**The effect of organizational justice, trust and commitment on knowledge sharing: Empirical evidence from IT professionals in Taiwan**

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**Abstract**

Knowledge sharing is an important process in modern organizations, as successful knowledge sharing can result in the shared intellectual capital, an increasingly important resource. In this paper, we study the influence of organizational commitment and the use of crucial organizational environment factors on knowledge sharing based on social exchange theory. Using hypotheses based on the literature, we surveyed 276 IT professionals. We find 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.

**Keywords**: Knowledge sharing, trust, commitment, organizational justice, social exchange theory

Introduction

Organizations recognize that knowledge constitutes an intangible asset for creating and sustaining competitive advantage (Crone & Roper, 2001; Howells, 2002; Lee, 2001). Knowledge sharing is the behaviour of disseminating acquired knowledge to other members of an organization (Ryu, Ho, & Han, 2003), and often presents major challenges, because some employees resist sharing their knowledge with others (Ciborra & Patriotta, 1998).

The purpose of this study was to develop an understanding of the factors affecting the individual’s knowledge sharing behaviour in the organizational context. The research model includes various constructs based on social exchange perspective. Social exchange relationships refer to subjective, relationship-oriented contracts between employers and employees characterized by an exchange of socio-emotional benefits, mutual trust, and open-ended commitments (Cropanzano & Mitchell, 2005). Higher levels of social exchange can reduce turnover, absenteeism, and tardiness (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002) and motivate employees to engage in positive behaviours, such as knowledge sharing, in an effort to fulfil their relational obligations to the organization. Improving our understanding of the causes of knowledge sharing, such as social exchange relationships, as well as the factors contributing to the development of these relationships, such as fair treatment (Konovsky & Pugh, 1994), is of importance to both researchers and practitioners alike.

In social exchange context, we argue that when people feel their organizational environment is fair, they display a high level of knowledge sharing behavioural 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 stimulate innovative thinking among employees if they offer a non-judgmental organizational climate (Cabrera & Cabrera, 2005). A theoretical basis for a relationship between fairness and knowledge-sharing has also been drawn from organizational justice. It explains relational satisfaction in terms of perceptions of fair/unfair distributions of resources within interpersonal relationships.

Overall, the purpose of this study is to identify the antecedents that support or hinder an individual’s knowledge sharing behaviour, exploring both environmental factors and personal cognition. Above all, this study examines the nature of trust and organizational justice to elucidate their impacts on an individual’s knowledge sharing self-efficacy and behaviour. Perceived self-efficacy is used as a behavioural control variable in situations in which individuals face the challenge of exchanging knowledge within the organization.

We also take trust as a major environmental factor in connecting knowledge providers and knowledge receivers. For example, when two parties begin to trust each other, they perceive less risk of being taken advantage of, and become more willing to share their resources. This study thus takes trust as an important factor in knowledge sharing cognition and behavioural intentions.

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

Theoretical background and hypotheses

Self-efficacy and knowledge sharing process

This study uses self-efficacy in understanding the context of the 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 (Bandura, 1986). Self-efficacy affects the amount of effort and length of persistence given to challenging tasks (i.e. knowledge sharing). For example, an employee with high self-efficacy may exert much more effort on difficult tasks and persist to overcome obstacles, while someone with low self-efficacy may express doubts about capability and be unwilling to expend effort and time on such tasks. Therefore, self-efficacy can help motivate employees to share knowledge with colleagues (Cabrera, Collins, & Salgado, 2006; Kankanhalli, Tan, & Wei, 2005; Wasko & Faraj, 2005).

Moreover, researchers have also found that employees with high confidence or self-efficacy in their ability to provide valuable knowledge are more likely to accomplish specific tasks (Bock & Kim, 2002). 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: KS self-efficacy has a positive effect on KS intention.

Commitment and knowledge sharing

Commitment is “the relative strength of an individual’s identification with, and involvement in a particular organization” (Mowday, 1979). Commitment to the organization is an important variable in explaining knowledge sharing (Barling, Slater, & Kelloway, 2000; Jarvenpaa & Staples, 2001). Commitment is positively related to individuals’ willingness to commit extra effort to their work, and this kind of commitment can be expected to be related to willingness to share and receive knowledge (Meyer & Allen, 1997).

Greater commitment may engender beliefs that the organization has rights to the information and knowledge one has created or acquired (Cabrera et al., 2006; Jarvenpaa & Staples, 2001). Kelloway and Barling (Barling et al., 2000) 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 KS self-efficacy.

Hypothesis 2b: Commitment has a positive effect on KS 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(Gefen, Karahanna, & Straub, 2003; Gefen & Ridings, 2002). This means that the higher the degree of trust, the more likely it is that individuals will be willing to share their knowledge with other members in the organization (Bock, Zmud, Kim, & Lee, 2005; Cabrera & Cabrera, 2005; Hsu, Ju, Yen, & Chang, 2007).

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 (Kramer, 1999; Levin & Cross, 2004). Relationships characterized by trust are so highly valued that parties will desire to commit themselves to such relationships (Hrebiniak, 1974).

Social exchange theory explains this causal relationship between commitment and trust through the principle of generalized reciprocity, which holds that “mistrust breeds mistrust and as such would also serve to decrease commitment in the relationship and shift the transaction to one of more direct short-term exchange”. Thus, the following hypothesis is proposed:

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

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 behavioural reactions to such perceptions(Moorman, 1991). Generally, maintaining good organizational justice can lead to favourable outcomes in the workplace(Simons & Roberson, 2003). It is expected that employees will act according to organizational rules and regulations if they are treated fairly and outcomes are just. 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 (Greenberg & Colquitt, 2005; Moorman, Blakely, & Niehoff, 1998).

Several studies found that trust in one’s supervisor mediated between justice and organizational citizenship behaviours (OCBs) (Asgari, Silong, Ahmad, & Samah, 2008; Karriker & Williams, 2009; Konovsky & Pugh, 1994). Additionally, trust in the organization mediates the impact of justice on commitment (Aryee, Budhwar, & Chen, 2002). And trust posits to affect commitment(Cropanzano & Mitchell, 2005). This study thus proposes the following hypotheses.

**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

Fig. 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 is analyzed primarily using structural equation modelling, supported by LISREL 8 software (Joreskog & Sorbom, 1997).

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Fig. 1 here.

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Numerous researchers have proposed a two-stage model-building process to apply structural equation modelling, 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 behaviour). Furthermore, the structural models specify causal relationships among the latent variables. This study utilizes the causal effects and amount of unexplained variance.

Methods

Measures

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.

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Table 1 here

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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 KS intention using five items adapted from the work of Bock (Bock et al., 2005) using terms such as “likely”, “acceptable”, and “needed” to assess employee intentions to share knowledge.

Sampling and Data Collection

Knowledge sharing is an important research topic in information technology department (Cabrera & Cabrera, 2002). 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.

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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. Computing Cronbach alpha assesses internal consistency reliability. As shown in Table 3, the values range from 0.862 (for KS intention) to 0.952 (for Organizational Justice). The Cronbach alpha of all measures exceeds the benchmark of 0.7 recommended by Hair (Hair, Black, Babin, & Anderson, 2006).

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Table 3 here

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Convergent validity is the degree to which multiple attempts to measure the same concept agree. 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 (Fornell & Larcker, 1981). The results of the analysis show that the square correlations for each construct are 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.

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Table 4 here

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Results of Hypothesis Testing

This research investigates how social cognition affects individual knowledge sharing behaviour by applying self-efficacy theory in the knowledge sharing context to understand how the relevant factors affect such behavioural intentions. Results are presented and discussed in the following sequence: self-efficacy (hypothesis 1), commitment (hypotheses 2a and 2b), perceived trust (hypotheses 3), and organizational justice (hypotheses 4a and 4b).

Fig. 2 display the results of structural model analysis and Table 5 shows the structural model analysis has a good fit, 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 (χ2 = 153.67; d.f. = 95; χ2/d.f. = 1.618)(Browne & Cudeck, 1992; Ullman & Bentler, 2004).

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Fig. 2 and Table 5 here

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The result shows that KS self-efficacy (β = 0.412; p < 0.001) is positively related to KS intention, providing support for hypothesis 1. The results also reveal that commitment is related to KS self-efficacy (β = 0.489; p < 0.001) and intention (β = 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 (β = 0.651; p < 0.001) and commitment (β = 0.184; p < 0.05).

Conclusion and future research

The main contribution of this study is its exploration of IT professionals’ knowledge sharing behavioural intention using existing theories of social psychology. We demonstrate the applicability of some major environmental factors to explaining knowledge sharing and find that individual social cognition has the strongest overall effect on intention to share knowledge. Further, organizational justice is found to be an antecedent of perceived trust and commitment, and such commitment, in turn, influences both self-efficacy and the intention to share knowledge.

It is also important to increase research into the personal cognition aspect of knowledge sharing (KS self-efficacy) and different levels of social environmental factor of knowledge sharing (trust and justice) 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 is the main determinant of knowledge-sharing intention, and trust and commitment foster commitment. Commitment will help to build individual KS self-efficacy, and both commitment and trust directly and indirectly affect intention to share knowledge.

Karriker and Lin argued that organizational justice, if efforts are taken to ensure it is fair, can increase organizational citizenship behaviours such as knowledge sharing(Karriker & Williams, 2009; Lin, 2008). According to justice theory, individuals weigh the potential benefits and risks of social relationships and then construct their relationships with each other and the organization as determined by factors such as trust and commitment. In this study, organizational justice was found to 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 (Abrams, Cross, Lesser, & Levin, 2003; Levin & Cross, 2004).

In addition, employees who are more committed to the organization, and have more trust in both management and co-workers, are more likely to share their knowledge. Equity theory predicts that people will choose to leave the relationship when they perceive that the costs of the relationship outweigh its perceived benefits. Maintaining good organizational justice can lead to favourable outcomes in the workplace. Therefore, managers should place greater emphasis on creating a just environment and building good relationships based on social theory. A meta-analysis suggests that managers should distinguish between the three forms of justice distributive, procedural, and interactional (Cohen-Charash & Spector, 2001).. Suggested attributes of organizational procedural justice include freedom from bias, accuracy, consistency, representation by stakeholders, correction of errors and ethical consistency (Cropanzano & Stein, 2009). Research suggests that existing individual differences in personality and hostile behaviour influence how individuals react to unfairness in the organization (Krings & Facchin, 2009). How employees perceive the validity and relevance of their performance ratings at their jobs relates to employee perceptions of procedural justice. Thus, using a rating system that is perceived as valid enhances employee perceptions of organizational justice (Burney, Henle, & Widener, 2009).

Implications for researchers

There are several theoretical implications of our study. First, this study employs certain social factors to investigate IT professionals' KS intentions within an organization. This study provides a compelling theoretical framework for conducting an empirical study in this line of research, and future work should incorporate additional social environmental factors, such as organizational support or social exchange, to better investigate knowledge sharing within organizations.

Second, this study finding that organizational justice increases knowledge sharing suggests that more research into defining, creating, and fostering justice in organizations should be carried out. 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 behaviours and supervisor support; (2) examine the sharing behaviour 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 other motivational theories.

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| Perceived trust  Organizational justice  KS intention  H4b  H2b  H2a  H3  H1  H4a  Self-efficacy  Commitment |
| Fig. 1. Research model |

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| Perceived trust  Organizational justice  KS intention  0.184\*\*  0.393\*\*  0.489\*\*\*  0.536\*\*\*  0.536\*\*\*  0.412\*\*  0.651\*\*\*  self-efficacy  **R2=0.45**  **R2=0.32**  **R2=0.47**  Commitment |
| Fig. 2. Results of SEM Analysis |

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| 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 IT professional 's commitment to the organization | Hooff & Weenen, 2004 |
| KS self-efficacy | The belief that one can perform 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 |

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| 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 |

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| Table 3. Descriptive statistics and discriminant validity | | | | | | | | |
| Measures | Mean | S.D. | Reliabilitya | 1 | 2 | 3 | 4 | 5 |
| 1. Organizational Justice | 4.15 | 1.36 | 0.95 | **0.81** |  |  |  |  |
| 1. Trust | 4.45 | 1.33 | 0.91 | 0.43 | **0.76** |  |  |  |
| 1. Commitment | 4.89 | 1.17 | 0.91 | 0.28 | 0.43 | **0.68** |  |  |
| 1. KS self-efficacy | 5.08 | 1.05 | 0.95 | 0.11 | 0.18 | 0.31 | **0.85** |  |
| 1. 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; aCronbach’s α; bVariance extracted: (summation of the square of the factor loadings) + (summation of error variances)} | | | | | | | | |

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| Table 4. Results of CFA for measurement model | | | |
| Latent variable | Item | Item-total correlation | Factor loadinga |
| Organizational Justice | JT1  JT2  JT3  JT4 | 0.886  0.910  0.891  0.844 | 0.956  0.977  0.848  0.797 |
| Perceived trust | TR1  TR2  TR3 | 0.804  0.833  0.792 | 0.875  0.886  0.855 |
| Commitment | CO1  CO2  CO3 | 0.797  0.775  0.795 | 0.876  0.882  0.780 |
| KS self-efficacy | SE1  SE2  SE3 | 0.945  0.875  0.831 | 1.015  0.909  0.846 |
| KS Intention | KSI1  KSI2 | 0.758  0.758 | 0.869  0.872 |
| a Factor loadings are come from confirmatory factor analysis | | | |

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| Table 5. Overall Fit Indices of the CFA model | | | |
| Fit index | | Scores | Recommended cut-off value |
| Absolute fit  measures | χ2 | 153.673 | Near to degree of freedom |
| d.f. | 95 | The higher, the better |
| 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 |
| χ2/d.f. | 1.618\*\* | ≤3 |
| Acceptability: \*\* (acceptable), \*(marginal). | | | |

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| **Appendix A** | | | | | | |
| **Results of Confirmatory Factor Analysis** | | | | | | |
| **Construct Items** | **Construct Items** | 1 | 2 | 3 | 4 | 5 |
| Organizational Justice | JT 3 | **0.91** | 0.13 | 0.15 | 0.15 | 0.08 |
| JT 2 | **0.89** | 0.20 | 0.05 | 0.22 | 0.17 |
| JT 4 | **0.88** | 0.16 | 0.19 | 0.15 | 0.01 |
| JT 1 | **0.87** | 0.21 | 0.03 | 0.21 | 0.20 |
| Commitment | OC 1 | 0.15 | **0.83** | 0.31 | 0.19 | 0.17 |
| OC 2 | 0.19 | **0.79** | 0.14 | 0.26 | 0.28 |
| OC 3 | 0.32 | **0.76** | 0.14 | 0.13 | 0.22 |
| KS Intention | KSI 2 | 0.12 | 0.22 | **0.81** | 0.17 | 0.28 |
| KSI 1 | 0.15 | 0.18 | **0.78** | 0.18 | 0.32 |
| Perceived trust | Trust 2 | 0.23 | 0.29 | 0.21 | **0.82** | 0.12 |
| Trust 3 | 0.25 | 0.07 | 0.35 | **0.75** | 0.19 |
| Trust 1 | 0.39 | 0.39 | (0.09) | **0.65** | 0.25 |
| Perceived  Self-Efficacy | SE 1 | 0.16 | 0.23 | 0.21 | 0.17 | **0.81** |
| SE 3 | 0.13 | 0.27 | 0.38 | 0.21 | **0.66** |
| SE 2 | 0.14 | 0.26 | 0.49 | 0.12 | **0.66** |

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| --- | --- | --- |
| **Appendix B** | | |
| **Questionnaire Items** | | |
| Construct | Item | Questions |
| 0rganizational justice | JT1 | Formal procedures 1   1. Procedures designed to collect accurate information necessary for making decisions. 2. Procedures designed to provide opportunities to appeal or challenge the decision. 3. Procedures designed to generate standards so that decisions could be made with consistency. |
| JT2 | Formal procedures 2   1. Procedures designed to hear the concerns of all those affected by the decision. 2. Procedures designed to provide useful feedback regarding the decision and its implementation. 3. Procedures designed to allow for requests for clarification or additional information about the decision. |
| JT3 | Interactional justice   1. Your supervisor considered your viewpoint. 2. Your supervisor was able to suppress personal biases. 3. Your supervisor provided you with timely feedback about the decision and its implications. 4. Your supervisor treated you with kindness and consideration. |
| JT4 | Distributive justice   1. Fairly rewarded considering the responsibilities. 2. Fairly rewarded for effort you put forth. 3. Fairly rewarded for the work you have done well. 4. Fairly rewarded for the stresses and strains of your job. |
| Trust | TR1 | Organization Trust   1. I believe the company will consider the rights of each employee fairly. 2. I believe the chance for each employee given by the company is fair. 3. The Company is sincere in its attempts to meet the employees’ needs. 4. I feel quite confident that the firm will always try to treat me fairly. |
| TR2 | Supervisor Trust   1. I believe that my supervisors will support if I meet some difficulty in my work. 2. I believe that my supervisors will help me to execute my work. 3. I believe that my supervisors won’t cheat me. 4. If I share my problems with a community member, I know my supervisors will respond constructively and caringly. |
| TR3 | Colleague Trust   1. I know most colleagues of the company are honest. 2. If I got into difficulties at work I know my colleagues would try and help me out. 3. I know my colleague will take other’s situation in consideration. 4. I can trust my colleague to lend me a hand if I needed it. 5. Most of my colleagues can be relied upon to do as they say they will do. |
| Organizational commitment | OC1 | 1. It is my pleasure to be one of company 2. I can agree mission of the company |
| OC2 | 1. I will work hard to do job from the supervisor. 2. I would like to bear the responsibility of assigning item of the supervisor. 3. [Even it is out my duty, i will work](http://video.google.com.tw/videosearch?hl=zh-TW&rlz=1T4GFRE_zh-TWTW331TW332&q=Even+it+is+out+my+duty,+i+will+work&lr=&um=1&ie=UTF-8&ei=A9E6S8iKMovo7APIlOjDAw&sa=X&oi=video_result_group&ct=title&resnum=1&ved=0CBEQqwQwAA) for the supervisor. |
| OC3 | 1. I would like to strive for work with my co-workers. 2. I would like to shoulder common responsibility with my co-workers. 3. Even it is not my duty; I will work for my co-workers. |
| Perceived  self-efficacy | SE1 | Performance Accomplishments   1. My organization has had numerous knowledge sharing experiences. 2. My experience has increases my confidence in my ability to make decisions encouraging employees to share knowledge with colleagues. 3. I have similar experiences of knowledge sharing. |
| SE2 | Vicarious experience   1. I observed how other teams shared knowledge. 2. I learned by listening to other teams as they shared their knowledge. 3. I can complete the job if someone shows me how to do it first. |
| SE3 | Emotional Arousal   1. When my members in organization want to share knowledge to each other, I felt peace. 2. When my members in organization want to share knowledge to each other, I felt secure. 3. I have confidence that I can provide new knowledge for my organization. |
| KS intention | KSI1 | Intention to share explicit knowledge   1. I will share my work reports and official documents with members of my company more frequently in the future. 2. I will always provide my manuals, methodologies and models for members of my company. |
| KSI2 | Intention to share implicit knowledge   1. I intend to share my experience or know-how from work with other company’s members more frequently in the future. 2. I will always provide me know-where or know-whom at the request of other company’s members. 3. I will try to share my expertise from my education or training with other company’s members in a more effective way. |