Sharing through Commitment: Organizational Justice and Trust as Antecedents of Knowledge Sharing between IT Professionals

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Abstract: Knowledge sharing is an important process in modern organizations, as successful knowledge sharing can result in shared intellectual capital, an increasingly important resource. In this paper, we study the influence of distinction is made between knowledge sharing self-efficacy and knowledge sharing intention. Based on relevant literature, we hypothesize that commitment, self-efficacy are both positively related to knowledge sharing intention. Organizational commitment as a mediator, we also hypothesize that organizational justice and trust positively influences commitment. Well-known and widely publicized findings from the literature are logically turned into hypotheses, proved or rejected through a well-constructed survey among 252 IT professionals. Our conclusion is that organizational justice and perceived trust are antecedents of organizational commitment, and that such commitment, in turn, influences the confidence and willingness to share knowledge. The results suggest the need for consideration of commitment as a mediator when encouraging individual to share knowledge.

Keywords: Knowledge sharing; self-efficacy; trust; commitment, organizational justice

I. Introduction

Organizations recognize that knowledge constitutes an intangible asset for creating and sustaining competitive advantage [1-4]. Knowledge that resides within individuals often is referred to as tacit knowledge, and successful knowledge management must convert internalized tacit knowledge into explicit codified knowledge in order for it to be stored and shared effectively [5]. Knowledge sharing is the behavior of disseminating acquired knowledge to other members of an organization, and often presents major challenges, because some employees resist sharing their knowledge with others [6].

Most studies take trust as a major environmental factor to connect the knowledge providers and the knowledge receivers. For example, when two parties begin to trust each other, they become more willing to share their resources without worrying that they will be taken advantage of by the other party. This study takes trust as an important factor with regard to knowledge sharing cognition and behavioral intentions.

This study argues that when people feel their organizational environment is fair, they display a high level of knowledge organizational commitment and the use of some crucial organizational environment factors (perceived trust and organizational justice) on knowledge sharing. In knowledge sharing, an important

sharing behavioral intention based on their perceptions of trust and commitment. Conversely, when people feel that the organization environment is unfair, they refuse to share knowledge. Organizations tend to arouse innovative thinking if they offer a non-judgmental organizational climate [7]. A theoretical basis for a relationship between fairness and organizational behavior (i.e. knowledge sharing) has also been drawn from justice theory. Justice theory attempts to explain relational satisfaction in terms of perceptions of fair/unfair distributions of resources within interpersonal relationships, and is considered as one of the various justice theories. The belief is that people value fair treatment, which then motivates them to maintain fairness in their relationships with their co-workers and the organization.

Overall, the purpose of this study is to identify the antecedents that support or hinder an individual's knowledge sharing behavior from both environment factors and personal cognition aspects. Especially, this study aims to explore the nature of trust and organizational justice to examine their impacts on an individual's knowledge sharing self-efficacy and behavior. Perceived self-efficacy is served as a behavioral control variable to deal with situations in which people face the challenge of exchanging knowledge among individuals in organization.

This paper is organized as follows: first, the social exchange theory is described as a theoretical background to link trust, commitment, and a research model is proposed. Then, research methodology and data analysis are discussed. Finally, the conclusion and limitations are presented.

II. Theoretical background and hypotheses

Self-efficacy and knowledge sharing process

Self-efficacy is defined as the judgments of individuals regarding their capabilities to organize and execute courses of action required to achieve specific levels of performance [8]. People who have high self-efficacy will be more likely to perform related behavior than those with low self-efficacy. Therefore, self-efficacy can help motivate employees to share knowledge with colleagues [9, 10].

This study use self-efficacy to understand in the context of knowledge sharing process. Researchers have also found that employees with high confidence in their ability to

provide valuable knowledge are more likely to accomplish specific tasks [11]. Employees who believe that they can contribute organizational performance by sharing their knowledge will develop more positive attitudes toward and intentions regarding knowledge sharing. Hence, the following hypothesis is proposed.

Hypothesis 1: Perceived self-efficacy has a positive effect on knowledge sharing intention.

Commitment, self-efficacy and knowledge sharing

Commitment is "the relative strength of an individual's identification with, and involvement in a particular organization" [12]. Commitment to the organization is an important variable in explaining knowledge sharing [13, 14]. Commitment is positively related to individuals' willingness to commit extra effort to their work, and this kind of commitment can be expected to relate to willingness to share and receive knowledge [15].

Greater commitment may engender beliefs that the organization has rights to the information and knowledge one has created or acquired [14]. Kelloway and Barling [13] report a number of empirical studies that confirm that commitment is a predictor of performance, and is based on a reciprocal relationship wherein the individual offers his or her talents to the organization in exchange for the rewards of organizational membership.

In sum, the literature leads us to expect that commitment to the organization positively influences the extent to which people share their knowledge. As commitment influences both the willingness to contribute to the organization and the cognition of knowledge sharing, this study thus proposes the following hypotheses.

Hypothesis 2a: Commitment has a positive effect on perceived self-efficacy.

Hypothesis 2b: Commitment has a positive effect on knowledge sharing intention.

Trust and knowledge sharing

Trust, an implicit set of beliefs that the other party will behave in a dependent manner and will not take advantage of the situation, has been recognized as an important factor affecting knowledge sharing [16, 17]. This means that the higher the degree of trust, the more individuals will be willing to share their knowledge with other members in the organization [7, 18, 19].

Trust in the organization have a strong and robust influence on a variety of organizational phenomena including job satisfaction, commitment, and, most relevant to the current research, knowledge sharing [20, 21].

Organizational justice as an antecedent of trust and commitment

Organizational justice describes individual and group perceptions of the fairness of an organization, as well as behavioral reactions to such perceptions. Generally, maintaining good organizational justice can lead to favorable outcomes in the workplace. It is expected that employees will act according to organizational rules and regulations if they are treated and receive the outcomes fairly. Moreover, research has shown that employees have more trust, are more committed to the organization, and are more satisfied when justice is perceived as being fair [22, 23].

Konovsky and Pugh [24] found that trust in one's supervisor mediated between justice and organizational citizenship behaviors (OCBs). Additionally, trust in the organization mediates the impact of justice on commitment [25]. Trust posits to affect job satisfaction, commitment, and OCB [26]. This study thus proposes the following hypotheses.

Hypothesis 3: Perceived trust has a positive effect on commitment.

Hypothesis 4a: Organizational justice has a positive effect on perceived trust.

Hypothesis 4b: Organizational justice has a positive effect on commitment.

Development of the research model

Figure 1 depicts our research model. Organizational justice and perceived trust is posited to indirectly (through commitment) influence intention to share knowledge, and commitment is posited to both directly and indirectly (through self-efficacy) influence intention to share knowledge. The research model analyzes primarily using structural equation modeling, supported by LISREL 8 software [27].

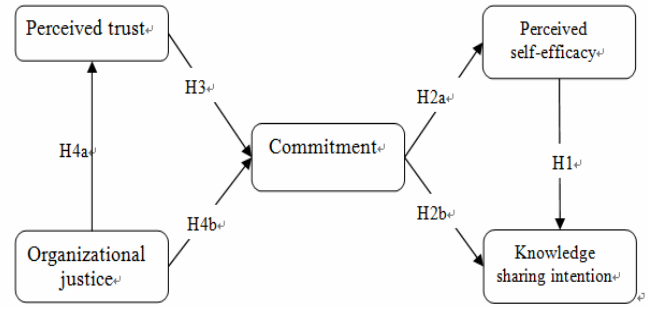

Figure 1. Research model

Numerous researchers have proposed a two-stage model-building process to apply structural equation modeling, in which the measurement models were tested before testing the structural model. The measurement models specify how hypothetical constructs are measured in terms of the observed variables (such as organizational climate, self-efficacy, intentions, and behavior). Furthermore, the structural models specify causal relationships among the latent variables. This study utilizes the causal effects and amount of unexplained variance.

Research Method

Measurement

Table 1 lists the construct definitions of instruments and the relevant literature. Items measure the constructs included in each investigated model was adopted from previous studies for use in the knowledge-sharing context. This study measure six constructs: knowledge-sharing intention, self-efficacy, trust, commitment and organizational justice.

▪Table 1. Operational definitions

Constructs	Operational definition	References
Organizational Justice	People's perception of fairness in organizations	Moorman, 1991
Perceived trust	The trust between IT professionals and the organization, which has three components: (1) Organization trust (2) Supervisor trust (3) Colleague trust	Hsu, Ju, Yen, and Chang, 2007; Mayer, Davis, and Schoorman, 1995; Mooradian, Renzl, and Matzler, 2006
Commitment	commitment that can characterize an employee's commitment to the organization	Hooff & Weenen, 2004
Perceived self-efficacy	The belief that one is capable of performing knowledge-sharing is composed of three elements: (1) Performance accomplishments (2) Vicarious experience (3) Emotional arousal	Compeau and Higgins, 1995; Stone and Bailey, 2007
KS Intention	The degree to which IT professionals believe they will adopt knowledge sharing actions, composed of two components: (1) Intention to share explicit knowledge (2) Intention to share implicit knowledge	Bock, Zmud, Kim, and Lee, 2005

Multiple items measure all constructs and items using a seven-point Likert scale (ranging from 1 = strongly disagree, to 7=strongly agree). This study measures knowledge sharing intention using five items adapted from the work of Bock [18] using terms such as "likely", "acceptable", and "needed" to assess employees' intentions to share knowledge.

III. Sampling and Data Collection

Knowledge sharing is an important research topic in information technology department [28]. Knowledge sharing in the high technology industry is a key component of an organization's knowledge management strategy, as it will significantly affect organizational effectiveness. This is because software development is an intense cognitive activity that requires collaborative problem solving. In this study, we examine the role of the social exchange perspective in promoting knowledge sharing between IT software professionals.

The population in this study mainly consists of programmers and software engineers in Taiwan. Four hundred questionnaires were mailed to software companies, and a total of 276 usable questionnaires were returned, giving a response rate of 69 percent. The respondents consisted of employees (83.3%), supervisors (12.3%), and managers (3.6%), with more details shown in Table 2.

Table 2. Demographic Details of the Respondents (n =276)

Measure	Items	Frequency	(%)
Industry type	Computers/ communication	93	33.7
	Electronic technology	83	30.1
	Semi-conductor	40	14.5
	Optoelectronics	18	6.5
	Retail/ wholesale	17	6.2
	E-commerce	14	5.1
	IT products manufacturing	11	4
Gender	Male	196	71
	Female	80	29
Age	21-25	48	17.4
	26-30	172	62.3
	31-35	46	16.7
	36-40	7	2.5
	Over 41	3	1.1
Education level	High school	6	2.2
	Bachelor	128	46.4
	Graduate	142	51.5
Working experience	0-3 years	196	71.0
	3-5 years	57	20.7
	6-8 years	18	6.5
	Over 8 years	4	1.4
Position	Employee	230	83.3
	Chief employee	34	12.3
	Manager	10	3.6
	Director	2	0.7

IV. Results and analyses

Analyses of Reliability and Validity

Table 3 lists means, standard deviations, and alpha coefficients for each summed scale. Internal consistency reliability is a statement about the stability of individual measurement items across replications from the same source of information (Straub, 1989). Computing Cronbach alpha assesses internal consistency reliability. As shown in Table 3, the values range from 0.862 (for Knowledge Sharing Intention) to 0.952 (for Organizational Justice). The Cronbach alpha of all measures exceeds the benchmark of 0.7 recommended by Hair et al [29].

▪Table 3. Descriptive statistics and discriminant validity

▪ Measures	Mean	S.D.	Reliability[a]	1	2	3	4	5
1. Organizational Justice	4.15	1.36	0.95	**0.81**				
2. Trust	4.45	1.33	0.91	0.43	**0.76**			
3. Commitment	4.89	1.17	0.91	0.28	0.43	**0.68**		
4. Perceived self-efficacy	5.08	1.05	0.95	0.11	0.18	0.31	**0.85**	
5. KS Intention	5.25	0.94	0.86	0.11	0.17	0.35	0.38	**0.76**

Note: Diagonals represent the average variance extracted, while the other matrix entries represent the square correlations; [a]Cronbach's α; [b]Variance extracted: (summation of the square of the factor loadings) ÷ (summation of error variances)}

Convergent validity is the degree to which multiple attempts to measure the same concept in agreement. Table 4 presents the factor loadings of the measurement items. The factor loading for all items exceeds the recommended level of 0.6. Discriminant validity is the degree to which the measures of different concepts are distinct. Discriminant validity can be examined by comparing the squared correlations between constructs and variance extracted for a construct [30]. The

analysis results shows that the square correlations for each construct is less than the variance extracted by the indicators measuring that construct, as shown in Table 3, indicating the measure has adequately discriminant validity. In summary, the measurement model demonstrated adequate convergent validity and discriminant validity. Since this study includes some measures in our study, this study considers both loadings and cross-loadings to establish discriminant validity; these are shown in Appendix A.

Table 4. Results of CFA for measurement model

Latent variable	Item	Item-total correlation	Factor loading[a]
Organizational Justice	JT1	0.886	0.956
	JT2	0.910	0.977
	JT3	0.891	0.848
	JT4	0.844	0.797
Perceived trust	TR1	0.804	0.875
	TR2	0.833	0.886
	TR3	0.792	0.855
Commitment	CO1	0.797	0.876
	CO2	0.775	0.882
	CO3	0.795	0.780
Perceived self-efficacy	SE1	0.945	1.015
	SE2	0.875	0.909
	SE3	0.831	0.846
KS Intention	KSI1	0.758	0.869
	KSI2	0.758	0.872

[a] Factor loadings are come from confirmatory factor analysis.

V. Results of Hypothesis Testing

This research aims to investigate how social cognition affects individual knowledge sharing behavior by applying self-efficacy theory in the knowledge sharing context to understand how the relevant factors affect such behavioral intentions. This study discusses results in the following sequence: self-efficacy (hypothesis 1), commitment (hypotheses 2a and 2b), perceived trust (hypotheses 3), and organizational justice (hypotheses 4a and 4b).

Figure 2 display the results of structural model analysis. The structural model analysis has a good fit (see Table 5), as judged from the goodness of fit indices (GFI = 0.93; AGFI = 0.90; CFI = 0.985; RMSEA = 0.05), and the chi-square index is significant ($\chi 2 = 153.67$; d.f. = 95; $\chi 2$/d.f. = 1.618).

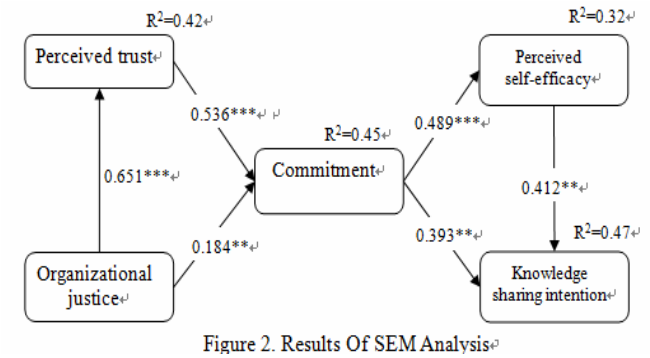

Figure 2. Results Of SEM Analysis

Table 5. Overall Fit Indices of the CFA model

Fit index		Scores	Recommended value
Absolute fit measures	χ^2	153.673	
	d.f.	95	The higher, the better
	χ^2/d.f.	1.618**	≤3
	GFI	0.931**	≥0.80
	RMSEA	0.050**	≤0.05
Incremental fit measures	NFI	0.962**	≥0.9
	AGFI	0.901*	≥0.9
	CFI	0.985**	≥0.9
	IFI	0.985**	≥0.9
Parsimonious fit measures	PCFI	0.771*	The higher, the better
	PNFI	0.761*	The higher, the better

Acceptability: ** (acceptable), *(marginal).

The result shows that perceived self-efficacy ($\beta = 0.412$; $p < 0.001$) is positively related to knowledge sharing intention, providing support for hypothesis 1. The results also reveal that commitment is related to perceived self-efficacy ($\beta = 0.489$; $p < 0.001$) and intention ($\beta = 0.393$; $p < 0.001$), providing support for hypotheses 3a and 3b. Finally, this study examines the exogenous factor of organizational justice in the knowledge-sharing context. The results support both hypotheses 4a and 4b, as organizational justice is positively related to perceived trust ($\beta = 0.651$; $p < 0.001$) and commitment ($\beta = 0.184$; $p < 0.05$).

VI. Conclusion and future research

The main contribution of this study is first to explore IT professionals' knowledge sharing behavioral intention using existing theories of social psychology. We demonstrate the applicability of some major environmental factors with regard to explaining knowledge sharing, and find individual's social cognition have the strongest overall effect on their intentions to share knowledge. Further, organizational justice is an antecedent of perceived trust and commitment, and such commitment, in turn, influences both self-efficacy and the intention to share knowledge.

Additionally, it is important to distinguish different cognitions of knowledge sharing (self-efficacy and intention) and different levels of social environmental factor of knowledge sharing (trust and justice) in order to obtain a more comprehensive understanding of the relationship between crucial environmental factors and knowledge sharing in an organization.

Implications for practitioners

The results show that organizational justice builds the main determinant of knowledge-sharing intention, and trust and

commitment foster commitment. Commitment will help to built individual perceived self-efficacy, and both directly and indirectly affect intentions to share knowledge.

Karriker [31] asserted that organizational justice, if efforts are taken to ensure they are fair, can increase citizenship behavior like knowledge sharing. According to justice theory, people weigh the potential benefits and risks of social relationships and then build the appropriate kind of relationship in terms of factors such as trust and commitment. In this study, organizational justice would directly increase trust among IT professionals. Trust leads to increased overall knowledge exchange, makes knowledge exchanges less costly, and increases the likelihood that knowledge acquired from a member is sufficiently understood and absorbed so that others can put it to use [21]. In addition, an employee who is more committed to the organization, and has more trust in both management and coworkers, is more likely to share their knowledge. Equity theory predicts that people will choose to leave the relationship when they perceive the costs as outweighing the perceived benefits. Therefore, managers should place greater emphasis on creating a just environment and building good relationships based on some social theory.

Implications for researcher

There are several theoretical implications of our study. First, this study employs some social factors to investigate IT professionals' knowledge sharing intentions within an organization. This study provides a compelling theoretical framework for conducting an Empirical study in this line of research, and future works can extend more social environmental factors (i.e. organizational support, social exchange) to better investigate knowledge sharing within organizations.

Second, this study finds that the significant factor influencing knowledge sharing intention is organizational justice, and the main mediating variables for the impact of organizational justice on knowledge sharing intention are trust, commitment and self-efficacy. Organizational justice is found to have a positive influence on both trust and commitment, and commitment itself is an important determinant of knowledge sharing intention. Specifically, perceived trust will mediate the relationship between organizational justice and commitment. Third, the distinction between self-efficacy and outcome expectancy is also an important one, which should receive more attention in social cognitive theories about knowledge sharing.

Furthermore, we strongly encourage others to examine our findings through more rigorous research designs and across different national cultures. We also recognize the value, in future studies, of extending research models to (1) include other variables like actual knowledge-sharing behaviors and supervisor support; (2) examine the sharing behavior through internal KMS (knowledge management system) usage and satisfaction in organization; (3) examine knowledge sharing beyond the boundaries of single organizations (reflecting the increasing necessity for organizational members to share knowledge with customers, suppliers, and other partners); and (4) recognize that individuals share motivation by expectancy theory and some other motivational theory.

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