THE EFFECT OF SELF-EFFICACY AND SELF-REGULATION ON KNOWLEDGE SHARING BEHAVIOR UNDER SOCIAL COGNITIVE PERSPECTIVE

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ABSTRACT

The aim of this study is to develop an integrative understanding of the factors supporting or inhibiting individual knowledge-sharing intentions. This study employs as our theoretical framework the social cognitive theory and self-regulation mechanism factors that are believed to influence individual knowledge sharing. It was found that self-efficacies affect individual self-regulation. And positive self-regulation leads to positive intention to share knowledge. Keywords: Knowledge Sharing, Social Cognitive Theory, Self-Regulation, Self-Efficacy, Organizational Climate

Introduction

Scholars see knowledge sharing as a key component of knowledge management in organizations. Numerous studies have identified the multitude factors that affect the sharing of knowledge in organizations, such as organizational culture, trust, and incentives [1]. Knowledge sharing in the organization can be the key to organizational effectiveness. An attempt is made here to understand the need for knowledge sharing in several industries. Since knowledge sharing behaviors are likely to be influenced not only by personal motivations but also by contextual forces [2].

Knowledge sharing constitutes a major challenge in the field of knowledge management because some employees resist sharing their knowledge with the rest of the organization [3, 4]. It is thus important to explain why individuals elect to share or not to share knowledge with other employees. Identifying the motivations underlying knowledge sharing behavior in organizations would help both academics and practitioners gain insight into how to foster knowledge sharing. To this end, two complementary social theories are applied: Social Cognitive Theory and self-regulatory mechanisms.

Social Cognitive Theory [5, 6] has been widely used in the information systems (IS) literature with demonstrated validity. The theory defines human behavior as a triadic, dynamic, and reciprocal interaction of personal factors, behavior, and the social network (system). Of the factors that affect human functioning, and standing at the core of the theory, are self-efficacy and outcome expectations. Self-efficacy is “a judgment of one's ability to organize and execute given types of performances,” whereas an outcome expectation is “a judgment of the likely consequence such performances will produce” [7].

This paper applies a theoretical frame in which extrinsic motivators, goal-setting, and organizational climate are integrated with SCT. This paper examines the role of SCT in promoting knowledge sharing within the software industry and the effects of self-regulation on behavioral intention.

Theoretical Background

Social Cognitive Theory and Organizational Climate

Based on SCT, this paper assumes that the organizational environment should have an influence on personal factors and behavior. In this study, Organizational climate is treated as a major environmental factor affecting individual characteristics and behavior.
Organizational climate refers to the perceptions and feelings of organizational members regarding their work environment [8]. It also identifies the variables which moderate an organization’s ability to mobilize its workforce in order to achieve business goals and maximize performance [9]. Organizations tend to arouse knowledge sharing behavior if they offer organizational climates of fairness, innovativeness, and affiliation[10]. Many scholars also hold similar views arguing a comfortable organizational climate can encourage personal knowledge sharing and creating new knowledge [11, 12].

A number of studies have found a very strong link between organizational climate and employee reactions [13-15]. Therefore, organizational climate surveys can provide concrete evidence of how such programs work in practice. This paper will explore how environment affects behavior through personal factors using organizational climate. Thus, this paper hypothesizes:

**Hypothesis 1:** Organizational Climate has a positive effect on knowledge sharing self-efficacy.

**Hypothesis 2:** Organizational Climate has a positive effect on individual goal-setting.

**The Relationship between Goal-Setting, Self-Efficacy and Self-Regulation**

To elicit a given specific form of behavior from others, it is important that the individual has a clear view of what is expected from him/her[16]. A goal is thereby of vital importance because it helps the individual in focusing him/her efforts in a specified direction. In other words; goals canalize behavior [17].

Goal-setting is a common practice among successful learners. Goals allow employees to see progress that is made, enhance motivation, provide structure and focus attention, and serve an informational function. In research and practice has been shown to be an influential and valuable means for improving performance. The expected and anticipated fulfillment gained by reaching or making progress toward a goal provides motivation to continue until the goal is reached or exceeded[18].

However when goals are established at a management level and thereafter solely laid down, employee motivation with regard to achieving these goals is rather suppressed[16]. In order to increase motivation the employees not only need to be allowed to participate in the goal setting process but the goals have to be challenging as well[17].

Besides goal-setting, self-efficacy can handle a wide range of behaviors through its focus on cognitive factors [19]. It plays a central role in the cognitive regulation of motivation, because people regulate the level and the distribution of effort they will expend in accordance with the effects they are expecting from their actions[5, 20].

Self-efficacy represents an individual’s perception of their ability to plan and take action to reach a particular goal. Self-efficacy (task-specific confidence) is measured by getting efficacy ratings across a whole range of possible performance outcomes rather than from a single outcome[21]. The concept of self-efficacy is important in goal-setting theory in several ways. When goals are self-set, individuals with high self-efficacy set higher goals than individuals with lower self-efficacy. They also are more committed to assigned goals, find and use better task strategies to attain the goals, and respond more positively to negative feedback than do people with low self-efficacy [22, 23].

Goal-setting theory might define "self-efficacy" as an impression that one has the capability of attaining certain goals or as a belief that one has the capabilities to execute the courses of actions required to manage prospective situations. Self-efficacy consists of the belief that one has the power to produce that effect.

Goal-setting is especially effective in enhancing self-efficacy and self-regulation [24]. Therefore, Goals raised self-efficacy, and people who received goals and comparative information demonstrated the highest self-efficacy and skill. This paper make this hypothesis:
Hypothesis 3: Individual’s goal-setting has a positive effect on Perceived self-efficacy.

A key variable in self-regulation is goal-setting. Self-regulation, or systematic efforts to direct thoughts, feelings, and actions, toward the attainment of one's goals [25], has assumed increasing importance in the psychological and educational literature. A self-regulated person requires that goals be realistically challenging but attainable. With realistic goals, progress can be monitored and different task approaches determined. Goals are therefore an important tool for managers since goals have the ability to function as self-regulatory mechanisms [5, 22, 26-28].

Most theories of self-regulation emphasize its inherent link with goals. A goal reflects one's purpose and refers to quantity, quality, or rate of performance [22]. Goal setting involves establishing a standard or objective to serve as the aim of one's actions. Goals are involved across the different phases of self-regulation: forethought; performance control; and self-reflection [29].

Hypothesis 4: Individual’s goal-setting has a positive effect on self-regulation.

Self-regulation refers to the ability to control human behavior through the exertion of will. In contemporary psychology it is sometimes referred to as self-control, and exerting self-control through the executive functions in decision making is thought to deplete a resource in the ego [30].

Goals enhance self-regulation through their effects on motivation, learning, self-efficacy (perceived capabilities for learning or performing actions at given levels) [7, 24]. Self-efficacy is also hypothesized to influence choice of activities, effort expended, and persistence[19]. People who have low self-efficacy for knowledge sharing may avoid tasks; those who judge themselves efficacious are more likely to participate [31].

Hypothesis 5: Perceived self-efficacy has a positive effect on self-regulation.

Assigned goals, personal goals, and self-efficacy interrelate to affect performance [28]. Self-efficacy is the central cognitive mediator of the motivational process [7]. Therefore, it can be assumed that self-efficacy in the ability to share knowledge would predict actual knowledge-sharing activity. Accordingly, the hypothesis is:

Hypothesis 6: Individual self-regulation has a positive effect on intention to share knowledge.

Self-regulation is used to refer to the many processes individuals use to manage drives and emotions. It refers to the self-directive process through which learners transform their mental abilities into task related skills [32]. In an organization, employees who are self-regulated believe that opportunities to take on challenging tasks, practice their learning, develop a deep understanding of subject matter, and exert effort will give rise to success[33]. The ability to self-regulate has been viewed as a desirable quality throughout history because of its positive effects on behavior and the acquisition of skills [34]. This paper proposes the following hypothesis:

Hypothesis 7: Individual self-regulation has a positive effect on intention to share knowledge.

THE RESEARCH MODEL AND METHODOLOGY

Figure 1 depicts our research model. Note that the model describes social cognitive perspective in recognizing that knowledge sharing goal setting of an individual is posited to directly and indirectly (through self-efficacy) influences self-regulation, which in turn affects knowledge-sharing, and organizational climate is posited to directly influence goal setting and self-efficacy in knowledge sharing.
This paper developed the items in the questionnaire either by adapting measures that have been validated by other researchers or by converting the definitions of constructs into a questionnaire format.

The items measuring self-efficacy and self-regulation were adapted from Schwarzer’s [35, 36] research, and the items for measuring organizational climate were adapted from previous organizational climate studies, with the items altered to fit the knowledge-sharing context. The four organizational climate dimensions in which the emphasis is upon productivity and goal achievement were then used as indicators to create the superordinate organizational climate construct [37].

All respondents are full time software engineers working in a variety of different organizations. A total of 400 individuals from 20 organizations in Taiwan were invited to participate voluntarily in this research. 244 valid responses were returned, a response rate of 61%. Table 2 shows the respondent characteristics according to industry type.

**ANALYSIS METHODS**

Structural equation modeling (SEM) was used as it allows latent constructs to be modeled either as formative or reflective indicators as was the case with our data, and it makes minimal demands in terms of sample size to validate a model compared to alternative structural equation modeling techniques.

According to analytical procedures, the measurement model and structural relationships were examined. In order to validate the measurement model, this paper assessed content validity, convergent validity and discriminant validity. Content validity was assessed by interviewing the extant literature and pilot-testing the instrument. This paper examined composite reliability and average variance extracted to access convergent validity. Table 3 below shows our composite reliability values range from 0.86 to 0.91 and average variance extracted scores range from 0.61 to 0.70; all scores are above the acceptability value.

The weights and loadings of the measures are given as well. The results in Table 4 confirm the discriminant validity: the square root of the average variance extracted for each construct is greater than the levels of correlations involved in the construct. The results of the inter-construct correlations also show that each construct shares a larger amount of variance with its own measures than with other measures.
This paper discusses the results in the following sequence: social cognitive constructs (Hypotheses 5, and 6), antecedents of goal-setting to these social cognitive constructs (Hypotheses 3, and 4), and organizational climate (Hypotheses 1 and 2).

Regarding organizational climate, the results show, as posited, that organizational climate influences and knowledge sharing self-efficacy and goal-setting toward knowledge sharing, and hypothesis 1 and 2 are supported.

Hypotheses 3 and 4 are supported the idea that goal-setting can increase individual self-efficacy and self-regulation. These results confirm the relationship between self-efficacy and Goal-setting in the SCT, which posits that self goal-setting will influence self-efficacy because such sense of personal competences is derived from the goal-setting by individuals.

Hypotheses 5 and 6 examine the links between self-efficacy, self-regulation, and intention toward knowledge sharing. Self-efficacy similarly has a significant positive effect on self-regulation. Self-regulation has a significant positive effect on intention to share knowledge. Therefore, hypothesis 5 and 6 were supported.

**CONCLUSION AND IMPLICATION FOR MANAGERS**

The main contribution of this study is that it is the first to explore knowledge sharing behavior using existing theories of social psychology. In this study, the applicability of self-regulation mechanism to explaining knowledge sharing behavioral intentions was demonstrated, and social cognition was found to have the strongest overall effect on individual behavior and intention to share knowledge. Further, organizational climate was found to have a significant effect on knowledge sharing intention.

Initially people must make a commitment to attain a goal because it will not affect performance without this commitment[38]. Goals motivate people to exert effort necessary to meet task demands and persist over time. Goals also direct individual attention to relevant task features, behaviors to be performed, and potential outcomes, and goals can affect how people process information. Goals help people focus on the task, select and apply appropriate strategies, and monitor goal progress.

The results of the theory and research have implications for knowledge sharing. One implication is for managers to provide employees with opportunities for self-regulation. Managers might periodically show employees sample tasks and ask them to evaluate how much progress they have made in sharing knowledge.

Another implication is to design knowledge sharing environments to provide information about progress. A comfortable organizational climate can encourage knowledge sharing and creating new knowledge. When employees perceive extrinsic motivators and organizational climate factors, they feel capable of improving skills that affect their intention to share knowledge.

Finally, a recommendation is to have knowledge sharing goals and provide feedback on goal progress. This can be done formally for example, manager and employee can hold a goal-setting conference at the start of a unit where goals are established and then at different times during the unit to assess progress. Once goals are attained, employees can set new goals. Combined with progress feedback, goal offer an important means for promoting self-regulatory strategy use and developing skills and achievement beliefs.

**References**
