

Knowledge-sharing behavior among banking officers in Indonesia

Muhammad Rasyid Abdillah*

*College of Management, Da-Yeh University
Taiwan
m.rasyidabdillah@unilak.ac.id*

Ching-Torng Lin

*Department of Information Management, Da-Yeh University
Taiwan
charllin@mail.dyu.edu.tw*

Rizqa Anita

*College of Management, Da-Yeh University
Taiwan
rizqa.anita@gmail.com*

Bambang Suroto

*Department of Management, Universitas Lancang Kuning
Indonesia
bambanguroto@unilak.ac.id*

Hadiyati

*Department of Management, Universitas Lancang Kuning
Indonesia
hadiyatisuroto@yahoo.co.id*

**Corresponding Author*

Abstract. Knowledge-sharing behavior has been a hot issue in knowledge management. In the context of highly dynamic business, understanding the factors that encourage a knowledge-sharing behavior is critical if an organization wants to compete and win in the industry. This study investigates the antecedents of knowledge-sharing behavior. This study examines the factors that encourage knowledge-sharing behavior among banking officers using Ajzen's theory of planned behavior. The suggested research model was tested using partial least square analysis. Data consisting of 200 responses from employees who have been working in banks in Pekanbaru, Riau, Indonesia are analyzed. The results reveal that personal attitude, subjective norm, and

Received:
November, 2017
1st Revision:
February, 2018
Accepted:
April, 2018

DOI:
10.14254/2071-
8330.2018/11-2/10

perceived behavioral control lead to knowledge-sharing intention. Findings also suggest that the effect of personal attitude, subjective norm, and perceived behavioral control on knowledge-sharing behavior is indirectly influenced by knowledge-sharing intention.

Keywords: knowledge management, knowledge-sharing, partial least square analysis, bank employees, Indonesia

JEL Classification: M10, M12

1. INTRODUCTION

Knowledge is an essential resource for all businesses of the globalization era (Ding et al., 2017; Nonaka & Toyama, 2015; Razak et al., 2016). As a critical asset, knowledge is the key driver that has been constantly sought, maintained, and developed by many industries including the banking industry (Olapegba et al., 2013). Therefore, knowledge must be meticulously managed by organizations that want to survive in today's global competition (Wang & Wang, 2012). Success in knowledge management can be reflected in knowledge-sharing behavior among employees of an organization (Wang & Noe, 2010). Effective knowledge-sharing practices in an organization show that this organization can create and manage organizational knowledge well (Huber, 2015; Sun, 2010). Understanding the factors that cause employees to engage in knowledge-sharing behavior in an organization is a critical aspect of knowledge management (Razak et al., 2016; Wang & Noe, 2010).

The factors behind knowledge-sharing behavior have been extensively investigated with different designs and contexts by scientists worldwide, such as in the United States, United Kingdom, Europe, Africa, and Asia (Caniels et al., 2017; Ding et al., 2017; Fullwood & Rowley, 2017; Mafabi et al., 2017; Mahyarni et al., 2012; Wang & Noe, 2010). Scholars have predicted that this direction of studies only continues to grow in popularity over the next two decades (Tea & Sun, 2012; Ding et al., 2017; Fullwood & Rowley, 2017; Mafabi et al., 2017). This prediction proves the increasing attention of scholars on knowledge-sharing research in the world today.

Several studies have successfully explained the prediction of intention and knowledge-sharing behavior using theory of planned behavior (TPB) (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Jolaei et al., 2014; Lin & Lee, 2004; Mafabi et al., 2017). The TPB model was introduced by Ajzen (1991). According to this theory, personal attitude, subjective norm, and perceived behavioral control are used to predict the behavior of individuals to participate in a certain activity (Hsu et al., 2016). However, some other studies have failed to predict knowledge-sharing behavior using TPB. Mahyarni et al. (2012) found that perceived behavioral controls do not affect knowledge-sharing intention, whereas Mafabi et al. (2017) and Al Qeisi and Al Zagheer (2015) indicated that they have no direct effect on knowledge-sharing behavior. Al Qeisi and Al Zagheer (2015) reported that subjective norms do not influence knowledge-sharing intention, whereas according to Ajzen (1991), behavior control can directly predict certain behaviors, such as knowledge-sharing.

Chatzoglou and Vraimaki (2009) investigated the prediction of knowledge-sharing behavior in the banking industry in Greece using TPB; however, their study did not reveal or test the mediation role of knowledge-sharing intention to predict knowledge-sharing behavior. Mafabi et al. (2017) investigated the role of behavioral intention to predict knowledge-sharing behavior on hospitals in Uganda. Few studies have examined the mediation role of knowledge-sharing intention in predicting the act of knowledge-sharing in the banking industry.

Understanding the mediation role of knowledge-sharing intention in predicting knowledge-sharing behavior among banking officers in Indonesia is crucial because it can accurately explain why individuals in professional groups engage in knowledge-sharing (Chatzoglou & Vraimaki, 2009). Indonesia is “considered one of the most attractive markets for financial institutions in Southeast Asia” (CNBC, 2017). Therefore, understanding the causes behind knowledge-sharing behavior in Indonesian banks is important. Without this understanding, managing knowledge-sharing in practice would be ambiguous.

Thus, we should remember that empirical studies on the mediation role of knowledge-sharing in predicting the act of knowledge-sharing by banking officers in Indonesia are lacking, whereas several studies have produced different results in terms of predicting knowledge-sharing behavior. This study utilizes TPB to study the prediction model of knowledge-sharing behavior among banking officers in Indonesia. TPB has gained considerable attention and power in explaining and predicting volitional behavior, such as knowledge-sharing (Ajzen, 1991; Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Mafabi et al., 2017). The current study aims to explain the effects of attitude, norm subjective, and perceived behavioral control toward the knowledge-sharing behavior among banking officers in Indonesia. This study explores the mediation role of knowledge-sharing intention within the influence of attitude, subjective norm, and perceived behavioral control toward knowledge-sharing behavior.

The paper is organized in four parts. First, the paper will discuss the literature review and hypothesis development for the study, the second part will present the research methods including data collection tools and measurement instruments. In the third part the empirical results are presented. And in the final part the paper concludes with a discussion and limitations of this study.

2. LITERATURE REVIEW

2.1. Knowledge sharing

In the globalization era, knowledge is a vital organizational resource that provides a sustainable competitive advantage (Wang & Noe, 2010). Knowledge refers to a combination of elements, such as expert insight, experience, contextual information, and values that provide a framework for evaluating and incorporating new skills and information (Davenport & Prusak, 1998). Knowledge is defined as the “information processed by individuals including ideas, facts, expertise, and judgments relevant to individual, team, and organizational performance” (Wang & Noe, 2010).

Knowledge originates and is applied in the mind of knowers. It is reflected in the organization’s routines, processes, practices, and norms (Davenport & Prusak, 1998). Scholars have elaborated on two varieties of knowledge (Budiharjo, 2016; Penrose, 2009; Jain et al., 2015; Wong & Noe, 2010). The first, explicit knowledge, is a kind of concrete knowledge, usually either easily expressed in the form of language (words, numbers, and other symbols) or it is codified, easily articulated, and transferred to others through writing and or verbal communication (Bergeron 2003; Budiharjo, 2016). The second type of knowledge is tacit knowledge. Unlike explicit knowledge, which is easy to codify and send to others, tacit knowledge refers to the knowledge that is retained in one’s mind, and it is not easy to transfer to others (Jain et al., 2015).

Tacit knowledge is based on a person’s personal experience, and it is difficult to codify or render explicit (Budiharjo, 2016). Such knowledge is deeply embedded in individuals, difficult to quantify, and can be lost easily when employees leave/retire from the organization (Jain et al., 2015). Tacit knowledge that is by an individual appears unconsciously when an individual is thinking and performing. For knowledge to be concrete, tacit knowledge must be transformed into explicit knowledge (Budiharjo, 2016). It depends on the willingness of the person who has the knowledge to show and provide

knowledge to others (Jain et al., 2015). Thus, the organization must ensure that tacit knowledge is maintained and remains within the organization through effective knowledge management.

Managing knowledge is absolute and should be carried out by the organization if it wants a competitive advantage (Budiharjo, 2016; Lin & Lee, 2004; Chatzoglou & Vraimaki, 2009; Wong & Noe, 2010). An organization that has cutting edge and unique knowledge has a chance to win the market within the industrial competition (Budiharjo, 2016). Knowledge management refers to “a systematic activity that offers to manage through acquisition, use, share, storage, retrieval, and development of knowledge to generate new ideas that impact on innovation” (Budiharjo, 2016). The success of knowledge management practices relies heavily on knowledge-sharing behaviors that happen among employees in an organization. (Wang & Noe, 2010). Many organizations argue that an effective knowledge-sharing practice is a critical way of leveraging core competencies and gaining competitive advantage (Lin & Lee, 2004). Knowledge-sharing refers to the human activities where they are willing to share knowledge (task information and or know-how) with others in an organization to solve problems, develop new ideas, or act policies or procedures (Chatzoglou & Vraimaki, 2009; Wang & Noe, 2010).

2.2. Theory of planned behavior on knowledge-sharing behavior

Theory of planned behavior (Ajzen, 1985) predicts the antecedent of human volitional behavior; its essence lies in the intention of a behavior (Azwar, 2013). This theory explained the determinants (predictors) of the intention of a behavior (Ajzen, 1991; Ajzen, 2005; Azwar, 2013). TPB is a development and modification of the previous theory of reasoned action (TRA) (Ajzen, 1985; Ajzen, 1991; Ajzen, 2005; Azwar, 2013). In the TRA, Ajzen and Fishbein (1980) explained that one’s intention to do (or not do) a behavior is the determinant of that behavior. Moreover, one’s intention to a behavior is a function of two determinants. These factors are attitude and subjective norm toward a behavior. Attitude is a person’s positive or negative evaluation of behavior (Ajzen & Fishbein, 1980; Ajzen, 1985). Subjective norm is a person’s perception of the perceived social pressure to perform or not perform a behavior (Ajzen, 1985) or a person’s beliefs about what others expect in doing the behavior or not (Anwar, 2013).

Like TRA, TPB identifies the antecedent of volitional behavior by adding a factor, such as perceived behavioral control, which has not been discussed before (Ajzen, 1985; Ajzen, 1991; Ajzen, 2005; Azwar, 2013). Perceived behavioral control refers to a person’s perception of the ease or difficulty of performing a behavior (Ajzen, 1991). Perceived behavioral control tends to be determined by experience and individual estimates through indirect information (others experience) toward behavior. (Azwar, 2013).

TPB has been used mainly by researchers and management scientists and organizational scholars to predict and explain behavioral intention and behavior (Chatzoglou & Vraimaki, 2009; Hegner et al., 2017; Hsu et al., 2016; Lin & Lee, 2004; Ryu et al., 2003). In knowledge-sharing research, some researchers have also used TPB to predict intention and knowledge-sharing behavior (Chatzoglou & Vraimaki, 2009; Lin & Lee, 2004; Ryu et al., 2003). Thus, TPB models are handy in predicting an increase in the knowledge-sharing behavior of employees in an organization. The studies conducted by Chatzoglou and Vraimaki, 2009; Mafabi et al., 2017; Ryu et al. (2003); and Lin & Lee (2004) suggest that knowledge-sharing intention and behavior are influenced by attitudes, subjective norms, and perceived behavior control. Moreover, their studies indicate that the increase in knowledge-sharing intention tends to affect the behavior of knowledge-sharing.

2.4. Attitude toward knowledge-sharing and knowledge-sharing intention

The attitude factor in TPB has been tested and proven to be a significant predictor of the intention of a particular behavior (Chatzoglou & Vraimaki, 2009; Lin & Lee, 2004). Several studies have revealed

that attitude has a positive effect toward knowledge-sharing intention (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Fulwood & Rowley, 2017; Jolaei et al., 2014; Lin & Lee, 2004; Lurmas & Indarti, 2016; Teh & Sun, 2011; Mafabi et al., 2017; Rahab & Wahyuni, 2013; Ryu et al., 2003). Attitude is an evaluative response that arises when a person faces a stimulus that requires a reaction (Azwar, 2013). The evaluative response is based on the evaluation process (assessment) within the individual that provides a stimulus with a conclusion in the form of a good-bad, positive-negative, and unpleasant-unpleasant object (Chennamaneni, et al., 2012).

In this study, attitudes toward knowledge-sharing refer to the degree to which a person has a positive or negative evaluation of knowledge-sharing behavior (Al Qeisi & Al Zagheer, 2015; Chatzoglou & Vraimaki, 2009; Lin & Lee, 2004). A positive response of employee toward knowledge-sharing behavior determines the intention of the employee to perform knowledge-sharing. An employee's negative response to knowledge-sharing behavior leads to employees' reluctance to share knowledge (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Jolaei et al., 2014; Lin & Lee, 2004; Lurmas & Indarti, 2016; Teh & Sun, 2011; Tsai et al., 2012; Mafabi et al., 2017; Rahab & Wahyuni, 2013; Ryu et al., 2003). Thus, this study investigates the following hypothesis based on above discussion:

H₁: Attitude toward knowledge-sharing positively affects knowledge-sharing intention.

2.5. Subjective norm about knowledge-sharing and knowledge-sharing intention

An individual's intention to perform a behavior is influenced by the social pressure of that individual's referent group (Chennamaneni et al., 2012; Chatzoglou & Vraimaki, 2009). In a social environment, individuals have a normative belief that determines the intention of the individual to behave in a certain manner (Mafabi et al., 2017). Moreover, the antecedent closest to normative belief is "subjective norm" (Lin & Lee, 2004). A subjective norm is one's belief that a particular individual or group approves or disapproves of a behavior (Ajzen, 1991; Ajzen, 2005). If important people who exist in the social environment encourage or motivate someone to behave, the individual feels the social pressure to engage in the behavior. If important people in the social environment disapprove of a behavior, this places pressure on the individual to avoid the behavior.

In this study, the subjective norm on knowledge-sharing refers to the social pressure (encourage or discourage) from institution, manager, and coworkers perceived by an employee in an organization to engage in or perform knowledge-sharing behavior (Ajzen, 1991; Ajzen, 2005; Chatzoglou & Vraimaki, 2009; Lin & Lee, 2004). Several studies have explained that subjective norms about knowledge-sharing positively affects knowledge-sharing intention (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014; Lin & Lee, 2004; Mafabi et al., 2017; Rahab & Wahyuni, 2013; Tsai et al., 2012). Social pressure that encourages employees to perform knowledge-sharing behavior determines their desire to carry out knowledge-sharing. Social pressure that discourages employees to perform knowledge-sharing behavior leads them to be reluctant in sharing knowledge. Thus, based on the above discussion, this study investigates the following hypothesis:

H₂: Subjective norms on knowledge-sharing positively affect knowledge-sharing intention.

2.6. Perceived behavioral control, intention, and knowledge-sharing behavior

Perceived behavioral control refers to "a person's beliefs about the presence or absence of factors that facilitate or impede the performance of the behavior" (Ajzen, 2005). The perceived behavioral control is a person's ability to predict certain behaviors (Mafabi et al., 2017). This ability includes information that a person has about behavior, along with the skills, abilities, emotion, and compulsions that one has to perform such behavior (Lin & Lee, 2004). The information that a person has about a behavior is based on

an experience about a successful behavior attempt. Moreover, the experience is usually influenced by second-hand information about the behavior. Second-hand information is obtained through others' experience on the ease or difficulty of performing such behavior (Ajzen, 1985; Ajzen, 1991; Ajzen, 2005).

In this study, perceived behavioral control to knowledge-sharing refers to the past experience felt by an employee regarding the ease or difficulty of performing knowledge-sharing (Ajzen, 1991; Azwar, 2013; Chatzoglou & Vraimaki, 2009). Several studies have revealed that perceived behavioral control to knowledge-sharing positively affects knowledge-sharing intention (Al Qeisi & Al Zagheer, 2015; Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014; Lin & Lee, 2004; Mafabi et al., 2017; Razak et al., 2015). An employee's perceived experience on the ease of doing knowledge-sharing determines the employee's desire to perform knowledge-sharing. Perceived experience about the difficulty in doing knowledge-sharing leads to employee reluctance to perform knowledge-sharing. Thus, based on above discussion, this study investigates the following hypothesis:

H₃: Perceived behavioral control knowledge-sharing positively affects knowledge-sharing intention.

Moreover, a central factor in predicting behavior in TPB is "a person's intention to perform a given behavior" (Ajzen, 1991). Intention is assumed as "a description of one's motivational factors that influence behavior" (Ajzen, 2005). A behavior arises if a person has a strong desire to attempt to perform a behavior. In this study, knowledge-sharing intention refers to a strong desire of an employee to try and strive to perform knowledge-sharing (Ajzen, 1991; Ajzen, 2005; Chatzoglou & Vraimaki, 2009; Lin & Lee, 2004). Several studies have explained that knowledge-sharing intention positively influences knowledge-sharing behavior (Al Qeisi & Al Zagheer, 2015; Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014; Lin & Lee, 2004; Mafabi et al., 2017). The strong desire of an employee to strive for knowledge sharing tends to lead to actual knowledge-sharing behavior. A weak desire for knowledge sharing is likely to result in an employee not performing a knowledge-sharing behavior. Thus, based on above discussion, this study investigates the following hypothesis:

H₄: Knowledge-sharing intention positively affects knowledge-sharing behavior.

In TPB, Ajzen (1991) explained that in addition to intention, behavior control could also directly predict knowledge-sharing behavior. Several studies have revealed that perceived behavioral control to knowledge-sharing has a positive effect on knowledge-sharing behavior (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014). Perceived experience by an employee regarding the ease of doing knowledge-sharing tends to directly cause the employee to perform a knowledge-sharing behavior. Perceived negative experiences (such as the difficulties in sharing knowledge) tend to prevent an employee from engaging in a knowledge-sharing behavior. Thus, based on the above discussion, this study investigates the following hypothesis:

H₅: Perceived behavioral control to knowledge-sharing appositively affects knowledge-sharing behavior.

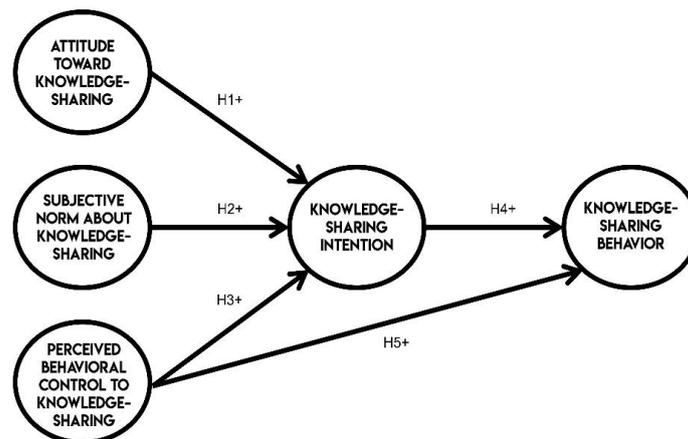


Figure 1. Direct effect model

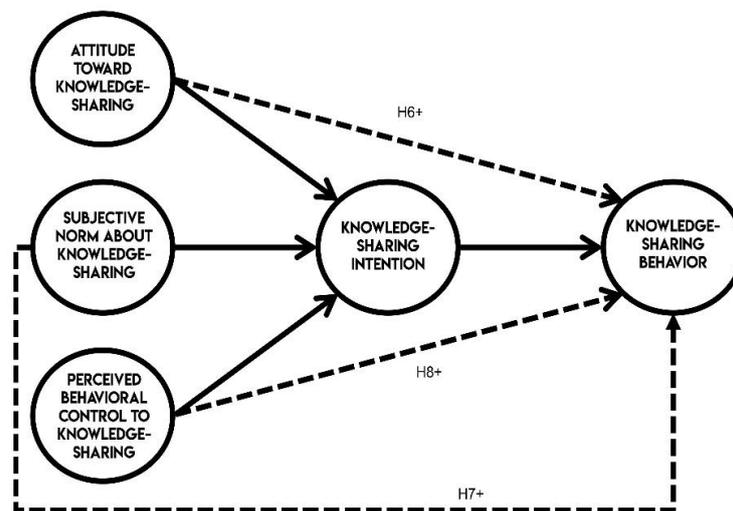


Figure 2. Mediation effect model

2.7. Mediation role of knowledge-sharing intention

TPB has explained behavioral intention through links of one's attitude to a specific behavior (Ajzen, 1991). It assumes that behavioral intention becomes a critical factor in predicting a certain behavior. Intention to behave plays a critical role in linking attitude, subjective norm, and perceived behavioral control (Ajzen, 1991; Mafabi et al., 2017). Few studies have comprehensively investigated the mediation role of knowledge-sharing intention. Only one research has revealed that knowledge-sharing intention has a mediation role in the effects of attitude, subjective norm, and perceived behavioral control toward the behavior of knowledge-sharing (Mafabi et al., 2017). Employee positive response toward knowledge-sharing, organizational social pressure, and perceived employee experience when conducting knowledge-sharing tend to influence their desire in doing knowledge-sharing. Moreover, high knowledge-sharing intention leads to knowledge-sharing behavior. Thus, based on above discussion, this study investigates the following hypothesis:

H₆: Attitude toward knowledge-sharing indirectly affects knowledge-sharing behavior through knowledge-sharing intention.

- H₇:** Subjective norm about knowledge-sharing indirectly affects knowledge-sharing behavior through knowledge-sharing intention.
- H₈:** Perceived behavioral control to knowledge-sharing indirectly affects on knowledge-sharing behavior through knowledge-sharing intention.

3. METHODOLOGY

3.1. Participants and data collection

This study used a survey questionnaire research design to collect data. The banking industry in Riau Province was chosen as a sample because Riau is one of the regions with an increasing share of banking assets to the national banking annually (GoRiau, 2017). An invitation was sent to the human resource departments of 42 banks in Riau Province, Indonesia. No existing data indicate how many employees are in the banking industry in Indonesia, especially in Riau Province; thus, 420 questionnaires were sent directly to departments with a convenience sampling design (<https://goo.gl/forms/n3YYzLLjUzJvpX93>). Collecting data in Indonesia is a challenge. The reluctance of respondents to answer and complete surveys are among the several problems faced by the researcher (Anugerah et al., 2016a; Anugerah et al., 2016b, Anita, 2015). From all of the questionnaires sent to the banks, only 211 questionnaires (50.24 percent) were returned. However, only a total of 200 (47.62 percent) questionnaires were used in this study due to the incomplete status of some of the surveys.

Table 1
Demographics of the participants

Variable		Frequency	
		n (total = 200)	(%) (total = 100%)
Gender	Male	154	77.0
	Female	46	23.0
Age	Under 30 years	26	13.0
	30 to 39 years	128	64.0
	Over to 40 years	46	23.0
Education	Postgraduate studies	14	7.0
	Undergraduate studies	154	77.0
	High school or below	32	16.0
Designation	Manager	20	10.0
	Deputy manager	10	5.0
	Head of the department	10	5.0
	Deputy head of Department	42	21.0
	Employee/clerk	118	59.0
Work experiences	Under 5 years	10	5.0
	5 to 10 years	118	59.0
	Over to 10 years	72	36.0

The sample demographics are described in Table 1. In personal demographics, more than 77.0 percent of the participants achieved undergraduate and postgraduate education, and 64.0 percent of the sample was less than 40 years of age. Furthermore, in organizational demographics, more than 59.0 percent of participants have working experiences of more than 5 years. In addition, the respondents were distributed across various positions in the organizations such as the manager (10.0 percent), deputy manager (5.0 percent), head of the department (5.0 percent), deputy head of department (21.0 percent), and employee/clerk (59.0 percent).

3.2. Variables and measurement

Attitude toward knowledge-sharing was measured reflectively using the five items developed by Lin and Lee (2004) and Chatzoglou and Vraimaki (2009). Alternative answer items were rated on a five-point Likert scale with anchors that range from 1 as strongly disagree to 5 as strongly agree. Sample items include “encouraging knowledge sharing with colleagues is an important component of the policy of my company” and “encouraging knowledge sharing with colleagues is valuable.” The α reliability for this measure was above conventional standards (i.e., 0.841).

Subjective norm about knowledge-sharing was reflectively measured by utilizing the six items developed by Lin and Lee (2004) and Chatzoglou and Vraimaki (2009). Alternative answer items were rated on a five-point Likert scale with anchors that range from 1 as strongly disagree to 5 as strongly agree. Sample items include “Institution encourages employees to share their knowledge with colleagues” and “Immediate manager encourages employees to share their knowledge with colleagues.” The α reliability for this measure was above conventional standards (i.e., 0.866).

Perceived behavioral control to knowledge-sharing was reflectively measured using the four items developed by Lin and Lee (2004). Alternative answers item were rated on a five-point Likert scale with anchors that range from 1 as strongly disagree to 5 as strongly agree. Sample items include “My past experience has increased my confidence in my ability to make decisions encouraging employees to share knowledge with colleagues” and “I have the resources, abilities, and knowledge to make a decision facilitating employees in sharing knowledge with colleagues.” The α reliability for this measure was above the conventional standards (i.e., 0.868).

The knowledge-sharing intention was reflectively measured using five items, which were developed from Chatzoglou and Vraimaki (2009). Alternative answer items were rated on a 5-point Likert scale with anchors ranging from 1 as strongly disagree to 5 as strongly agree. Sample items include “I will try to share my knowledge with my colleagues more frequently in the future” and “I will try to share my knowledge with my colleagues in a more effective way”. The α reliability for this measure was above conventional standards (i.e., 0.832).

Knowledge-sharing behavior was reflectively measured using the four items developed by Lin and Lee (2004). Alternative answers items were rated on a five-point Likert scale with anchors that range from 1 as strongly disagree to 5 as strongly agree. Sample items include “Employees in my company share know-how from work experience with each other” and “employees in my company share expertise obtained from education and training methods.” The α reliability for this measure was above conventional standards (i.e., 0.838).

3.3. PLS analysis

The hypothesis in this study was tested using partial least squares - structural equation modeling (PLS-SEM) analysis through WarpPLS 6.0. SEM is a type of multivariate analysis in the social sciences (Solihin & Ratmono, 2013). PLS is a variance-based SEM that can simultaneously evaluate measurement models and structural models (Abdillah et al., 2016). PLS-SEM analysis is used because this study has an unobserved variable (Latan & Ghozali, 2012; Solihin & Ratmono, 2013). Moreover, PLS-SEM analysis can test complex research models simultaneously (Ghozali, 2014; Solihin & Ratmono, 2013). It is also a powerful method of analysis and is often referred to as soft modeling because it can test data that has a small sample size (Latan & Ghozali, 2012; Ghozali, 2014; Hair et al., 2014).

PLS-SEM consists of two steps (Chin, 2010; Hair et al., 2012; Hair et al., 2014). First, PLS-SEM analysis “focuses on the reliability and validity of the measures used to represent each construct” (Chin, 2010). Chin (2010) also explained that “If the measures are not representing the constructs of interest,

there is little reason to use them to test the theoretical model in question.” This confirms that the measurement model evaluation process is crucial in a PLS-SEM analysis before testing the hypothesis model. Second, after the measures represented each construct, the theoretical model was assessed to explain whether the hypotheses were supported statistically or not (Abdillah et al., 2016; Chin, 2010; Hair et al., 2014; Ting et al., 2015).

4. EMPIRICAL RESULTS AND DISCUSSION

4.1. Empirical Results

4.1.1. Measurement model analysis

Statistical test results on the measurement model evaluation on PLS analysis was employed to test validity and reliability (Hair et al., 2014). Assessment at this stage aims to determine whether each instrument item utilized to measure constructs, such as attitude toward knowledge-sharing, subjective norms about knowledge-sharing, perceived behavioral controls for knowledge-sharing, knowledge-sharing intention, and knowledge-sharing behavior, has good accuracy and consistency levels (Hartono, 2011; Abdillah & Hartono, 2015). Convergence and discriminant validity was tested initially in this evaluation.

Table 2
Convergent validity test

Variable	Items	Convergent validity	
		Factor loading	AVE
Knowledge-sharing behavior (KSB)	4	0.698 – 0.809	0.564
Knowledge-sharing intention (KSI)	4	0.665 – 0.801	0.554
Attitude toward knowledge-sharing (A)	5	0.628 – 0.753	0.515
Subjective norm about knowledge-sharing (SN)	6	0.672 – 0.788	0.520
Perceived behavioral control to knowledge-sharing (PBC)	4	0.765 – 0.807	0.622

Table 2 presents the assessment of the convergent validity of the constructs in this study. The illustration shows that the loading factor values for each instrument range between 0.60 and 0.80. These values demonstrate adequate convergent validity (Chin, 2010). Table 2 also depicts the value of average variance extracted (AVE). The AVE values for each construct achieve the minimum threshold value of 0.50, which indicates that the items loaded to the respective constructs explain more than 50 percent of the variance of the construct (Hair, et al., 2014; Ting et al., 2015).

Table 3
Discriminant validity and reliability test

Variable	Composite Reliability	Correlation				
		KSB	KSI	A	SN	PBC
KSB	0.838	0.751				
KSI	0.832	0.690**	0.744			
A	0.841	0.445**	0.390**	0.717		
SN	0.866	0.535**	0.613**	0.383**	0.721	
PBC	0.868	0.538**	0.499**	0.426**	0.519**	0.789

Note: Diagonal elements are the square root of the AVE statistics. Off-diagonal elements are the correlation between the latent variable calculated in PLS

** Significant at $p < 0.01$.

Table 4

Outer model loadings and cross loading

	Loadings and cross-loading for the measurement (outer) model				
	KSB	KSI	A	SN	PBC
KSB 01	(0.734)	0.178	0.095	-0.021	-0.057
KSB 02	(0.809)	0.060	-0.052	-0.159	0.253
KSB 03	(0.758)	0.067	0.012	-0.238	0.045
KSB 04	(0.698)	-0.330	-0.053	0.464	-0.282
KSI 01	0.308	(0.780)	0.173	-0.100	-0.188
KSI 02	0.065	(0.724)	-0.044	0.295	0.062
KSI 03	-0.385	(0.665)	-0.082	0.033	0.074
KSI 04	-0.038	(0.801)	-0.061	-0.197	0.065
A 01	0.194	-0.363	(0.753)	0.088	0.216
A 02	0.132	-0.200	(0.752)	-0.058	0.210
A 03	-0.132	0.400	(0.744)	-0.176	-0.052
A 04	0.164	-0.116	(0.628)	0.269	-0.455
A 05	-0.356	0.284	(0.702)	-0.086	0.006
SN 01	0.019	0.044	-0.065	(0.718)	0.167
SN 02	0.239	-0.187	-0.091	(0.715)	-0.070
SN 03	0.206	-0.089	-0.040	(0.788)	-0.015
SN 04	-0.161	0.140	0.185	(0.705)	-0.061
SN 05	-0.208	0.181	0.215	(0.672)	-0.111
SN 06	-0.130	-0.067	-0.183	(0.722)	0.083
PBC 01	0.014	0.096	-0.010	-0.019	(0.807)
PBC 02	0.172	-0.297	-0.119	0.044	(0.765)
PBC 03	-0.000	-0.110	0.215	0.034	(0.776)
PBC 04	-0.178	0.291	-0.084	-0.055	(0.806)

Tables 3 and 4 show the discriminant validity assessment. Discriminant validity was evaluated based on the square root of AVE compared with the correlations among the latent variables (Chin, 1998b; Hair et al., 2012; Hair et al., 2014). The items were evaluated in relation to each construct (cross loading) (Chin, 2010). Table 3 describes the value of correlation between constructs below the square roots of the AVE. Moreover, Table 4 shows that each item has the loading factor higher than the cross-loadings. The values explain that the item is more strongly related to its construct column than any other construct column (Chin, 2010; Hair et al., 2014). These discussion results explain adequate discriminant validity.

Moreover, Table 3 presents the assessment of construct reliability for this study. The values of composite reliability are 0.838 (KSB), 0.832 (KSI), 0.841 (A), 0.866 (SN), and 0.868 (PBC). These values indicate that the all of the constructs possess internal consistency (Abdillah & Hartono, 2015; Chin, 2010; Hair et al., 2014; Hartono, 2011; Latan & Ghazali, 2012; Solihin & Ratmono, 2013).

4.1.2. Structural model analysis

Ensuring no collinearity issues in the structural model is essential before evaluating the structural model (Ting et al., 2015). Table 5 shows the result of the full collinearity test (full collinearity VIF). The table describes that each variable has a value of VIF below 3.3. These results explain that collinearity is not a concern in the structural model (Kock, 2014; Solihin & Ratmono, 2013; Ting et al., 2015).

Table 5

Full collinearity test (Full collinearity VIF)

KSB	KSI	A	SN	PBC
2.208	2.292	1.350	1.814	1.649

The structural model is evaluated after ensuring no collinearity issues in the structural model. The study investigates the factors that encourage knowledge-sharing behavior among banking officers using Ajzen’s theory of planned behavior. Table 6 describes the results of the PLS model. The findings indicated that the attitude toward knowledge-sharing has a significant positive effect on knowledge-sharing intention ($\beta = 0.127, p < 0.05$). This result supports H_1 , which states that the attitude toward knowledge-sharing positively affects knowledge-sharing intention. Table 6 also shows that the subjective norm about knowledge-sharing has a significant positive effect on knowledge-sharing intention ($\beta = 0.457, p < 0.01$). This finding supports H_2 , which claims that the subjective norm about knowledge-sharing positively affects knowledge-sharing intention. The third hypothesis (H_3) is supported statistically ($\beta = 0.208, p < 0.05$). The data proved that perceived behavioral control to knowledge-sharing has a significant positive effect on knowledge-sharing intention. The fourth hypothesis (H_4) is supported statistically ($\beta = 0.561, p < 0.01$). The data proved that knowledge-sharing intention has a significant positive effect on knowledge-sharing behavior. Moreover, perceived behavioral control has a significant positive effect on knowledge-sharing behaviors ($\beta = 0.192, p < 0.05$). This result supports H_5 , which states that perceived behavioral control positively affects organizational commitment knowledge-sharing behaviors.

This study also extends the investigation on the mediating role of knowledge-sharing intention in the effects of attitude, subjective norm, and perceived behavioral control toward knowledge-sharing behavior. The significance of the indirect effect was computed by WarpPLS 6.0 Software (Kock, 2014). The results are presented in Table 6. The sixth hypothesis (H_6) is supported statistically ($\beta = 0.062, p < 0.05$). The data proved that knowledge-sharing intention is mediated in the effects of attitude on knowledge-sharing behavior. A significant indirect effect of the subjective norm toward knowledge-sharing behavior through knowledge-sharing intention was also found ($\beta = 0.223, p < 0.01$). This result supports H_7 , which states that subjective norm about knowledge-sharing has an indirect effect on knowledge-sharing behavior through knowledge-sharing intention. The last hypothesis (H_8) is supported statistically ($\beta = 0.102, p < 0.01$). The data proved that knowledge-sharing intention is mediated in the effects of perceived behavioral control toward knowledge-sharing behavior.

Table 6

PLS analysis result

	A	SN	PBC	KSI
Direct effect				
KSI	0.127*	0.457**	0.208*	
KSB	0.141**	0.082 ^{ns}	0.192*	0.489**
Indirect effect				
KSI				
KSB	0.062*	0.233**	0.102*	
Total effect				
KSI	0.127*	0.457**	0.208*	
KSB	0.203**	0.305**	0.294**	0.489**

** $p < 0.01$

* $p < 0.05$

^{ns} (not significant)

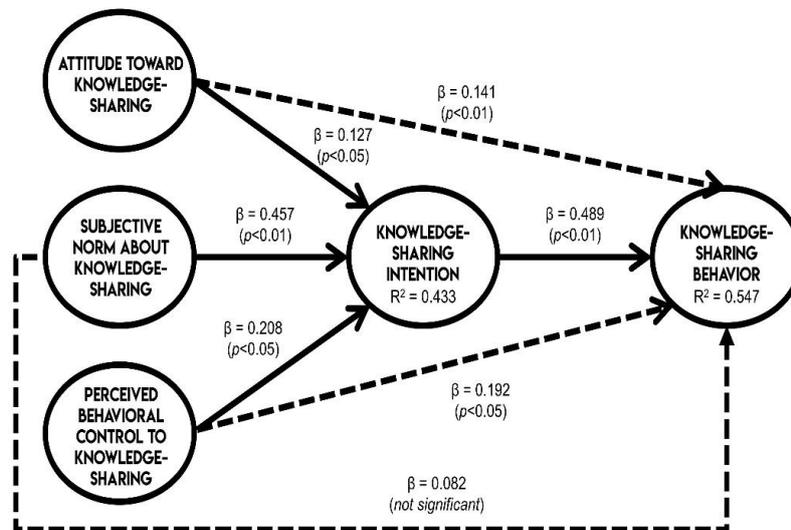


Figure 3. PLS analysis result

Finally, the result in Table 6 also reveals a full mediation role of knowledge-sharing intention in the effect of subjective norm on knowledge sharing behavior. A full mediation is indicated in which the direct effect subjective norm on knowledge-sharing behavior is not significant ($\beta = 0.082$, not significant), whereas the indirect effect is significant ($\beta = 0.233$, $p < 0.01$). In this model, full mediation means that the effect of the subjective norm to knowledge-sharing behavior is completely transmitted with the help of another variable knowledge-sharing intention (Nitzl et al., 2016). Knowledge-sharing intention partially mediates the effects of attitude and perceived behavioral control on knowledge-sharing behaviors. A partial mediation is indicated when the direct effects of attitude and perceived behavioral control toward knowledge-sharing behavior are significant ($\beta = 0.141$, $p < 0.01$; $\beta = 0.192$, $p < 0.05$), whereas the indirect effect is also significant. The partial mediation in this model means that a portion of the effects of attitude and perceived behavioral control toward a knowledge-sharing behavior are mediated through knowledge-sharing intention, whereas attitude and perceived behavioral control still explains a portion of knowledge-sharing behavior independent of knowledge-sharing intention (Nitzl et al., 2016).

4.1. Discussion

This section shows the findings related to the hypotheses developed. This study aims to investigate the prediction of knowledge-sharing behavior in a banking officer in Indonesia. We started by examining the model of behavioral prediction proposed by Ajzen (1991). The first hypothesis claims that “*attitude toward knowledge-sharing positively affects knowledge-sharing intention.*” The result of H₁ revealed that attitude toward knowledge-sharing has a positive effect on knowledge-sharing intention. The results are consistent with the findings of most previous studies (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Jolae et al., 2014; Lin & Lee, 2004; Luturmas & Indarti, 2016; Teh & Sun, 2011; Tsai et al., 2012; Mafabi et al., 2017; Rahab & Wahyuni, 2013; Ryu et al., 2003). An employee’s positive assessment of knowledge-sharing can improve the employee’s intention to perform knowledge-sharing. An employee’s negative evaluative assessment of knowledge-sharing tends to encourage employees’ unwillingness to engage in a knowledge-sharing behavior.

The second hypothesis states that “*subjective norms about knowledge-sharing positively affect knowledge-sharing intention.*” The result of H₂ revealed that subjective norms about knowledge-sharing positively influence

knowledge-sharing intention. The results are consistent with several studies in the past (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014; Lin & Lee, 2004; Mafabi et al., 2017; Rahab & Wahyuni, 2013; Tsai et al., 2012). Social environmental support from managers, institutions, and colleagues in the organization plays an important role in encouraging employees' intention or reluctance to share their knowledge. An employee that has beliefs about the expectations of a referent group for knowledge-sharing tends to have knowledge-sharing intention. Conversely, an employee who believes that knowledge-sharing behavior is not expected by the referent group determines the reluctance of employees to perform knowledge-sharing behavior.

The third hypothesis claims that *"perceived behavioural control knowledge-sharing positively affects knowledge-sharing intention."* The result of H₃ showed that perceived behavioral control to knowledge-sharing positively influences knowledge-sharing intention. This result is consistent with the past study (Al Qeisi & Al Zagheer, 2015; Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014; Lin & Lee, 2004; Mafabi et al., 2017; Razak et al., 2015). Predictions about the ease perceived by an employee in performing knowledge-sharing determine the employee's intention to undertake knowledge-sharing behavior. Conversely, predictions about the difficulties experienced by employees in sharing knowledge determine the employee's reluctance to perform a knowledge-sharing behavior.

Moreover, the fourth hypothesis indicates that *"knowledge-sharing intention positively affects knowledge-sharing behavior."* The result of H₄ explicated that knowledge-sharing intention positively influences knowledge-sharing behavior. This result is consistent with those of previous studies (Al Qeisi & Al Zagheer, 2015; Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014; Lin & Lee, 2004; Mafabi et al., 2017). Employees' intention to share their knowledge is assumed as the motivational factors that influence knowledge-sharing behavior (Ajzen, 2005). Knowledge-sharing intention is an indication of the extent that people are willing to try and the effort they are planning to exert to perform knowledge-sharing behavior (Ajzen, 1991). The stronger the employee's intention to knowledge-sharing is, the more likely for the employee to perform knowledge-sharing behavior. Conversely, the lower the employee intention to knowledge-sharing is, the more likely for the employee to not perform knowledge-sharing behavior.

Moreover, the fifth hypothesis states that *"perceived behavioural control to knowledge-sharing positively affects knowledge-sharing behaviour."* The result of H₅ showed that perceived behavioral control to knowledge-sharing has a direct positive effect on knowledge-sharing behavior. The result is consistent with that of past research (Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Lee & Hong, 2014), which has explained the predictions about the ease are perceived by an employee in performing knowledge-sharing allows employees perform knowledge-sharing behavior. Conversely, when predictions about the difficulties experienced by employees in sharing knowledge are made, employees tend to should not perform the knowledge-sharing behavior.

This study further investigates the role of mediators of knowledge-sharing intention in the model. The sixth hypothesis states that *"attitude toward knowledge-sharing indirectly affects knowledge-sharing behaviour through knowledge-sharing intention."* The result of H₆ revealed that intention to knowledge-sharing partially mediates the effects of attitude and perceived behavioral control on knowledge-sharing behaviors. This result described that an employee's positive attitude toward knowledge-sharing indirectly could lead employees to perform the knowledge-sharing behavior through high knowledge-sharing intention. Partial mediation in these results means that, in addition to the indirect effect, employee's attitude toward knowledge-sharing directly tends to facilitate knowledge-sharing behavior.

Moreover, the seventh hypothesis claims that *"subjective norm about knowledge-sharing indirectly affects knowledge-sharing behaviour through knowledge-sharing intention."* The result of H₇ showed that knowledge-sharing intention fully mediates the effect of subjective norm about knowledge-sharing toward

knowledge-sharing behavior. This result is consistent with that of past studies (Mafabi et al., 2017). Beliefs about the expectations of the referent group for knowledge-sharing indirectly tend to make employees perform knowledge-sharing through high knowledge-sharing intention. Full mediation in this model explains that knowledge-sharing intention has a critical role in completely transmitting the effect of a subjective norm toward knowledge-sharing behavior (Nitzl, 2016).

Moreover, the last hypothesis states that “*perceived behavioural control to knowledge-sharing indirectly affects knowledge-sharing behaviour through knowledge-sharing intention.*” The result of H₈ explicated that the intention to knowledge-sharing partially mediates the effects of perceived behavioral control on knowledge-sharing behavior. This finding explained that the predictions about the ease perceived by an employee in performing knowledge-sharing indirectly encourage employees to perform knowledge-sharing through strong employee intention to knowledge-sharing. Partial mediation in these results also means that, in addition to the indirect effect, the ease perceived by an employee in performing knowledge-sharing tends to directly create a knowledge-sharing behavior.

5. CONCLUSION

This study has made a valuable contribution in substantiating and extending theory of planned behavior (Ajzen, 1991) within a knowledge management context to understand the factors that encourage knowledge-sharing behavior among banking officers, with knowledge-sharing intention as mediation. This study also answers some of the research that has shown contradictory results. The work provides empirical answers as a scholarly response to the lack of empirical study that investigates the mediation role of knowledge-sharing intention in predicting the knowledge-sharing behavior of banking officers in the same contexts, such as Indonesia.

In addition to the theoretical contribution, this study also provides practical implications for managers in banking industries about the importance of understanding a model on encouraging the knowledge-sharing behavior. The findings provide insights into the important role of attitude, subjective norm, and perceived behavioral control in encouraging knowledge-sharing behavior through high knowledge-sharing intention. Therefore, to make banking officers want to share their knowledge, the management should provide employees support and create innovative climate and norms that build positive attitudes in the organization (Jolae et al., 2014).

Despite its valuable contributions to theory and practice, the current study has several limitations that should be acknowledged. First, the variables in this study were measured through self-reporting; thus, the results of the study may be biased (Chatzoglou & Vraimaki, 2009). Second, given that this research only uses a sample that was selected from banking industries, the results could not be generalized to other sectors. Third, data collection was restricted to banking officers in Pekanbaru, Indonesia. Consequently, the results of this study may not be confirmed when we want to examine the same sector in other countries with different national cultures. Moreover, additional factors should be considered to further explore the model of encouraging the knowledge-sharing behavior. These factors are personal factors, such as self-efficacy (Brooke et al., 2017) and personality (Wang & Noe, 2010), and environmental factors, such as a social network (Jolae et al., 2014), interpersonal trust (Jain et al., 2015; Wang & Noe, 2010), organizational and social support (Brook et al., 2017; Jolae et al., 2014).

ACKNOWLEDGMENT

The authors are thankful to the Da-Yeh University and Universitas Lancang Kuning for their material and non-material support in this research, authorship, and publication. We are also grateful to the editor and reviewers for their constructive comments on the original manuscript.

REFERENCES

- Abdillah, W. & J. Hartono. (2015). *Partial least square (PLS): Alternatif structural equation modeling (SEM) dalam penelitian bisnis*. Yogyakarta: Andi.
- Abdillah, M.R., Anita, R. & Anugerah, R. (2016). Dampak Iklim Organisasi Terhadap Stres Kerja dan Kinerja Karyawan. *Jurnal Manajemen*, 20(1), 121-141. doi: 10.24912/jm.v20i1.69
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood Cliffs: Prentice-Hall.
- Ajzen, I. (1985). From intention to action: A theory of planned behavior. In Kuhl & Beckmann (Eds.) *Action-control: From cognition to behavior*, (pp. 11-39). Heidelberg: Springer. doi: 10.1007/978-3-642-69746-3_2
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. doi: 10.1016/0749-5978(91)90020-T
- Ajzen, I. (2005). *Attitude, personality, and behavior*, 2nd edition. UK: McGraw-Hill Education.
- Al Qeisi, K.I. & Al Zagheer, H.M. (2015). Determinants of knowledge sharing behaviour among personnel in banking industry. *International Journal of Business and Management*, 10(4), 49-59. doi: 10.5539/ijbm.v10n4p49
- Anita, R. (2015). *Analisis penerimaan auditor atas dysfunctional audit behavior: Sebuah pendekatan karakteristik personal auditor (Studi Empiris pada Kantor Akuntan Publik di Wilayah Sumatera)* (Master thesis, Universitas Riau).
- Anugerah, R., Anita R., Sari, R.N., & Zenita, R. (2016a). External locus of control and reduced audit quality behavior: The mediating effects of auditor performance and organizational commitment. *Journal of Economics, Business and Management*, 4(5), 353-357. doi: 10.18178/joebm.2016.4.5.416
- Anugerah, R., Anita, R., Sari, R.N., Abdillah, M.R., & Iskandar, T.M. (2016b). The analysis of reduced audit quality behavior: The intervening role of turnover intention. *International Journal of Economics and Management*, 10(S2), 341-353.
- Azwar, S. (2013). *Sikap manusia: Teori dan pengukurannya*. Yogyakarta: Pustaka Pelajar.
- Bergeron, B. (2003). *Essentials of knowledge management*. New Jersey: Jon Wiley & Sons Inc.
- Budiharjo, A. (2016). *Knowledge management*. Jakarta: Prasetya Mulya Publishing.
- BPS (2016). Luas Daerah dan Jumlah Pulau Menurut Provinsi, 2002-2016. Retrieved from <https://www.bps.go.id/statictable/2014/09/05/1366/luas-daerah-dan-jumlah-pulau-menurut-provinsi--2002-2016.html>
- Brooke, J., Rasdi, R. M., & Samah, B. A. (2017). Modelling knowledge sharing behaviour using self-efficacy as a mediator. *European Journal of Training and Development*, 41(2), 144-159. doi: 10.1108/EJTD-04-2016-0021
- CNBC (2017) Indonesia's banking industry is attracting many investors-but there are major risks. Retrieved from <https://www.cnb.com/2017/08/25/indonesias-banking-industry-is-attracting-many-investors--but-there-are-major-risks.html>
- Caniëls, M.C.J., Neghina, C. & Schaetsaert, N. (2017). Ambidexterity of employees: the role of empowerment and knowledge sharing. *Journal of Knowledge Management*, 21(5), 1098-1119. doi: 10.1108/JKM-10-2016-0440
- Chatzoglou, P.D. & Vraimaki, E. (2009). Knowledge-sharing behaviour of bank employees in Greece. *Business Process Management*, 15(2), 245-266. doi: 10.1108/14637150910949470
- Chennamaneni, A., Teng, J.T.C. & Raja, M.K. (2012). A unified model of knowledge sharing behaviours: theoretical development and empirical test. *Behaviour & Information Technology*, 31(11), 1097-1115. doi: 10.1080/0144929X.2011.624637
- Chin, W.W. (2010). How to write up and report PLS analyses. In Esposito Vinzi, V., Chin, W. W., Henseler, J. & Wang, H. (Eds.) *Handbook of partial least squares: Concepts, methods and applications*, (pp. 655-690). Heidelberg: Springer. doi: 10.1007/978-3-540-32827-8_29
- Davenport, H.T. & Prusak, L. (1998). *Working knowledge: how organizations manage what they know*. Boston: Harvard Business School Press.
- Ding, G., Liu, H., Huang, Q., & Gu, J. (2017). Moderating effects of guanxi and face on the relationship between psychological motivation and knowledge-sharing in China. *Journal of Knowledge Management*, 21(5), 1077-1097. doi: 10.1108/JKM-10-2016-0439
- Fullwood, R. & Rowley, J. (2017). An investigation of factors affecting knowledge sharing amongst UK academics. *Journal of Knowledge Management*, 21(5), 1254-1271. doi: 10.1108/JKM-07-2016-0274

- Ghozali, I. (2014). *Structural equation modeling: Metode alternatif dengan menggunakan partial least square (PLS)*. Semarang: Badan Penerbit Undip.
- GoRiau (2017). OJK: Pertumbuhan Ekonomi Perbankan di Riau Positif. Retrieved from <https://www.goriau.com/berita/pemerintahan/ojk-pertumbuhan-ekonomi-perbankan-di-riau-positif.html>
- Hair, J.F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(1), 414-433. doi: 10.1007/s11747-011-0261-6
- Hair, J.F., Marko, S., Lucas, H., & Volker, G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121. doi: 10.1108/EBR-10-2013-0128
- Hartono, J. (2011). *Konsep dan aplikasi structural equation modeling berbasis varian dalam penelitian bisnis*. Yogyakarta: UPP STIM YKPN.
- Hartono. (2015). *Metodologi penelitian bisnis: Salab kaprah dan pengalaman-pengalaman*. Yogyakarta: BPFE.
- Hegner, S.M., Fenko, A., & Teravest, A. (2017). Using the theory of planned behaviour to understand brand love. *Journal of Product & Brand Management*, 26(1), 26-41. doi: 10.1108/JPBM-06-2016-1215
- Hsu C.C., Hsu Y.C., & Lin C.T. (2016). Towards understanding senior citizens' gateball participations behavior and well-being: An application of the theory of planned behavior. In: Yamamoto S. (Ed.) *Human Interface and the Management of Information: Applications and Services*, (pp 466-477). Switzerland: Springer. doi: 10.1007/978-3-319-40397-7_44
- Jain, K.K., Sandhu, M.S. & Goh, S.K. (2015). Organizational climate, trust and knowledge sharing: insights from Malaysia. *Journal of Asia Business Studies*, 9(1), 54-77. doi: 10.1108/JABS-07-2013-0040
- Janson, A. & Mc Queen, R.J. (2007). Capturing leadership tacit knowledge in conversations with leaders. *Leadership & Organization Development Journal*, 28(7), 646-663. doi: 10.1108/01437730710823897
- Jolace, A., Nor, K.M., Khani, N., & Yusoff, R.M. (2014). Factors affecting knowledge sharing intention among academic staff. *International Journal of Educational Management*, 28(4), 413-431. doi: 10.1108/IJEM-03-2013-0041
- Kock, N. (2014). Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-based SEM. *International Journal of e-Collaboration*, 10(1), 1-13. doi: 10.4018/ijec.2014010101
- Latan, H. & Ghozali, I. (2012). *Partial least squares: Konsep, teknik dan aplikasi menggunakan program SmartPLS 2.0 M3*. Semarang: UNDIP Press.
- Lin, H.F. & Lee, G.G. (2004). Perceptions of senior managers toward knowledge-sharing behaviour. *Management Decision*, 42(1), 108-125. doi: 10.1108/00251740410510181
- Lee, H.S. & Hong, S.A. (2014). Factors affecting hospital employees' knowledge sharing intention and behavior, and innovation behavior. *Osong Public Health and Research Perspectives*, 5(3), 148-155. doi: 10.1016/j.phrp.2014.04.006
- Luturmas, J.R. & Indarti, N. (2016). Underlying factors of attitude and intention toward knowledge sharing among employees: The case of the hotel business in Ambon, Indonesia. *Journal of Indonesian Economy and Business*, 31(3), 292-306. doi: 10.22146/jieb.23178
- Mafabi, S., Nasuima, S., Muhimbise, E.M., Kasekende, F., & Nakiyonga, C. (2017). The mediation role of intention in knowledge sharing behavior. *VINE Journal of Information and Knowledge Management Systems*, 47(2), 172-193. doi: 10.1108/VJIKMS-02-2016-0008
- Nitzl, C., Roldan, J.L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems*, 116(9), 1849-1864. doi: 10.1108/IMDS-07-2015-0302
- Nonaka, I. & Toyama, R. (2015) The knowledge-creating theory revisited: Knowledge creation as a synthesizing process. In Edwards, J.S. (Ed.) *The Essentials of Knowledge Management*, (pp. 95-110). London: OR Essentials Series. Palgrave Macmillan. doi: 10.1057/9781137552105_4
- Penrose, E. (2009). *The theory of the growth of the firm*. 4th Edition. New York: Oxford University Press Inc.
- Rahab & Wahyuni, P. (2013). Predicting knowledge sharing intention based on theory of reasoned action framework: An empirical study on higher education institution. *American International Journal of Contemporary Research*, 3(1), 138-147.

- Ryu, S., Ho, S.H. & Han, I. (2003). Knowledge sharing behavior of physicians in hospitals. *Expert Systems with Applications*, 25(1), 113-22. doi: 10.1016/S0957-4174(03)00011-3
- Solihin, M. & Ratmono, D. (2013). *Analisis SEM-PLS dengan WarpPLS 3.0*. Yogyakarta: Andi.
- Sun, P. (2010). Five critical knowledge management organizational themes. *Journal of Knowledge Management*, 14(4), 507-523. doi: 10.1108/13673271011059491
- Teh, P.L. & Sun, H. (2011). Knowledge sharing, job attitudes and organizational citizenship behaviour. *Industrial Management & Data Systems*, 112(1), 64-82. doi: 10.1108/02635571211193644
- Ting, H., Cuah, F., Cheah, J., Memon, M.A., & Yacob, Y. (2015). Revisiting attitude towards advertising, its antecedent and outcome: A two-stage approach using PLS-SEM. *International Journal of Economics and Management*, 9(2), 382-402.
- Tsai, M.T., Chen, K.S. & Chien, J.L. (2012). The factors impact of knowledge sharing intentions: the theory of reasoned action perspective. *Quality & Quantity*, 46(5), 1479-1491. doi: 10.1007/s11135-011-9462-9
- Wang, S. & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resources Management Review*, 20(2), 115-131. doi: 10.1016/j.hrmmr.2009.10.001