinates, encourage them to share knowledge with one another, and eventually facilitate constructive knowledge sharing practices in organizations. Additionally, the validation of the proposed research model has provided support of simultaneously adoption of interpersonal trust and various forms of interpersonal conflicts as key factors influencing knowledge sharing intentions of individuals in an organizational context. To further extend the contribution of this study, more research that aims to examine the proposed research model using a variety of samples that have a higher degree of representativeness in similar and different contexts is thus needed to further validate it, or refine it by identifying additional variables which can enhance the ability of the proposed research model to explain and predict employees' knowledge sharing intentions and behaviors, such as different dimensions of interpersonal trust, perceived empowerment of individuals regarding knowledge sharing, forms of personality of individuals, and corporation-related characteristics (e.g., staff size, business revenue, corporate culture).

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