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Why People Are Willing to Share More Knowledge than Required?

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Abstract: Knowledge sharing is critical for modern organizations. Besides in-role knowledge sharing, there exists knowledge sharing beyond one's role, which is called extra-role knowledge sharing. This study investigates the antecedents of the extra-role knowledge sharing from the perspective of organizational citizenship behavior (OCB). Previous studies on OCB and works on knowledge sharing were reviewed to develop a model explaining the factors behind extra-role knowledge sharing. Willingness to help that is hypothesized to be influenced by procedural justice, job satisfaction, and employee personality (extraversion and agreeableness) is believed to influence extra-role knowledge sharing. Empirical data confirmed most of the hypotheses of this study.

Keywords: extra-role knowledge sharing, organizational citizenship behavior, willingness to help

1. Introduction

The world has come to an information explosive era, in which knowledge, an intangible asset of companies, is extremely important. Knowledge is believed to be the most important resource for creating core competitive advantages of an organization (Liu and Lai 2010). To leverage this resource, knowledge management systems have been applied to organizations and were made to benefit them (He and Wei 2009). However, whether employees are willing to share their knowledge, an act on which achievement of effective knowledge management partly depends, is a critical

issue. Only when employees share their knowledge can an organization own and use said knowledge. Furthermore, the more knowledge employees want to share, the more resources the organization can gather, and the more value the organization can generate from said knowledge.

Researchers have explored the intention to share knowledge or information using different theories and contexts (Kolekofski Jr. and Heminger 2003; Bock, Zmud et al. 2005; Chiu, Hsu et al. 2006; Chen and Hung 2010; Du, Lai et al. 2010; Cui and Du 2012). Those studies help understand knowledge sharing in organization. For example, Cui and Du (2012) found that there are two types knowledge sharing existing in organizations, namely, in-role and extra-role knowledge sharing. Besides the knowledge sharing required or expected by each job role, employees in organization may share more with each other in reality. Extra-role knowledge sharing can generate additional resource sharing in organizations, enhancing the effectiveness of the use of knowledge. Therefore, investigating extra-role knowledge sharing, i.e., why people are willing to share more than what is required, is important. The need to do such an investigation is the reason for this study.

This study aims to examine the extra-role knowledge sharing from the perspective of OCB. Findings of previous studies on OCB were reviewed for the development of the model that explains the factors affecting OCB. Willingness to help is believed to influence extra-role knowledge sharing. Willingness to help is hypothesized to be influenced by procedural

justice, job satisfaction, and employee personality (extraversion and agreeableness). Empirical data confirmed most of the hypotheses of this study.

This study is organized as follows. Section 2 introduces the research background, including that on knowledge sharing in organizations and OCB. Section 3 presents the development of a research model based on previous literature. Section 4 discusses the methodology, while Section 5 presents results of data analysis. Finally, Section 6 provides further discussions, and presents the limitations and conclusion of the study.

2. Literature review

2.1 knowledge Sharing

Knowledge sharing in organizations is believed to be affected by the relationship between organizational structures and information systems (IS) structures. Researchers believe that knowledge sharing is determined by task characteristics, technological interdependency, work teams, and networked structures of organizations. Therefore, IS structures are said to possess capacities for matching information sharing requirements to make information sharing effective (Lee and Leifer 1992).

In addition to IS structure, belief of individuals on the knowledge is important for knowledge sharing. Researchers have applied the theory of reasoned action (TRA) in knowledge sharing and believe that attitude toward knowledge sharing is important (Kolekofski Jr. and Heminger 2003) in making them engage in such activity. In their study, information stewardship attitude of employees (i.e., treatment of information as a corporate, rather than personally owned, resource) is believed to determine the extent of knowledge sharing in organizations. In addition, they suggest combining two additional attitudes in the information sharing model, instrumentality (physical measures of the information and the impact of shar-

ing), and value for feelings (how the requester treated the information holder in the past) (Kolekofski Jr. and Heminger 2003).

Ardichvili et al. (2003) believe that when knowledge is viewed as a public good belonging to one whole organization, it flows much more easily. Therefore, various types of trust, ranging from knowledge-based to institution-based, are suggested to be developed in organizations to remove the barriers to knowledge sharing.

However, trust was shown to be insignificant in the study by Chow and Chan (2008). In their study, social capital (including social network, social trust, and shared goals) were combined with the theory of reasoned action. Data from 190 managers in Hong Kong confirmed that a social network and shared goals significantly influence knowledge sharing and the perceived social pressure of the organization. However, the social trust failed to show direct effect of knowledge sharing on the attitude and subjective norms.

In addition to people's belief, the knowledge sharing itself has also been investigated. Constant (1994) believe that the attitude toward information sharing depends on the form of the information to be shared. Sharing tangible information depends on pro-social attitude and norms of organizational ownership. Sharing expertise depends on self-expressive needs of people. On knowledge sharing management, Van den Hooff and Huysman (2009) argue that there are two important approaches: an emergent approach that focuses on the social dynamics between organizational members and the nature of their daily tasks, and an engineering approach that focuses on management interventions to facilitate knowledge transfer.

Motivators, like monetary or intrinsic rewards, are also investigated in relation to organization knowledge sharing behavior. Bartol and Srivastava

(2002) suggest four mechanisms in encouraging knowledge sharing in organizations. The first mechanism involves the most amenable rewards to the knowledge sharing databases. Second involves the rewards based on collective performance for formal interaction. Third entails the trust between individuals and organizations for informal interactions. Fourth covers the intrinsic rewards for the building of expertise and for recognition as the most appropriate means of fostering the feeling of competence among employees.

According to the study by Bock and Kim (2002), expected rewards do not have significant effect on the intention to share knowledge. In their follow-up study, anticipated extrinsic rewards even exert a negative effect on knowledge-sharing attitude of individuals (Bock, Zmud et al. 2005). They found that the intrinsic motivators, such as anticipated reciprocal relationships and sense of self-worth, affect knowledge sharing attitudes that, in turn, affect the intention to share knowledge together with the subjective norms and organizational climate. Their research findings indicate that different types of information sharing need different reward mechanisms.

2.2 Organizational citizenship behavior (OCB)

Organizational citizenship behavior (OCB) in the area of management long has been investigated. Researchers found that this behavior is different from in-role behavior. OCB is defined as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ 1988).

Research tried to discover the dimensions of OCB to thoroughly assess it. For example, a study of 422 employees and their supervisors from 58 departments of two banks found that OCB includes at least two separate dimensions, namely altruism (helping specific persons) and generalized compliance (a more impersonal form of conscientious citizenship) (Smith, Organ et al. 1983).

Later, general compliance is deconstructed, and the new model consists of five dimensions, namely, altruism, courtesy, conscientiousness, civic virtue, and sportsmanship (Organ 1988). This model later was found robust when assessing OCB. In addition to altruism that kept its original definition, the other dimensions were also clearly defined. Conscientiousness refers to behaviors that go beyond the minimum role requirements. Civic virtue indicates deep concerns of employees and their active interest in the life of the organization. Courtesy refers to behaviors preventing work-related conflicts with others. Sportsmanship is characterized by the willingness to accept changes occurring within the organization even if they do not like or agree with those changes.

In addition to its dimensions, antecedents of OCB were also investigated by researchers. For example, in the study by Smith et al. (1983), rural background was found to have direct effects on citizenship behavior. However, the predictive power of other variables, including leader supportiveness, personality, and job satisfaction, varied across the two dimensions of citizenship behavior.

Perception of fairness was also investigated as one of the antecedents of OCB. In the study by Moorman (1991), equity theory and other theories of social exchange were applied to develop a research model, including on relationships between procedural/distributive justice and OCBs. Results of the empirical data analysis showed that procedural justice has significant effect on four of the five OCB dimensions. The excluded dimension was civic virtue. However, distributive justice was found not to influence any OCB.

In addition to these attitudinal factors, the personality factors were suggested to be given emphasis

by Organ and Ryan (1995) in determining OCB. Later, person-organization fit was considered as the antecedents of leadership support and job satisfaction, which then influenced OCB (Netemeyer, Boles et al. 1997). The "big five" personality model were also introduced to OCB studies. The linkages between personality and OCB was investigated by a field sample (Kumar, Bakhshi et al. 2009). The regression results showed that four of the "big five"， including conscientiousness, extraversion, agreeableness, and neuroticism, can validly predict OCB. Openness to experience showed no significant effect on OCB.

Furthermore, researchers also examined the consequences of OCB. For example, Organ (1988) argues that organizational citizenship behavior is critical for organizational effectiveness. The relationship of social capital with OCB was also studied. Bolino et al. (2002) suggest that citizenship behaviors contribute to the development of social capital in organizations, including the creation of structural, relational, and cognitive forms of social capital. In this way, the manner by which a firm functions is enhanced.

3. Model and hypothesis development

This study aims to explore the antecedents of extra-role knowledge sharing from the perspective of OCB. Findings of research on OCB were applied to construct the model that is indicated in Figure 1. Extra-role knowledge sharing is determined by willingness to help that is influenced by procedural justice, job satisfaction, extraversion, and agreeableness.
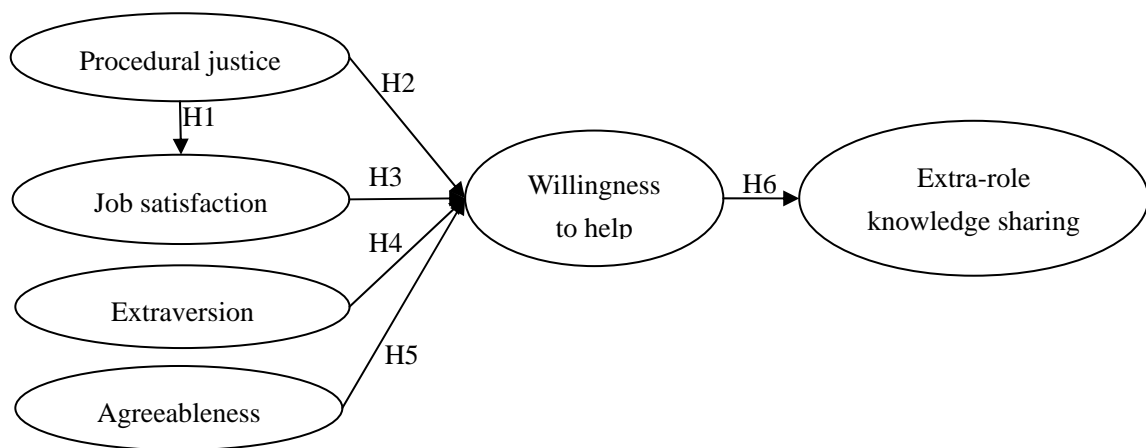

Figure 1 Research model of extra-role knowledge sharing

Equity theory argues that employees compare the outcomes of a job in relation to their inputs and then compare the inputs/outcomes ratio with relevant others (Adams 1965). Justice perceived by employees influences their job satisfaction, as confirmed by previous research. For example, Moorman (1991) found that the perceptions of organizational justice positively influences job satisfaction. Tansky (1993) confirmed that perceptions of overall fairness is positively associated with job satisfaction and explains 20% of its variance. There are two types of justice, namely, distributive and procedural. Procedural justice is the perceived fairness of the process used to determine the distribution of rewards (Robbins and Coulter 2009). When examined independently from the distributive one, procedural justice is found to affect job satisfaction (McFarlin and Sweeney 1992). Moorman et al. (1993) confirmed the effect of procedural justice on job satisfaction in their study. Therefore,

H1: Procedural justice is positively associated

with job satisfaction of employees.

Research identifies that OCB has several dimensions, and altruism is always one of them. Altruism, sometimes called helping behavior, involves voluntarily helping others on, or preventing the occurrence of, work related problems (Podsakoff, MacKenzie et al. 2000). Although all the dimensions of OCBs are usually investigated simultaneously, they seem different in terms of antecedents and consequences (Smith, Organ et al. 1983; Tansky 1993). For example, in the study by Tansky (1993), regressions for all the OCBs were run, but only the result of the regression for altruism was found significant to perceptions of overall fairness (Tansky 1993). Researchers have confirmed that there is a significant relationship between procedural justice and some of the OCBs, including altruism (Moorman, Niehoff et al. 1993). Another study also supports the relationship between procedural justice climate and the help OCB (Ehrhart 2004) that actually is altruism. The more procedural justice some employee perceives in the organization, the more willing he/she is to help others in the organization. Therefore, we believe there is a significant relationship between procedural justice and willingness to help.

H2: Procedural justice is positively associated with willingness to help of employees.

In addition to procedural justice, job satisfaction is an important antecedent of OCB. The willingness of employees who are satisfied with their jobs to perform extra-role behavior, such as helping others, is easy to understand. Previous research also found that job satisfaction is positively and significantly related to altruism (Tansky 1993). Smith et al. (1983) discovered a direct predictive path from job satisfaction to altruism but not to other OCBs. Therefore,

H3: Job satisfaction of employees is positively associated with willingness to help.

The research on OCB introduced "big five" as the most popular instrument for personalities to investigate their effects. However, not all the personalities affect all the OCBs. Some research suggests that different sets of personality traits predict different OCBs (Organ and Ryan 1995). Specifically, personality traits related to interpersonal interactions (e.g., extraversion and agreeableness) might be expected to have strong relationships with OCB (Small and Diffendorff 2006). Therefore, in this study, extraversion and agreeableness are believed to have an effect on willingness.

Extraversion refers to the degree of orientation of an individual to interact with others. It is the tendency to be outgoing and gregarious, and to have a strong need for sensory stimulation (Neuman and Kickul 1998). Mount et al. (1994) found that extraversion accounted for some of the variance in job performance. People with high extraversion tend to interact more with others, thus having more chances to help others. Therefore,

H4: Extraversion is positively associated with willingness to help.

Agreeableness describes skills of an individual to form relationships with others as well with an organization (Neuman and Kickul 1998). Through correlation analysis, Ahmadi (2010) showed that agreeableness is correlated with altruism. Moorman (1991) confirmed that agreeableness is a significant predictor of OCB of an employee. Therefore, it is believed that people with the ability to form a relationship with others have high tendency to help others. Therefore,

H5: Agreeableness is positively associated with willingness to help.

Cho et al. (2010) empirically found altruism is positively related to knowledge sharing in the context of Wikipedia. He and Wei also found enjoyment in helping is one factor influencing the positive attitude toward and the intention to engage in knowledge contribution in knowledge management system (He

and Wei 2009). It is believed the rationale can be generalized to the extra-role knowledge sharing behavior in organizations. Extra-role knowledge sharing is a behavior beyond in-role responsibility of an individual. The willingness to help may be needed to conduct such a behavior. People who are willing to help others is believed to share more knowledge with others even it is not required. This study seems to just put a variety of prior studies into one research model and to apply the model to new context (i.e., extra-role knowledge sharing). Therefore,

H6: Willingness to help is positively associated with extra-role knowledge sharing.

4. 4. Methodology

4.1 measurement development and validation

The measures in this study were developed based on previous studies on OCB and knowledge sharing. All the measures were composed of multi-statements. Respondents were asked to indicate their opinions by making a choice from 1 ("strongly disagree") to 7 ("strongly agree") for each statement.

The measures for extra-role knowledge sharing were adapted from Cui and Du's study (2012). The readiness to share knowledge beyond required, the eagerness to share new knowledge, and the voluntariness to share knowledge to enhance job performance were used to measure extra-role knowledge sharing.

The concept of job satisfaction was directly adopted from the study by Netemeyer et al. (1997). Three items describing satisfaction with work when all aspects were considered were given. Procedural justice was adopted from the study by Niehoff and Moorman (1993), and all the original five items on justice when job decisions are made were kept.

The measure of willingness to help was adapted from the study by Hsu and Lin (2008). The context was changed from knowledge sharing through blog use to knowledge sharing in organizations. Together with the measures of altruism cited in the study by Netemeyer et al. (1997), three items describing the willingness to help others were given. The measures for the two personality traits, namely, extraversion and agreeableness, were adapted from the measures for "big five" (John, Donahue et al. 1991). To keep the questionnaire short, only the positive descriptive items were kept. The reversed items were excluded from the questionnaire.

The questionnaire was pre-tested by five business professors. Based on their comments, the authors modified the questionnaire, particularly the wording, the grammar, and the structure. The questionnaire was first developed in English and then translated into Chinese for data collection.

4.2 Data collection and data analysis method

The data were collected by sending copies of the invitation letter containing the description of the survey to 200 EMBA students, most of who were from Taiwan. Questionnaires were sent as attachments to emails. The respondents were asked to invite one of their colleagues to fill up one questionnaire, if possible. After two rounds of sending out of the reminder, 86 questionnaires were filled up and sent back. After excluding two incomplete ones, 84 valid questionnaires were used for data analysis.

The data were analyzed first through exploratory factor analysis (EFA) to test the measurement model. AVEs and covariance among the variables were calculated to test the construct validity. Partial least squares (PLS) structure equation modeling (SEM) was applied to analyze the data because it allows small sample size.

5. Results and analyses

In total, 84 questionnaires were completed. Among the corresponding respondents, 56 were male

and 28 were female. They were all above first-line managers. Exploratory factor analysis (EFA) was run first to test the measurement. Principal component analysis and Varimax rotation were selected for the data analysis using SPSS 15.0. Based on the number of target factors cited in the hypothesized model, the number of the factors was set at six. Six factors, which this study intended to generate, were exacted. All the items loaded higher to their own target factors than to others.

Then, the validity of the measurement model was assessed. The content validity was verified by an interview of some senior managers. Convergent validity and discriminant validity were assessed by examining the average variance extracted (AVE) of each variable and comparing it with the shared variance between variables. The values of the AVEs of the variables range from 0.678 to 0.854, all higher than the required threshold, 0.5, indicating strong convergent validity of the measures. In addition, they are all higher than the shared variances with other variables. Therefore, the discriminant validity of the measures is established.

The reliability of the measures was assessed by Cronbach's alpha and composite reliability that are above 0.84 and 0.89 respectively, indicating the measures are reliable. The weights and loadings of the measures model are all significant on their path loadings at the level of 0.01.
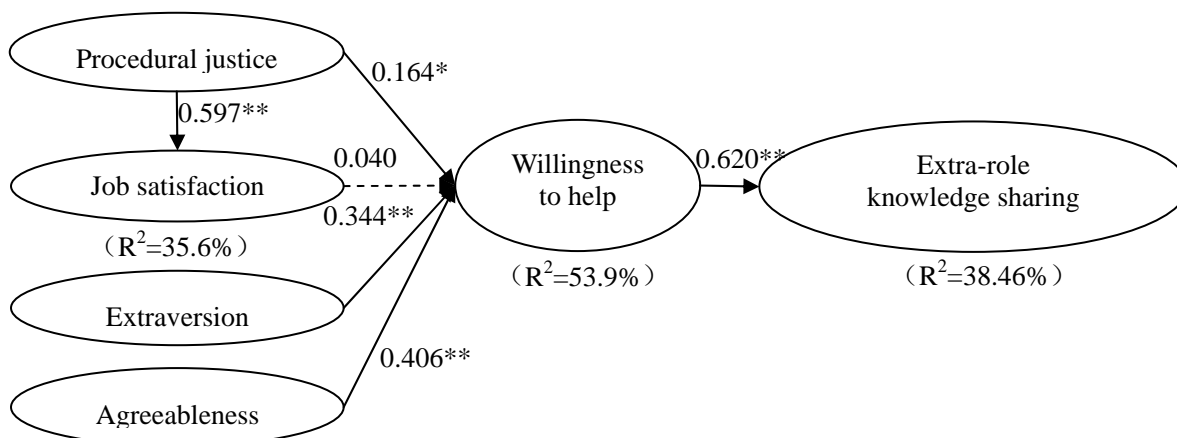

Figure 2 Data analysis results of the research model

The PLS results of the structure model were shown in Figure 2 with the standardized coefficients and the R-square of the endogenous variables. As shown in the figure, except for H3, all the other hypotheses are supported. Procedural justice has significant effect on job satisfaction (H1 is supported) and on willingness to help (H2 is supported). However, there is no significant relationship between job satisfaction and willingness to help (H3 is not supported). Both extraversion and agreeableness have significant effect on willingness to help (H4 and H5 are supported). Willingness to help is positively associated with extra-role knowledge sharing (H6 is supported).

In order to test the mediating effect of willingness to help (Baron and Kenny 1986), two extra models are performed. The first model removes willingness to help and tests the direct effect of OCBs on extra-role knowledge sharing. The second one adds willingness to help back together with all the links from the OCB factors to it. The results show that extraversion and agreeableness are significantly associated with extra-role knowledge sharing in the first

model. However, when willingness to help is controlled, their significance level dropped in the second model, which indicates that willingness to help has some mediating effect between the personality variables and extra-role knowledge sharing.

6. Discussions and conclusions

The result showing that job satisfaction does not have significant effect on willingness to help is interesting. However, further examination is needed to determine the underlying reasons for this observation. This study not only investigated job satisfaction but also procedural justice. These two variables have a relationship that may affect their individual effect on willingness to help. Actually, researchers found that job satisfaction does not show any significant effect on OCB when perceptions of fairness were also measured in one model (Moorman 1991). Another explanation comes from the meta analysis of the existing literature by Organ and Ryan (1995). They indicated that job satisfaction is more related to in-role performance than to OCB. This argument may explain why job satisfaction has not shown any significant effect on willingness to help.

Although the hypothesis on the relationship between job satisfaction and willingness to help (H3) is not supported, this study achieves its original goal of investigating the extra-role knowledge sharing from the perspective of OCB. Willingness to help also takes the mediating role between personality factors (extraversion and agreeableness) and extra-role knowledge sharing, thus providing a new direction for future research on this area. For managers, this study emphasizes the role of OCB in knowledge sharing. To enhance the effectiveness of knowledge sharing, managers need to provide more justice to their existing employees. This research also indicates that managers should consider personality of applicants in their recruitment. They must note that extra-

vert and agreeable persons are the ones inclined to help others and share more knowledge in organizations. The results are consistent with the research findings of de Vries et al.'s (2006) study that examines team communication style and team members' willingness to share knowledge. In their study, team extraversion and team agreeableness are positively related to team members' willingness to share knowledge.

This study has some limitations. The major one is the common method variance caused by self-ratings of all the questions. Researchers have found that self-ratings are associated with higher correlations, suggesting spurious inflation due to common method variance (Organ and Ryan 1995). In the future, peer evaluations or supervisor-ratings should be applied. The sample size is another limitation of this study. In order to meet the recommended minimum subject to item ratio (5:1) in EFA (Gorsuch 1983), more data should be collected in the future.

To conclude, this study brings up a research question for modern management about extra-role knowledge sharing in organizations. Through the literature review on knowledge sharing and OCB, a research model is proposed. Empirical data and analysis help confirm the validity of the model, which shows its academic and practical contributions. However, this study is simply an exploratory one, and further investigation of the topic using better and more rigorous procedure is advised.

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