THE RELATIONSHIP BETWEEN ORGANIZATIONAL ENVIRONMENT AND KNOWLEDGE SHARING INTENTION: EVIDENCE FROM MAP TA PHUT INDUSTRIAL ESTATE, RAYONG, THAILAND

Chanthima Virotepakorn*
Asst. Prof. Karin Boonlertvanich**

ABSTRACT
The purpose of this study is to examine the effect of organizational environment on knowledge sharing intention. Based on the Theory of Planned Behavior, the Technology Acceptance Model and other relevant theories, three important organizational environment factors, which are subjective norms, attitude towards knowledge sharing and attitude of IT usage towards knowledge sharing, are selected as predictors of knowledge sharing intention. The findings confirm that all three predictors are statistically significant. The study also reveals that: 1) significant predictive determinants of subjective norm are innovativeness, shared goal, affiliation, and fairness, 2) those of attitude towards knowledge sharing are reciprocal benefits, perceived enjoyment in helping others, and perceived reputation enhancement, and 3) perceived usefulness and perceived ease of use are significant predictors of attitude of IT usage. Utilizing path analysis, the total effect, combined both direct and indirect impacts, of subjective norms has greatest impact on knowledge sharing intention, followed by attitude towards knowledge sharing and attitude of IT usage. These results can then be used to prioritize and develop proper organizational environment in achieving more knowledge sharing.

Keywords: knowledge sharing, attitude toward knowledge sharing, attitude of IT usage, knowledge management, theory of planned behavior, technology acceptance model.

* Doctor of Business Administration, Burapha University, 2014
** Assistant Professor of Graduate School of Commerce, Burapha University, Thailand
INTRODUCTION

Knowledge sharing is a vital part of knowledge management which leads to better business improvement (Law & Ngai, 2007). It can create a huge impact on organizational competitive advantage or failure. As a result, Jones (2010) has demonstrated an interesting case study on how a giant electronic firm lost its competitive advantage caused by an ineffective management of knowledge sharing among its talent organizational members.

In order to leverage the organizational competitive advantage, many firms put a lot of effort in screening and selecting the brightest individuals to join their organization. Nevertheless, the firms need to continuously develop their employees (Wang & Noe, 2010). Some organizations spend budget and time to enhance the workforces’ competencies and knowledge by providing formal training (Boyce, Zaccaro & Wisecarver, 2010) or using different learning systems. One of the crucial challenges is how to manage workforces to exchange knowledge and experiences. This study will strengthen behavioral intention to knowledge sharing by combining the concepts of planned behavior and technology acceptance model to leverage organizational knowledge for developing organizations’ policies and methods in supporting effective knowledge management system on how to influence their employees’ knowledge sharing intention.

LITERATURE REVIEW

Different dimensions of knowledge

The two terms of knowledge are tacit and explicit knowledge (Nonaka, 1991). Tacit knowledge is often the subjective approach which includes mental models resulting from individuals’ experiences, attitude, and vision of the world. This type of knowledge can be embodied in a company by providing an organizational environment to bring up the employees’ personal commitment in sharing ideas (Nonaka, 1991). It sometimes results from interdepartmental task forces, information social group and interpersonal relation (Marquardt, 1995). While explicit knowledge is the formal and systematic information which individuals can formulate and officially share to the others in the forms of product specifications, scientific formula, figurative data or written
procedures (Nonaka, 1991). Scott (2000) explains that tacit knowledge is transferred throughout personal conversation, observation and practice. Unlike tacit knowledge, explicit knowledge is the process of gathering information over a period of time and able to visualize it to another person to understand the knowledge (Jia, 2008). Most of research examined knowledge sharing as a whole regardless of knowledge type. Knowledge sharing in this study is based on knowledge which can be codified in verbal explanation or documented form in which relevant to systematic knowledge management.

**Theory of planned behavior**

Theory of planned behavior posits that individual will perform behavior in favorable to his/her behavioral intention. This behavioral intention has a consequence from subjective norms, personal attitude and perceived behavioral control (Ajzen, 1991). Subjective norm is “the perceived social pressure to perform or not to perform the behavior (Ajzen, 1991). It is an important predictor of behavioral intention. The study of Chow & Chan (2008) reports a relational support of subjective norm to the knowledge sharing intention. It appears that shared goals have indirect effects on the intention to share knowledge through attitudes toward knowledge sharing and the subjective norm on knowledge sharing. While, the study by Bock, Zmud, Kim & Lee (2005) and Chennamaneni (2006) show that affiliation, innovativeness and fairness indirectly support the subjective norm.

Higher intention to engage in a behavior is also driven by their attitude toward such behavior. Yang (2007) finds that individual attitude correlates with knowledge sharing, and individuals’ tendency to share knowledge is based on their attitudes, competencies and actions. The antecedents of knowledge sharing attitude in this study consist of Perceived Enjoyment in Helping Others, Perceived Reputation Enhancement, and Perceived Reciprocal Benefits.

The factor of perceived behavioral control was added in the theory of reasoned action to extend an understanding on situations that may obstruct over a control of individual’s intention. It identifies the individuals’ perception of required cognitive and resource which are essential to influence the behavior (Awa, Nwibere & Inyang, 2010). As such, we combined this factor with the idea and concept drawn from Technology Acceptance Model.
Technology Acceptance Model

Technology acceptance model has been broadly used to investigate behavioral intention in relation to perceived ease of use and perceived usefulness. For example, Hwang (2005) finds that perceived ease of use and perceived usefulness has a significant effect on behavioral intention to use ERP system. Though individual acceptance and use of technologies have been studied by scholars in last two decades (Fillion, Braham & Ekionea, 2010), limited papers examine information system in relation to knowledge management system, especially on the knowledge sharing platform. Despite, technology acceptance model has been introduced in several information system researches. Kuo & Lee (2009) specified an extension of technology acceptance model to the adoption of knowledge management system. Based on the result of their study, perceived usefulness and perceived ease of use in technology acceptance model empirically support behavioral intention in adopting knowledge management system. The study of Chennamaneni, (2006) indicates that perceived behavioral control on technology is essential predictor of knowledge sharing behavior. Therefore, attitude of IT usage towards knowledge sharing is integrated to this study and defined as the degree of an individual’s favorable IT usage in sharing knowledge.

RESEARCH OBJECTIVES

Of ideas and theories that have been presented, the issue has led to this study by a research study aims to integrate the concepts of the various elements associated with knowledge sharing intention, in order to gain a stronger relational prediction of such intention. The research objectives can be stated as follows: 1) To study the impact of subjective norm, attitude toward knowledge sharing and attitude of IT usage towards knowledge sharing on knowledge sharing intention, 2) To study the direct and indirect effects of subjective norm on knowledge sharing intention, and 3) To study the driving factors of subjective norm, attitude toward knowledge sharing, and attitude of IT usage towards knowledge sharing.
CONCEPTUAL FRAMEWORK AND HYPOTHESES

Based on the literature reviews in the context of different dimensions of knowledge, theory of planned behavior and technology acceptance model (Davis, 1989; Bock, Zmud, Kim & Lee, 2005; Chennamaneni, 2006; Kuo & Lee, 2009), a conceptual model was developed as shown in Figure 1. The first hypothesis indicates that knowledge sharing intention is affected by subjective norms, attitude towards knowledge sharing and attitude towards IT usage for knowledge sharing. The second hypothesis focuses on analyzing the total effect of subjective norms on knowledge sharing intention, both directly and indirectly via attitude towards knowledge sharing. The last hypothesis studies the impact of affiliation, innovativeness, fairness, and shared goal on subjective norms, the impact of perceived enjoyment in helping others, perceived reputation enhancement and perceived reciprocal benefits on attitude towards knowledge sharing, and the impact of perceived usefulness and perceived ease of use on attitude of IT usage towards knowledge sharing.

RESEARCH DESIGN AND METHOD

Sampling and Data Collection

The conducted research surveyed from employees working in petrochemical industry located at Map Ta Phut Industry Estate, Rayong province in Thailand. The
researcher sampled employees from two separate organizations, which value an importance of knowledge sharing for the organizational sustainable development. The different culture of the two organizations in regards to their corporate nationality, one is German-owned company and one is Thai-owned company, support the generalization of the research findings. A total of 700 full-time employees were invited for the survey via paper and electronic channel. Within the defined data collection period, the researcher received 539 returned questionnaires, representing a response rate of 77% of these returned questionnaires, a total of 530 questionnaires were usable for data analysis. In general, majority of the sample were male (80.2%), 30-39 years old (55.1%), having under graduated degree (42.8%), working at operational level (70.4%) and having work experience 11-15 years (32.5%).

Measures

Scale items for assessing key constructs, such as knowledge sharing intention, subjective norms, attitude towards knowledge sharing and attitude towards IT usage for knowledge sharing were adapted from prior studies’ validated measures. The respondents were requested to indicate the extent to which they agree or disagree, based on their own assessment, by checking the appropriate response to the questionnaire items regarding the key constructs of the study. For each item, a five-point Likert scales anchored by 1 = strongly disagree and 5 = strongly agree with 3 = neutral (neither agree nor disagree) as the midpoint were utilized.

The knowledge sharing intention, subjective norms, attitude towards knowledge sharing and antecedent factors for these factors were taken from Chennamaneni (2006). The attitude towards IT usage for knowledge sharing, perceived ease of use and perceived usefulness were adapted from the technology acceptance model of Davis (1989). The questionnaire was translated into Thai language for targeted respondents.

The survey construct was pretested and modified so that there was only one common factor within each area and all loading factors were greater than 0.4 cut off (Nunnally & Bernstein, 1994). In addition, all the reliability alphas were above the recommended 0.70 (Nunnally & Bernstein, 1994). These indicated that the multicollinearity among dependent variables is not an issue here. Finally, to
ensure both contents and wordings of the questionnaire were problem-free, Index of Item Objective Congruence (IOC) was conducted and confirmed by three academic professors. Therefore, reliability and validity of the constructs in this study are acceptable.

HYPOTHESIS TESTING RESULTS

Bivariate correlation analysis was conducted to examine correlation among variables according to our research framework. Table 1 shows the results of our analysis, which lead support to our first hypothesis. It is confirmed that subjective norms, attitude toward knowledge sharing and attitude of IT usage toward knowledge sharing are the key affecting factor toward knowledge sharing intention.

Table 1: Hypothesis Results

<table>
<thead>
<tr>
<th>Relation</th>
<th>Description</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-IN</td>
<td>Attitude towards knowledge sharing-intention to share knowledge sharing</td>
<td>0.637*</td>
</tr>
<tr>
<td>SN-AT</td>
<td>Subjective norm-attitude towards knowledge sharing</td>
<td>0.649**</td>
</tr>
<tr>
<td>SN-IN</td>
<td>Subjective norm-Intention to share knowledge.</td>
<td>0.711**</td>
</tr>
<tr>
<td>IT-IN</td>
<td>Attitude of IT usage towards knowledge sharing intention-Intention to share knowledge</td>
<td>0.541**</td>
</tr>
</tbody>
</table>

**p ≤ 0.01; *p ≤ 0.05

To pursue further analysis on the relationship between subjective norms, attitude towards knowledge sharing and knowledge sharing intention, path analysis was done and its result is shown in Table 2. It can be seen that despite stronger impact on knowledge sharing intention, direct effect from subjective norms is very minimal. Similar to Chow & Chan (2008), there exists the mediating effect of subjective norms via attitude towards knowledge sharing on knowledge sharing intention.
Table 2: Path Analysis Results

<table>
<thead>
<tr>
<th>Construct</th>
<th>Direct effect</th>
<th>Indirect effect</th>
<th>Total effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN</td>
<td>0.062</td>
<td>0.649</td>
<td>0.711</td>
</tr>
<tr>
<td>AT</td>
<td>0.637</td>
<td>-</td>
<td>0.637</td>
</tr>
<tr>
<td>IT</td>
<td>0.541</td>
<td>-</td>
<td>0.541</td>
</tr>
<tr>
<td><strong>Total Effect</strong></td>
<td><strong>1.240</strong></td>
<td><strong>0.649</strong></td>
<td><strong>1.889</strong></td>
</tr>
</tbody>
</table>

Figure 2 shows the results of the last hypothesis. It demonstrates that affiliation, innovativeness, fairness, and shared goal are the significant predictors of subjective norm. Among the four determinants, innovativeness is the strongest predictor; it shows that a perception of organizational practice in being open for process and product improvement is the stronger predictor to subjective norm. Meanwhile, among the three determinants of attitude towards knowledge sharing, perceived enjoyment on helping other has the highest impact, higher than reciprocal benefits or reputation enhancement. On technological side, perceived ease of use directly and indirectly influenced the individuals’ attitude of IT usage towards knowledge sharing.

Figure 2: Factors Impacting Subjective Norms, Attitude towards Knowledge Sharing and Attitude of IT Usage towards Knowledge Sharing
DISCUSSION AND CONCLUSION

Key Drivers of Knowledge Sharing

The results reveal the significant predictive determinants of subjective norm, attitude towards knowledge sharing and attitude of IT usage towards knowledge sharing that induced to personal intention to share knowledge. Based on path analysis, we found that subjective norm directly influenced the attitude towards knowledge sharing (Beta 0.711) and indirectly influenced the intention to share knowledge (Beta 0.649), at higher relations than the other constructs of the overall model. In addition, it is confirmed that affiliation, innovativeness, fairness, and shared goals are significant determinants of subjective norm. Among the four components, innovativeness has the strongest effect to the subjective norms. Thus, creating organizational practice in the way that welcomes ideas for process or product improvements helps support subjective norm and leading toward knowledge sharing. We also found that perceived enjoyment in helping others, perceived reputation enhancement and perceived reciprocal benefits effectively lead to higher attitude towards knowledge sharing.

Impact from IT Usage in Knowledge Sharing

Technology acceptance model is applied into this study in order to gain better understanding on the impact of IT usage that contributed to employees’ knowledge sharing intention (Kuo & Lee, 2009) because one of the important purpose of knowledge management is to maintain and document knowledge within the company. The results of this study demonstrate not only the significant effects from perceived usefulness and perceived ease to attitude of IT usage toward knowledge intention; but also a strong relationship between perceived usefulness and perceived ease of use. This study corroborates the findings of Kuo & Lee (2009) that the attitude of IT usage can support the individuals’ knowledge sharing as the higher degree of an individual’s favorable IT usage in sharing knowledge, the stronger individual’s willingness to engage in a knowledge sharing behavior.
IMPLICATIONS

These findings suggest several courses of action for subjective norm in terms of innovativeness, shared goal, affiliation, and fairness that provide manifold implications for influencing sharing phenomenon. Growing agreed objectives of knowledge sharing in all organizational levels would also be helpful to a higher contribution of team members. Moreover, a favorable attitude to knowledge sharing behavior relatively predicts knowledge sharing intention. The organization should arrange activities to allow employees to be more engaged in knowledge sharing. Management should be role models in recognizing or showing appreciation of group’s achievement.

In addition, there is a definite need for the proper IT facilities to support knowledge sharing where employees can easily exchange information or store their knowledge at their most convenience. The previous studies of Bock, Zmud, Kim & Lee (2005) and Chennamaneni (2006) have not comprehensively integrated the theory of planned behavior and technology acceptance model to support an implication of knowledge sharing intention in the organizations. However, if the firms have limited resources, they can consider prioritizing the following activities.

1) Encourage the employees to share their own opinions in order to sustain innovativeness by inviting employees to share different perspectives during team meetings.

2) Promote the value of sharing and collaborative working environment by organizing both formal and joyful knowledge sharing activities in order to create knowledge sharing platform.

3) Create employees’ awareness on the importance of IT tools, as well as develop their skills in operating IT system for sharing knowledge by communicating advantages of available IT system in knowledge sharing to the employees regularly.

REFERENCES


