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An Integrated Theoretical Framework of the Antecedents of Knowledge-Sharing Behavior among Lecturers

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Abstract

The purpose of this paper is to explore the antecedents of knowledge-sharing behavior among lecturers. This paper integrates the antecedents of knowledge-sharing behavior among lecturers into an integrated theoretical framework. The proposed framework aims to add to the understanding of specific processes to enhance lecturers' knowledge-sharing behavior intention. This paper is developed based on a literature review. A range of relevant literature was explored, and a theoretical framework is proposed and discussed. The proposed theoretical framework is original; therefore it will contribute to the enrichment of the literature.

Keywords: Antecedents; behavior intention; knowledge sharing; relational model theory

■1.0   INTRODUCTION

In a knowledge-based economy era, knowledge becomes a critical issue for many organizations as it can increase the capacity of and keep the sustainability of the organization in the future. Many organizations believe that knowledge is the power of the organization. According to Nanda in Matzler, Renzl and Miller (2008), "*Knowledge is essential because it is unique, scarce, and difficult to imitate or substitute by others*". Organizations must learn how to capture, create, and share the new knowledge and learn how to gather, organize, and store the existing knowledge to beat the competition. The processes of creating new knowledge and keeping current knowledge are known as the knowledge management process.

The thought that knowledge is power, is out of date for organizations. They must know how to share knowledge in the organization to gain from it, especially if the knowledge belongs to an individual. According to Grant (1996, p122), "*from the knowledge management process, knowledge sharing plays a fundamental role in generating new ideas and creating business opportunities*". Knowledge sharing is important for an organization to develop skills and competencies, increase value and sustain competitive advantage because innovation occurs when people share and combine personal knowledge with one another (Matzler, Renzl & Miller, 2008).

Knowledge sharing is important for many organizations including universities. Universities are known as knowledge-based organizations, where knowledge is created and shared. Hence, universities are also known to have a central governing role and a responsibility for the development and transmission of knowledge (Loh et al., 2003). As the center of knowledge development and creation, universities also realize the important role of knowledge sharing. Knowledge sharing is important to increase one's capability, to introduce one's findings, and to set the standard of competencies for lecturers, researchers, and other university members.

Knowledge sharing is a process to distribute one's knowledge to others. The knowledge should be socialized once it is created or developed. Because, according to Cheng, Ho and Lau (2010), if the knowledge is not disseminated, it will become a 'stone'. On the other hand, if it is disseminated quickly, it becomes active knowledge, and it becomes a 'gem'. In a university, the knowledge-sharing process happens between one lecturer and other lecturers, lecturers to students, lecturers to community, lecturers to researchers, lecturers to administrators, and so on. Knowledge sharing helps a university to transfer expertise (knowledge, skills) from the experts to someone who needs it (Wang & Noe, 2010). Besides that, knowledge sharing is essential in transforming individual knowledge into group knowledge (Abdullah, et al., 2011).

Universities around the world have noticed the critical role of knowledge sharing among lecturers. The competition among higher education institutions forces them to set a high standard of education. To survive the competition, they must enhance the quality, skills and competencies of their primary resources, which are the lecturers. One way to do this is to require the lecturers to engage in knowledge sharing. To be able to do this, lecturers should have knowledge-sharing behavior.

The ultimate objective of lecturers' knowledge sharing is to elevate the quality and performance of the academics. The knowledge must be transferred from one lecturer to another to maintain the same standard and quality of knowledge. It must be shared from senior lecturers

to the beginners to keep the standard and minimize the knowledge gap between the seniors and juniors. By doing so, the university can maintain its quality standard of teaching, research and community services. Besides that, knowledge sharing among lecturers can reduce redundancy of learning efforts and enhance innovation.

Even though there are many benefits from knowledge sharing, there are some issues and challenges that need to be addressed. Even though lecturers realize the importance of knowledge sharing, it is hard to implement. Many lecturers hoard their knowledge for some reasons such as fear of plagiarism, of giving others an advantage over their knowledge, and other reasons. Therefore, it is important to examine the factors affecting knowledge-sharing behavior among lecturers. Many studies have been conducted to examine the factors that influence knowledge-sharing behavior, but most of them focus on business organizations which are profit-oriented. Only a few of them focus on educational institutions. This paper attempts to develop an integrated model to explain and predict knowledge-sharing behavior among lecturers.

■2.0 THEORETICAL FOUNDATION OF THE STUDY

Knowledge Sharing

Knowledge sharing is the first stage of implementing knowledge management in an organization. There is no rigid definition regarding knowledge sharing. Many experts have defined knowledge sharing from different points of view. Some of them define knowledge sharing as an inter-exchange process from individual to individual, team to team and organization to organization. Knowledge sharing is a process of communicating or disseminating knowledge from one person who has it to another who needs it. This process can happen in a formal institution, between colleagues in an organization or in an informal institution. It also can happen between friends.

Many researchers have proposed many definitions regarding knowledge sharing. Sharrat and Usoro (2003, p188) defined knowledge sharing as "*a process whereby a resource is given by one party and received by another. For sharing to occur, there must be an exchange; a resource must pass between source and recipient*". This knowledge flow happens if there is a minimum of two individuals. The distribution may use any media of communication. Moreover, Gupta and Govindarajan (2000) defined knowledge sharing as knowledge flow. Knowledge sharing might happen if there is: (1) value of the source of knowledge, (2) willingness of the source to share knowledge, (3) media richness of the communication channel, (4) willingness of the recipient to acquire knowledge and (5) absorptive capacity of the recipient.

Davenport and Prusak (1998) defined knowledge sharing as "*a process that involves exchanging knowledge between individuals and groups*". Furthermore, Connelly and Kelloway defined knowledge sharing as:

> "*A set of behaviors that involve the exchange of information or assistance with others. It is separate from information sharing, which typically requires management making information on the organization available to employees. Whereas knowledge sharing contains an element of reciprocity, information sharing can be unidirectional and unrequested.*" (2005, p294)

Based on the definitions above, this paper defines knowledge-sharing behavior as a set of behaviors that involves exchanging knowledge between someone who has the knowledge to others who need it. In this research, knowledge-sharing behavior is limited to knowledge-sharing behavior among lecturers. In a university, there are many ways of knowledge sharing. It can happen through closed and/or open networks. In a closed network, the knowledge-sharing process occurs between lecturers, where a lecturer can choose with whom they want to share their knowledge. In an open network, a lecturer cannot decide with whom they want to share knowledge, since the lecturer shares their knowledge with other members in the knowledge management system. So, the knowledge sharing become a sharing among many people. There are no limitations for the lecturers to share their knowledge, but the intensity and effectiveness of knowledge-sharing behavior among lecturers depends on them. There are many factors such as motivation (extrinsic and intrinsic), leadership, organization culture, and others that influence one's willingness to share or not to share their knowledge. This will be discussed in the next section.

Knowledge-Sharing Behavior Intention

Nowadays knowledge management (KM) has become an interesting issue for researchers and practitioners because of its contribution to capturing, developing, managing and externalizing the knowledge effectively. A KM initiative is the first part of KM and also the essential element of the organization for KM implementation. An organization's development and sustainability can be achieved by implementing KM initiative (Hung et al., 2011). Knowledge sharing can improve the competitiveness of an organization. An organization with a lack of knowledge sharing will have a serious problem in the organization's development and competitiveness in the future (Lin, 2008).

An organization must stimulate and motivate its members to have knowledge-sharing behavior. In universities, knowledge sharing behavior is needed both by the universities and the lecturers. By sharing knowledge with others, lecturers gain some benefits for themselves that include elevating their competencies; continuing their research process and at the end, will increase the productivity of the research and achieve a higher teaching quality, which are two primary criteria in a lecturer's performance appraisal. For the university, the active knowledge sharing of its members (especially lecturers) can help the university to achieve its goals and a competitive advantage efficiently and effectively. Even though both the university and lecturer gain the benefit, the process of knowledge sharing in a university is not easily implemented. Therefore, it is important to explore the behavior, intensity and factors in the knowledge sharing process among lecturers.

Many studies had been conducted to explore factors influencing one's knowledge sharing behavior, that include motivation, reward, organizational culture, leadership, opportunity, ability, competency, space, time, tools, and others. Those factors can be classified into two categories: individual factors and organizational factors. Besides those factors, prediction of behavioral intention can be explained using the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB) developed by Ajzen (1991). These two theories explain that one's behavior is affected by one's intention to perform the actual behavior. The intention is influenced by three components that include attitude, subjective norm and perceived behavioral control.

Behavioral intention occurs because there is a relationship or a connection between one and the other. According to Fiske (1992), there are four elementary social structures in a society. Each social structure creates a different type of relationship, which consist of community sharing, authority ranking, equal matching and market pricing. Each type of relationship has a different impact on one's knowledge sharing behavior. Besides individual and organizational factors, attitude, subjective norm and perceived behavior control, and type of relationship influence knowledge sharing behavior as well. If those factors integrate simultaneously, it will build an integrated model of knowledge-sharing behavior. This model can be used to explain the antecedents of knowledge-sharing behavior among lecturers.

■3.0 INTEGRATED THEORETICAL FRAMEWORK

Previous Research

Previous studies reveal that one's passion to share knowledge in an organization is affected by many factors. Those factors can be classified into individual and organizational factors. Individual factors are those that come from the internal individuals that stimulate that person to perform or not to perform knowledge-sharing behavior. Organizational factors are factors that come from external individuals that force someone to share or not to share. Those factors can directly and/or indirectly affect one's behavior toward knowledge sharing. Besides that, there is also another determinant that affects one's behavior. Bock, Zmud, Kim and Lee (2005), using the Theory of Reasoned Action, studied factors that influence individuals' knowledge-sharing intentions. This study added other variables such as extrinsic motivators, social psychological forces, and organizational climates. The data was collected using a survey of 154 managers from 27 Korean companies. The results show that there are significant effects of attitude, subjective norm, and organizational climate on one's intention toward knowledge sharing. This study also found that anticipated reciprocity affects attitude. Furthermore, it also found that reward has a negative impact on one's intention to share knowledge.

Examining the relationship between knowledge sharing and firms' innovation capability, Lin (2007) determined individual factors (enjoyment in helping others and knowledge self-efficacy), organizational factors (top management support and organizational reward) and technology (ICT use) that influence the knowledge-sharing process (knowledge donating and knowledge collecting). The knowledge-sharing process is expected to increase a firm's innovation capability. From a survey of 172 employees in 50 organizations in Taiwan, the result show that both individual factors and top management support influence knowledge sharing process significantly.

Lin, W-B (2008) studied the influence of organizational structure characteristics (formalization, complication, and centralization), organizational culture (bureaucratic, innovative and supportive) and organizational interaction (trust and commitment) on knowledge sharing from the viewpoint of organizational structure and network. This study was conducted on five hi-tech industries in Taiwan. From analyzing 138 questionnaires, this study found that trust and commitment among units are essential for facilitating knowledge sharing. Besides, an effective organizational culture brings benefits to the implementation of knowledge sharing activities.

Lin, C-P (2008) examined the relationship between organizational citizenship behavior, gender and knowledge sharing in workplace organizations in Taiwan. Using the Structural Equation Model, Lin examined the model. The finding is that gender has a moderating effect on knowledge sharing. The effect of altruism on knowledge sharing is stronger for women than for men. On the other hand, the influence of courtesy and sportsmanship on knowledge sharing is stronger for men than for women. Another study was conduct by Matzler, Renzl and Miller (2008). They examined the effect of personal traits (agreeableness, conscientiousness, and openness) on knowledge sharing. Data was collected from 124 completed questionnaires from companies in German and UK. They found that personal traits influence knowledge-sharing behavior.

Using social exchange theory, Liang, Liu and Wu (2008) examined factors that affect knowledge-sharing behavior. Variables used in this study are perceived benefit, organizational commitment, social interaction, trust, organizational support, and reward systems. This study used meta-analysis from 29 reported studies. The results found that most constructs, excluding organization support, in the social exchange theory have a significant effect on individual's knowledge-sharing behavior. Applying the functions of performance, Siemsen, Roth and Balasubramanian (2008) used motivation, opportunity and ability as variables that affect knowledge sharing. This study used the constraining factor model (CFM) to explain the relationship between those factors. The results of this study showed that motivation, opportunity, and ability cannot be used independently, but should be used dynamically and simultaneously.

Cheng, Ho and Lau (2010) studied knowledge sharing in academic institutions in Malaysia. This study explained the factors affecting knowledge-sharing behavior in open network sharing. The variables used are incentive system, management system, organizational culture, individual attitude, personal expectation and IT application. From 60 respondents, this study found that both external and internal factors are important to explain knowledge sharing in an academic institution. Hung, et al. (2011) examined the influence of intrinsic and extrinsic motivation on individual knowledge sharing behavior. Extrinsic motivation consists of economic reward, reputation feedback, and reciprocity. Intrinsic motivation is defined as altruism. The result of this study is extrinsic motivation such as economic reward does not influence individual knowledge sharing significantly.

Xue, Bradley and Liang (2011) examined the impact of team climate and empowering leadership on team members' knowledge sharing behavior. Data was collected through a survey of 434 college students at a major American university. This study used Partial Least Square to confirm the research model. This study found that team climate and empowering leadership significantly influence individuals' knowledge sharing behavior. Those factors can affect individual's knowledge sharing directly or indirectly with attitude as a moderating variable. Chennamaneni (2006) examined factors that promote or discourage knowledge sharing behaviors of knowledge workers in an organizational context. Using a modified Theory of Planned Behavior (TPB) with other factors, this research studied how psycho/socio-technological determinants affects behavioral determinants. The results were knowledge-sharing behavior was predicted by the knowledge workers' intention towards knowledge sharing and perceived behavioral control. Knowledge-sharing intention in turn was predicted by knowledge workers' attitude towards knowledge sharing, subjective norms, and perceived behavioral control. The knowledge workers' perceptions of reciprocity, reputation, enjoyment in helping others were positively associated with a favorable attitude towards knowledge sharing. The perception of loss of knowledge power exerted an adverse effect on attitude. Organizational climate positively influenced knowledge workers' subjective norms. Additionally, facilitating tools and technology were positively associated with high levels of perceived behavioral control towards knowledge sharing.

Antecedents of Knowledge Sharing

Individual Context

The first factor that is considered as the trigger factor of knowledge sharing behavior is reward/incentive. Bock, Zmud, Kim and Lee (2005) and Jewels and Ford (2006) classified reward as extrinsic motivation that can drive someone to share his/her knowledge. Cheng, Ho and Lau (2010) and Hung et al., (2011) also noticed that incentive is a key factor in knowledge sharing. Based on the assumption that knowledge is valuable and sharing knowledge is costly, Bock, Zmud, Kim and Lee. (2005), Jewel and Ford (2006), Cheng, Ho and Lau (2011) and Hung, et al. (2011) linked extrinsic motivation as reward and incentive to one's motivation for sharing. Besides extrinsic motivation, intrinsic motivation also affects knowledge sharing behavior (Jewels & Ford, 2006; Siemsen, Roth & Balasubramanian, 2008). In addition, personal values (Lee & Choi, 2003), leadership (Liu & Philips, 2011; Xue, Bradley & Liang, 2011), trust (McDermott & O'Dell, 2001; Lin, 2008), altruism (Hung et al., 2011, Lin, 2008), courtesy, conscientiousness, sportsmanship, civic virtue (known as Organizational Citizenship Behavior) also influence one's passion for sharing knowledge. Other factors such as one's ability and opportunity (Siemsen, Roth & Balasubramanian, 2008), organizational commitment (Liang, 2008) influence one's knowledge sharing behavior directly and indirectly. Besides those factors, based on the researchers' experience, individual factors such as reputation, seniority, competency, self-efficacy, self-confidence also influenced lecturers to share or to hoard the knowledge.

   Based on the literature review discussed above, the potential factors derived from individual context are identified as follows: personal values, self-efficacy, self confidence, reputation, trust, organizational commitment, personal traits, altruism, perception of benefit, personal expectation and competency.

Organizational Context

The organizational context as external factors that affect one's behavior toward knowledge sharing are leadership (Liu & Philips, 2011; Xue, Bradley & Liang, 2011), social psychological forces (Bock, et al., 2005, Chatzoglou & Vraimaki, 2009), organizational climate (Bock, et al., 2005) and organizational culture (Lee & Choi, 2003). Besides those factors, facilities in organization such as time and space (Davenport & Prusak, 1998, Nonaka & Takeuchi, 1995), technology (Alavi & Leidner, 2001), access to knowledgeable people (Brown & Duguid, 1991) also influence one's knowledge sharing behavior. Based on the literature review above, the potential factors derived from organizational context are identified as follows: management support, organizational reward system, climate, culture, structure and leadership.

Behavior Intention

Behavior can be defined as one's reaction to do or not to do something stimulated by internal and environmental factors. Many researchers have used behavior determinants proposed by Ajzen (1991) that one's behavior is stimulated by one's intentions to react toward such situations. Attitude and subjective norms encourage one's intention. This theory is known as the Theory of Reasoned Action. Ajzen said that there were several reasons why people do something. Attitude and subjective norms have been used as good predictors of knowledge sharing behavior (Ryu, Ho & Han, 2003; Ford, 2004; Bock, Zmud, Kim & Lee, 2005; Kwok & Gao, 2005; Jewels & Ford, 2006; Chennamaneni, 2006, Jeon, Young & Joon, 2011). The results prove that attitude and subjective norm have a significant impact on one's intention toward knowledge sharing. But the attitude and subjective norms are also influenced by individual and organizational contexts.

Types of Relationship

Many studies found that the type of relationship also affect one's intention to share knowledge (Davenport & Prusak, 1998; Jeon, Young & Joon, 2011; Boer & Berends, 2003; Boer, 2005; Boer, Berends & van Baalen, 2011). Davenport and Prusak (1998) argued that people will share if they feel that they will have benefit from it. This happens because sharing knowledge takes time and opportunity. The more time they spend on knowledge sharing, the greater the opportunity lost. Davenport and Prusak (1998) perceived knowledge as a commodity. People exchange knowledge as they exchange commodities. Davenport and Prusak introduced the term 'knowledge market' to explain how valuable the knowledge is to some people. As the intellectual assets in a university, lecturers sometimes use this term to exchange their knowledge. That is why many universities give rewards to stimulate their lecturers to share their knowledge. Some of them are succesful, but others fail.

   Giving a reward sometimes works because it meets one's expectations. But sometimes it does not work because reward is not the only thing that can stimulate lecturers' knowledge sharing behavior. They often share their knowledge whether there is a reward or not. They share if there is similar interest between members in the organization or group. The group which consists of people who share because of having common interest is called the *community of practice* (CoP). There are two types of CoP. There are formal and informal CoP. A formal CoP is the community that is developed by the institution. The members themselves build the informal CoP based on the same interests. In this kind of relationship, giving to others is not based on how much they will get if they share. They share because they believe in each other and because they have something in common. For lecturers, they build the CoP because they have the same field of expertise or interest such as finance, marketing, human resources, operations or it can be built between lecturers who have the same hobbies such as sports, science, etc. The problem is the members of CoP only want to share among the members and sometimes it is hard to become a member. Another relationship that exists in knowledge sharing between lecturers is an equality relationship. The equality relationship happens if there is a reciprocal relationship between lecturers. The lecturers who share knowledge expect that they will get knowledge from others too. This kind of relationship usually happens between individuals.

According to Fiske (1992), those relationships above can be classified into four forms of basic relationships depending on the context of human beings that include communal sharing, authority ranking, equality matching and market pricing. Fiske explained that someone can change his or her behavior depending on the relationship. Related to knowledge sharing, Boer and Berends (2003), Boer (2005), Boer, Berends, van Baalen (2011) found that the type of relationship influences one's behavior toward knowledge sharing. Some of the basic forms

have the same meaning as the existence relationship on knowledge sharing. i.e. communal sharing known as Community of Practice in knowledge sharing. Another type of relationship is market pricing, which is known as Knowledge Market (Davenport & Prusak, 1998). The reciprocity in this relationship is equal to equality matching.

Integrated Model of the Antecedents of Knowledge Sharing Behavior

This paper combines two approaches to develop an integrated model of the antecedents of knowledge sharing behavior among lecturers that include the Theory of Planned Behavior (TPB) by Ajzen (1991) and the Relational Model Theory (RMT) by Fiske (1992). Besides that this paper also includes some factors that affect the TPB and RMT. The TPB is used to explain the factors that influence people to share or not to share knowledge since the TPB suggests that one's intention to share or not to share determines one's actual behavior in performing knowledge sharing behavior. The intention is a function of the person's attitude, subjective norms and perceived behavior control toward knowledge sharing behavior (Ryu, Ho & Han, 2003). Hrubes and Ajzen (2001) defines "attitudes and subjective norms shape a person's intention to perform a behavior". Perceived behavioral control refers to people's perception of the ease or difficulty of performing the behavior of interest. Perceived behavior control has a direct effect on behavioral intention and action in the TPB model.
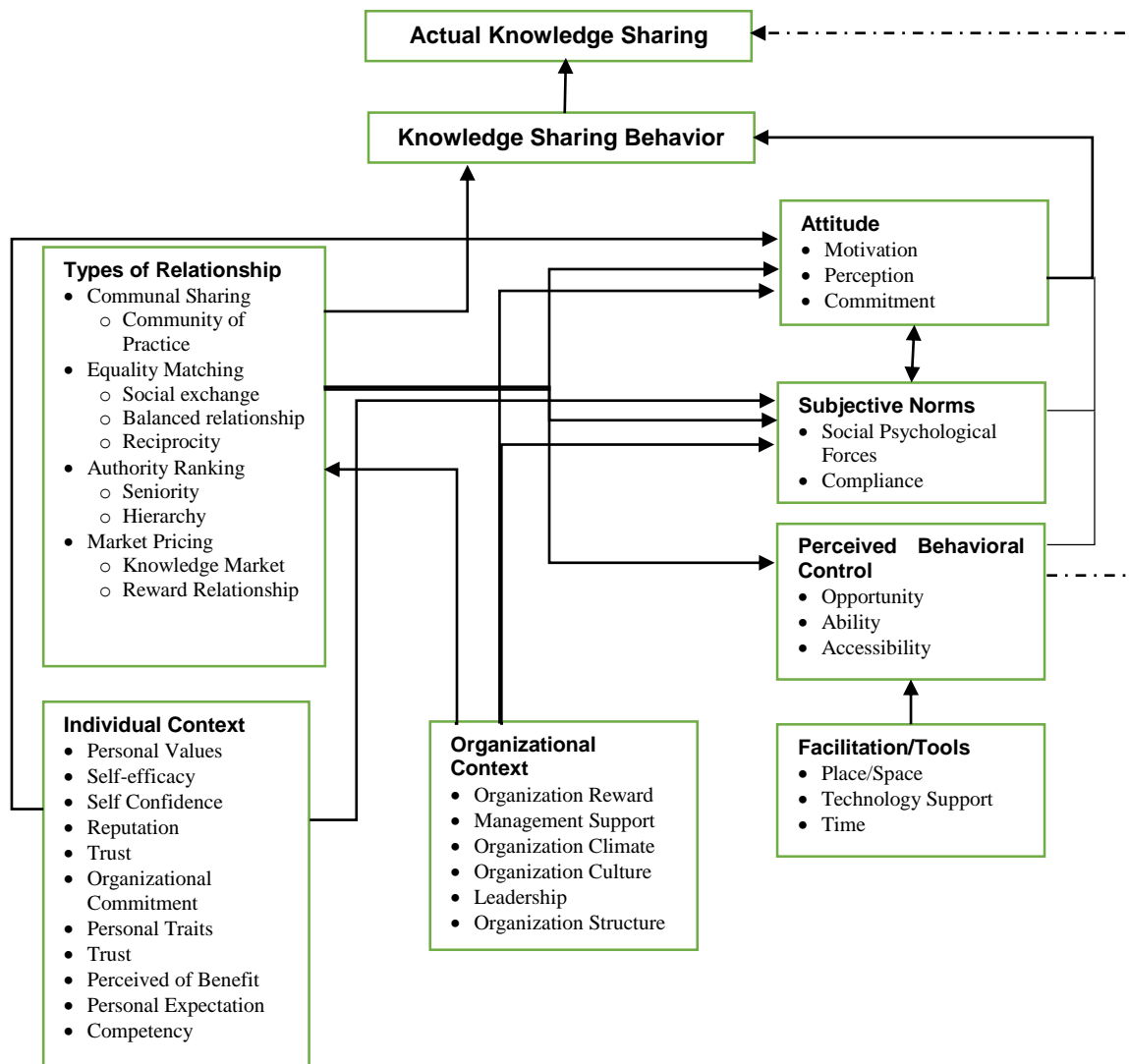

Figure 1 An Integrated Theoretical Framework of the Antecedents of Knowledge Sharing Behavior among Lecturers

Even though there is much research that has been conducted using TPB as the predictor of people's knowledge sharing behavior, the TPB has not been used to predict and measure lecturers' knowledge sharing behavior. Therefore, the primary interest of this paper is to explore the drivers of lecturer's attitude, subjective norms and perceived behavioral control toward knowledge-sharing behavior to perform knowledge-sharing behavior. The RMT is used to explain that human relationships impact knowledge-sharing behavior. Boer and Berends (2003), Boer (2005) and Boer, Berends and van Baalen (2011) used RMT to explain people's knowledge sharing behavior as a comprehensive alternative to the existing knowledge-sharing behavior.

TPB and RMT are also influenced by other factors such as individual and organizational factors and others (such as technology, place, time, tools). Those factors are not stand-alone but influence each other. Therefore, the explanation of the antecedents of lecturers' knowledge-sharing behavior should integrate those factors. By integrating those factors, the study can explain the relationship of those contexts and how they will influence lecturers' knowledge sharing behavior. Figure 1 shows how those contexts interact and influence each other.

■4.0 CONCLUSION

This literature review reveals that the Theory of Planned Behavior can predict people's behavior by examining the attitude, subjective norms, and perceived behavioral control. The three components in TPB are also affected by other factors that can be categorized into individual and organizational contexts. Individual contexts such as motivation, opportunity, ability, organizational commitment, trust, personal value, organizational citizenship behavior will influence attitude, subjective norm and personal behavioral control toward knowledge sharing behavior. Organizational factors such as incentive, social psychological forces, organizational climate and culture also influence attitude, subjective norms, and personal behavioral control.

Besides that, knowledge-sharing behavior is also influenced by tools, time, space and technology to support the knowledge-sharing process. Previous research also found that the type of relationship influences knowledge-sharing behavior. There are many types of relationships in knowledge sharing behavior that include gift giving, communities of practice, knowledge market and social dilemma. Applying the relational model theory from Fiske, there are four fundamental social relations that occur in knowledge sharing process and influence knowledge-sharing behavior that include communal sharing, authority ranking, equality matching and market pricing. Those relationships cause the knowledge-sharing process to be different between one individual and another. Those kinds of relationship are influenced by individual and organizational contexts.

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