AFFECTING FACTORS OF KNOWLEDGE SHARING BEHAVIOR IN THE KNOWLEDGE PORTAL

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ABSTRACT

This study examines the factors influencing attitudes, intentions, and knowledge-sharing behavior that consists of knowledge collecting and knowledge donating in the knowledge portal. The authors used the purposive sampling technique and tested confirmatory factor analysis (CFA), Cronbach's alpha, and model testing with Structural Equation Model (SEM) analysis with AMOS. Further, the study surveyed 600 auditors and answered 28 questions, with 311 samples processed. An online questionnaire was distributed in March 2020. The authors analyzed and had two significant findings. Firstly, organizational reward and reciprocal benefit were proven not to be expected from knowledge-sharing activities. Employees are willing to share knowledge without concern about reward and reciprocity; they enjoy sharing knowledge to help their colleagues. Secondly, enhancement in the knowledge collection process intensifies knowledge donation activities. A knowledge portal, which tends to be a repository of knowledge, needs further developed into a learning management system. Dynamic interaction is expected among people who want to share their knowledge and find the required knowledge. An adequate information and communication technology is crucial to support an e-learning practice in the organization. This study provides another perspective on knowledge-sharing behavior in the knowledge portal as a form of online learning that can be further discussed.

Keywords: Enjoyment in Helping Others, Knowledge Collecting, Knowledge Donating, Organizational Reward, Reciprocal Benefit.

INTRODUCTION

Knowledge management can be a success factor for the company or organization and is considered crucial in achieving organizational effectiveness (Khan et al., 2013). One organizational strategy for managing knowledge is to begin codifying the intellectual capital from each employee into corporate assets that can be reproduced and shared to achieve organizational goals (Hunt, 2017). In addition, for specific knowledge to be easily accessed and tracked by a community, a forum is needed to accommodate these interests through various information media and be accessed anytime and anywhere, namely a knowledge portal (Hasfera et al., 2019). A knowledge portal in an organization can support knowledge management implementation to work effectively and efficiently (Aulawi et al., 2017). Knowledge portal facilitates tacit and explicit knowledge for users to support institutions or organizations in all aspects of their learning, teaching, working, research, and other activities (Miri & Sahu, 2019). Therefore, the knowledge portal must cover portal knowledge management activities, such as knowledge acquisition/creation, knowledge sharing, knowledge storage, and knowledge utilization (Aulawi et al., 2017).

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Several studies have tested the use of corporate/knowledge portals. Ease of use and usability are essential for increasing the community portal frequency of usage and volume (Saghapour et al., 2018). The availability of Information Communications Technology (ICT) tools and access to the internet also affect the Knowledge Management Portal uses (Kumar et al., 2017). Individual characteristics and personal motivation are also factors that affect knowledge-sharing behavior. Individual factors, such as online personal identity, web-specific self-efficacy, and knowledge-creation self-efficacy, significantly predict knowledge sharing in Social Network Services (Kim et al., 2019). Trialih et al. (2017) found a positive direct effect of reward on knowledge sharing behavior (Liou et al., 2016). Furthermore, the reciprocal benefit also becomes one of the factors that can affect knowledge sharing. Individual attitudes toward knowledge sharing are driven primarily by knowledge sharing anticipated reciprocity (Rode, 2016; Tohidinia & Mosakhani, 2010; Zhang et al., 2017). Moreover, other studies also revealed that enjoyment in helping others has driven knowledge contributors to use Electronic Knowledge Repositories (Kankanhalli et al., 2005). Knowledge contributors get pleasure by showing their altruistic behavior (Wasko & Faraj, 2000).

In addition, the support of an adequate knowledge management system (KMS) such as a knowledge portal does not automatically encourage the employees to share knowledge in the knowledge portal. Wasko & Faraj (2005) argue that KMS is a system product and service platform, which demands a dynamic interaction among application developers, system service providers, and users. One critical issue is whether or not users are willing to share knowledge even though KMS have been installed and promoted in the organization (Wasko & Faraj, 2005). Wasko & Faraj's research results were proven by pre-research results that have been done at the Supreme Audit Institution in Indonesia. Even though the organization has provided a knowledge portal, employees do not use it to do knowledge-sharing activities.

This study aims to fill the existing gaps to enrich the literature on how to increase the use of knowledge portals for knowledge sharing. This study will test the factors (including organizational reward, reciprocal benefit, and enjoyment in helping others) that could affect knowledge sharing behavior in the knowledge portal with the Theory of Planned Behavior as the theoretical framework. The research results can be used for further discussion on knowledge management practices, especially knowledge portal development and e-learning practices in the organization.

LITERATURE REVIEW

Organizational Reward (REW) and Attitude toward Knowledge-Sharing (ATK)

According to Ajzen & Driver (1991), the perceived benefit is a belief in improving conditions or services generated from the activities. Davenport & Prusak (1998) stated that sharing knowledge must be encouraged and rewarded. Research from Wasko & Faraj (2000) found that extrinsic rewards such as financial rewards can motivate knowledge exchange. Other research by Trialih et al. (2017) shows a positive and direct effect of compensation on knowledge-sharing behavior. Lin & Huang (2013) also illustrates that Yahoo Kimo application users who receive more reward in a system have better attitudes towards sharing knowledge.

Further, Liou et al. (2016) also found that anticipated extrinsic reward positively and significantly affects knowledge sharing behavior. Moreover, Khalil et al. (2014) showed that extrinsic reward has a substantial and positive effect on teacher attitudes toward sharing knowledge. Vuori & Okkonen (2012) also stated that the expected reward is praise or

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commentary appreciation rather than financial reward. So with the hope of getting a reward from the organization, there is a tendency to share knowledge. Therefore, the proposed hypothesis is:

H_1 Organizational reward has a significant and positive effect on attitude toward knowledge-sharing.

Reciprocal Benefit (PRB) and Attitude Toward Knowledge-Sharing (ATK)

The anticipated reciprocity of knowledge-sharing activities is a driver for individual attitudes toward knowledge-sharing (Bock et al., 2005). Findings from Tohidinia & Mosakhani (2010) positively impact attitudes towards sharing knowledge from the anticipated reciprocal relationship. This finding means that intensification in employees' attitudes towards sharing knowledge is affected by employees' assumptions regarding relationships with other employees. Khalil et al. (2014) also found significant evidence of the relationship between attitudes towards sharing knowledge and perceived reciprocal benefit. Research from Tsai et al. (2012) and Rode (2016) also shows the same result. Thus, reciprocity becomes one form of extrinsic incentive that motivates sharing knowledge in online health communities, social trading sites, and other online communities (Zhang et al., 2017). Lin (2007) found at least three motivational aspects that affect attitudes and intention to do knowledge sharing activities: reciprocal benefit, enjoyment in helping others, and self-efficacy. Liao (2013) validates findings from Lin (2007) that in virtual communities, individuals will tend to share their knowledge if they believe in reciprocal relationships. Liou et al. (2016) found that if members of an online community maintain well-anticipated reciprocal relationships with other members, they share the knowledge they have. Therefore, the proposed hypothesis is:

H_2 Reciprocal benefit has a significant and positive effect on attitude toward knowledge-sharing.

Enjoyment in helping others (PEH) and attitude toward knowledge-sharing (ATK)

The concept of altruism becomes the basis for the perceived enjoyment in helping others. When someone helps others, they do not expect reward and get intrinsic pleasure from helping others; altruism arises (Smith, 1981). One that influences moral behavior, which is essential, is altruism (Krebs, 1970). Davenport & Prusak (1998) also revealed that someone who often contributes knowledge and intends to help others could be motivated by altruism. Research from (Wasko & Faraj, 2000) shows that a person will get satisfaction by showing altruistic behavior when contributing his knowledge. Kankanhali (2005) confirms Wasko & Faraj's findings that knowledge contributors feel enjoyment while helping others use electronic knowledge repositories. Lin (2007) also found that enjoyment when helping each other was significantly related to the employees' attitudes and intentions in sharing knowledge. So, one of the most crucial factors affecting attitudes towards sharing knowledge is the pleasure of helping others (Liao et al., 2013), which is also influencing behavior to share knowledge (Trialih et al., 2017). One of the motives for sharing knowledge on social media platforms is to help colleagues and organizations achieve goals (Vuori & Okkonen, 2012). So the proposed hypothesis is:

H_3 Enjoyment in helping others has a significant and positive effect on attitude toward knowledge-sharing.

Attitudes Toward Knowledge Sharing (ATK) and the Intention to Share Knowledge (INT)

Based on the Theory of Planned Behavior, attitudes toward behavior affect the intention to do the behavior. Research from (Bock & Kim, 2001) shows that attitudes are getting more positive and intensified the intention to share knowledge. Many research results also confirmed

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this theory (Bock et al., 2005; Fauzi et al., 2018; Rahman et al., 2016; Tohidinia & Mosakhani, 2010; Wu & Zhu, 2012). All research results indicate that an individual's attitudes towards behavior determine the intention to engage in the behavior (Liao et al., 2013; F. R. Lin & Huang, 2013). Several studies conducted in the Virtual Community of Practice (VcoP) on corporate/knowledge portals show the same result as the previous study. Positive attitudes of the information technology users towards the use of information technology will affect their intention to use information technology and ultimately influence knowledge sharing behavior (Tsai et al., 2012). Research on virtual learning community website uses also revealed that students' intensification to use the virtual learning community website is driven by their attitudes toward knowledge sharing activities (Chen et al., 2009). Therefore, the proposed hypothesis is:

H_4 Attitudes toward knowledge sharing have a significant and positive effect on the intention to share knowledge.

Intention to Share Knowledge (INT) on Knowledge Collecting (KCL) and Knowledge Donating (KDN)

Many studies examining behavior reveal that behavior is based on the intention to perform the behavior itself. The findings of the studies are following the Theory of Planned Behavior developed by Ajzen (1985). Several tests, including testing of behavior in knowledge sharing activities, confirm Ajzen's theory that the knowledge sharing intention is directly proportional to one's behavior. An intensification in one's intention to share knowledge is directly proportional to the behavior carried out in sharing knowledge (Chennamaneni et al., 2012). This finding is confirmed by Oladipupo & Abdulrahman (2018), which shows similar results. Intention also plays an essential role in strengthening the relationship between attitudes and subjective norms on behavior in sharing knowledge (Rahman et al., 2016). Knowledge sharing behavior consists of activities for collecting or donating knowledge. Research from Tohidinia & Mosakhani (2010) on Iran oil companies' employees shows that improving knowledge sharing intention also improves people's activities to donate their knowledge and collect the required knowledge supporting their work. Based on this description, the following two hypotheses proposed:

H_5 Intention to share knowledge has a significant and positive effect on knowledge collecting.

H_6 Intention to share knowledge has a significant and positive effect on knowledge donating.

Knowledge Collecting (KCL) and Knowledge Donating (KDN)

According to (Evans et al., 2014), in the knowledge management cycle model developed in 2014, it is revealed that the knowledge management cycle phase consists of 6 stages: (1) Identifying or creating; (2) Storing; (3) Sharing; (4) Using; (5) Learning; and (6) Improving. The knowledge created is then identified and stored in a repository to be accessed and used efficiently. In phase three, the sharing process involves donating knowledge and collecting knowledge (Tohidinia & Mosakhani, 2010). Higher intention to share knowledge also provides an improvement in activities to share and gather knowledge. Users who need relevant knowledge will search for knowledge (knowledge collection) in the repository at the using stage. The better the mechanism of collecting knowledge in the organization is, the more knowledge can be donated to users. The more developing the process of collecting knowledge is, the more likely the knowledge accessed can be contributed (Van Den Hooff & Ridder, 2004). These results are supported by the study of (Nodari et al., 2016), showing that knowledge donation results from

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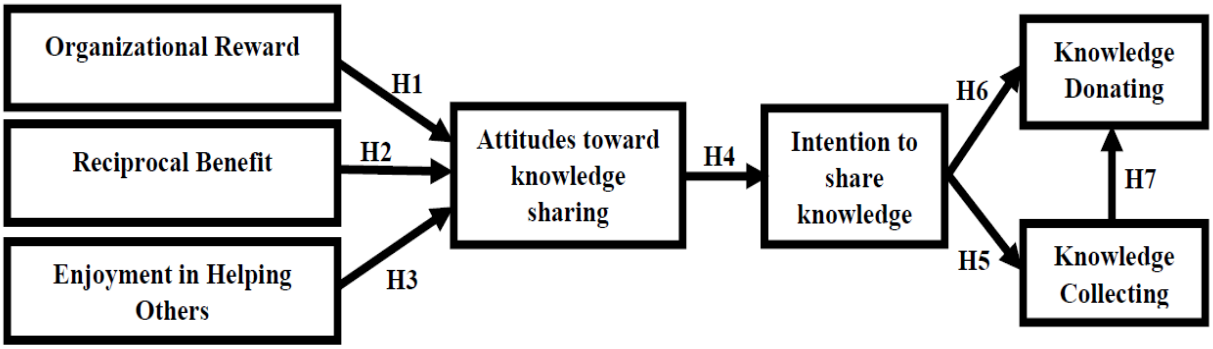
prior formation in collecting knowledge. Nodari advised the managers to strengthen the sharing knowledge culture by encouraging employees to adopt knowledge collection behavior. Based on this description, the following hypothesis is proposed:

H_7 Knowledge collecting has a significant and positive effect on knowledge donating.

A research model for factors affecting knowledge sharing behavior in the knowledge portal following Figure 1:



Source: Authors proposed

FIGURE 1
RESEARCH MODEL

METHODS OF RESEARCH

This study is quantitative research and was conducted at the Supreme Audit Institutions in Indonesia. A purposive sampling technique was employed to determine the sample of the study. The respondents are auditors, with 1,047 in population. This study refers to the Isaac and Michael method to calculate the sample (Sugiyono, 2015). With an error rate of 5%, out of 1,047 auditors in the population having a degree of confidence of 95%, the number of representative samples derived was 290 respondents.

An online questionnaire has been developed to measure the research model. The instrument questionnaire used to measure variables is an adaptation from previous studies. This research is limited to the factors that influence attitudes, intentions, and knowledge-sharing behavior, including knowledge donating and knowledge collecting. Each construct covered four items, respectively. First, a Likert scale was used with five score levels, ranging from strongly disagree (one point) to strongly agree (five points).

A pilot test to 56 respondents of auditors was conducted to validate the survey instrument. The result shows that each indicators' factor loading is adequate from required > 0.4 (Hair, F et al., 2014). Thus, the indicators to measure each construct are valid and can be used for further research. Then the questionnaire was distributed in March 2020 to 600 auditors in six departments, and collectively, 311 questionnaires returned complete with a response rate of 51.83 percent and have met the minimum sample requirements (above 290). The data collected were analyzed using IBM SPSS and Structural Equation Model with AMOS Graphics. Table 1 showed the constructs, construct's measurement items, pre-test factor loadings, and literature sources.

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Table 1
LIST OF CONSTRUCTS AND SOURCE OF LITERATURE

Constructs	Items Name	Measurement Items	Pre-test Factor loadings	Source of Literature
Organizational Reward (REW)	REW1	I am expecting a monetary reward for my knowledge sharing.	0.840	Bock et al. (2005); Chennamaneni et al. (2012); Tohidinia & Mosakhani (2010)
	REW2	I expect additional points for promotion for my knowledge sharing.	0.809	
	REW3	I expect to be promoted for my knowledge sharing.	0.902	
	REW4	I expect to get better assignments at work for my knowledge sharing.	0.624	
Reciprocal Benefit (PRB)	PRB1	I think sharing knowledge with colleagues can strengthen relationships with other members of the organization.	0.743	Chennamaneni et al. (2012); Kankanhalli et al. (2005); Liao et al. (2013); Rode (2016); Zhang et al. (2017)
	PRB2	When I share knowledge with my colleagues, I hope they will also respond to my need for specific expertise.	0.687	
	PRB3	When I share knowledge with colleagues, I am sure that my questions about something will be answered in the future.	0.690	
	PRB4	It's fair to help my colleagues when they need knowledge because they help me when I need them.	0.474	
Enjoyment in Helping Others (PEH)	PEH1	I enjoy sharing knowledge with my colleagues	0.922	Chennamaneni et al. (2012); Kankanhalli et al. (2005); Liao et al. (2013); Rode (2016); Zhang et al. (2017)
	PEH2	I enjoy helping my colleagues by sharing knowledge.	0.921	
	PEH3	It feels great to help my colleagues solve their work-related problems.	0.921	
	PEH4	Sharing knowledge with my colleagues gives me pleasure.	0.893	
Attitudes toward knowledge-sharing (ATK)	ATK1	Sharing knowledge with my colleagues in organizations is beneficial for me.	0.955	Bock et al. (2005); Chennamaneni et al. (2012); Kankanhalli et al. (2005); Rahman et al. (2016)
	ATK2	Sharing knowledge with my colleagues in the organization is a good thing for me.	0.956	
	ATK3	Sharing knowledge with my colleagues in the organization is a pleasant experience for me.	0.924	
	ATK4	Sharing knowledge with my colleagues in the organization is valuable for me.	0.901	
Intention to share knowledge (INT)	INT1	I intend to share my knowledge with my co-workers in the future.	0.935	Bock et al. (2005); Chennamaneni et al. (2012); Kankanhalli et al. (2005); Tohidinia & Mosakhani (2010)
	INT2	I always share my problem-solving methods with my co-workers.	0.918	
	INT3	If given the opportunity, I will share my work experience with my colleagues.	0.961	
	INT4	If given the opportunity, I will share the skills gained from education or training with my colleagues.	0.943	
Knowledge Donating (KDN)	KDN1	When I learn something new, I will tell my co-workers about it.	0.779	Tohidinia & Mosakhani (2010)
	KDN2	I share my knowledge with my co-workers.	0.745	
	KDN3	I think it is important that my co-workers know what I am doing	0.755	

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Table 1 LIST OF CONSTRUCTS AND SOURCE OF LITERATURE				
Constructs	**Items Name**	**Measurement Items**	**Pre-test Factor loadings**	**Source of Literature**
	KDN4	I regularly tell my co-workers what I am doing	0.764	
Knowledge Collecting (KCL)	KCL1	When I need spesific knowledge, I will ask my co-workers about it.	0.837	Tohidinia & Mosakhani (2010)
	KCL2	I like to be informed of what my co-workers know.	0.765	
	KCL3	I will ask my co-workers about their capabilities when I need to learn something.	0.720	
	KCL4	When one of my co-workers is good at something, I will ask him/her to teach me how to do it.	0.504	

RESEARCH RESULTS

According to Anderson and Gerbing's (1988) recommendation, two analysis stages were conducted in this study. The first stage is completing the Confirmatory Factor Analysis (CFA) to test the research constructs' validity and reliability. The second stage is to test the structural model, then to verify the proposed research hypothesis.

Test of the Measurement Model

Confirmatory Factor Analysis (CFA) evaluated the overall measurement model by testing its validity and reliability. The validity test results show that the factor loading ranges from 0.645 to 0.927, exceeding the value of 0.5, and can be considered significant (Straub, 1989). As for the composite reliability (CR), all values are above 0.6 (Bagozzi & Yi, 1988). Further, the Average Variant Extracted (AVE) value ranges from 0.516 to 0.844, exceeding 0.5 (Fornell & Larcker, 1981). Therefore, the research constructs can be declared valid because it meets the minimum requirements. Also, reliability testing was carried out with Cronbach's alpha. The analysis results show that the Cronbach's alpha value of each variable is above the minimum value > 0.60 (Hair et al., 2014). Table 2 shows the factor loading, Cronbach alpha, AVE, and composite reliability of the measurement model's constructs.

Table 2 RESULTS OF CONFIRMATORY FACTOR ANALYSIS (CFA)					
Constructs	**Items Name**	**Factor Loading (>0.5)**	**Cronbach α (>0.6)**	**AVE (>0.5)**	**CR (>0.6)**
Organizational Reward (REW)	REW1	0.789*	0.788*	0.613*	0.863*
	REW2	0.756*			
	REW3	0.863*			
	REW4	0.715*			
Reciprocal Benefit (PRB)	PRB1	0.718*	0.686*	0.516*	0.809*
	PRB2	0.756*			
	PRB3	0.749*			
	PRB4	0.645*			
Enjoyment in Helping Others (PEH)	PEH1	0.904*	0.938*	0.844*	0.956*
	PEH2	0.927*			
	PEH3	0.919*			
	PEH4	0.924*			
Attitudes toward knowledge-sharing	ATK1	0.922*	0.929*	0.826*	0.950*
	ATK2	0.895*			

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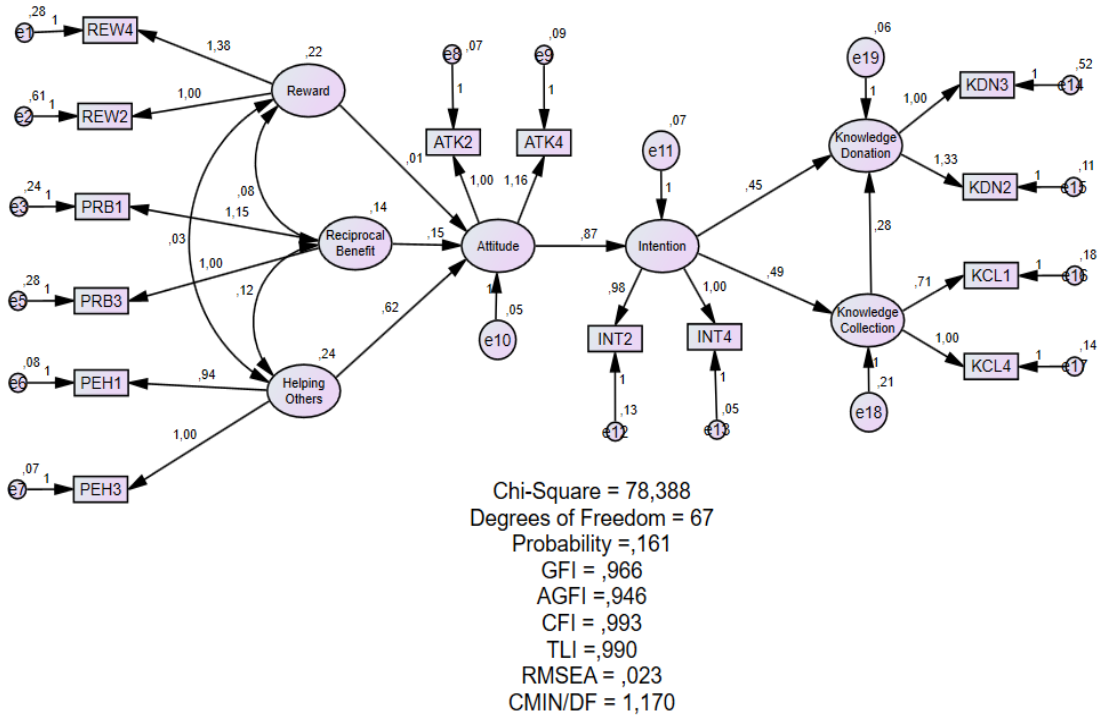
Table 2 RESULTS OF CONFIRMATORY FACTOR ANALYSIS (CFA)					
Constructs	**Items Name**	**Factor Loading (>0.5)**	**Cronbach α (>0.6)**	**AVE (>0.5)**	**CR (>0.6)**
(ATK)	ATK3	0.915*			
	ATK4	0.904*			
Intention to share knowledge (INT)	INT1	0.804*	0.885*	0.751*	0.923*
	INT2	0.835*			
	INT3	0.918*			
	INT4	0.905*			
Knowledge Donating (KDN)	KDN1	0.796*	0.795*	0.623*	0.869*
	KDN2	0.752*			
	KDN3	0.803*			
	KDN4	0.805*			
Knowledge Collecting (KCL)	KCL1	0.821*	0.723*	0.566*	0.839*
	KCL2	0.706*			
	KCL3	0.703*			
	KCL4	0.774*			
Notes: Acceptability : *accepted					

Test of the Structural Model



Source: AMOS Graphics

FIGURE 2
THE MEASUREMENT MODEL

Several items from each construct were removed to reach a fit structural model with a probability value above 0.05. The test results showed that items REW1 and REW3 dropped as to the organizational reward construct, PRB2 and PRB4 dropped as to the reciprocal benefit

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construct, and PEH2 and PEH4 dropped to the enjoyment in helping others construct. Further, items ATK1 and ATK3 dropped as to the attitudes toward knowledge sharing construct, items INT1 and INT3 dropped as to the intention to share knowledge construct, items KDN1 and KDN4 dropped as to the knowledge donation construct, and items KCL2 and KCL3 dropped as to the knowledge collection construct. The final results showed a fit research model with a 0.161 probability value presented in Figure 2, and Table 3 showed the fit indices results.

Table 3 indicates that absolute fit indices (Chi-Square, RMSEA, GFI, and CMIN/DF), incremental fit indices (TLI and CFI), and parsimony fit indices (AGFI) all met adequate levels. Therefore, since all results were above general acceptance levels, the structural model fits and explains the research hypotheses.

Table 3
OVERALL FIT INDICES OF THE RESEARCH MODEL

Fit Index	Scores	Recommended cut-off value
Absolute Fit Indices		
Chi-Square (df=67)	78.388*	< 97.11
RMSEA	0.023*	≤ 0.08
GFI	0.966*	≥ 0.90
CMIN/DF	1.170*	≤ 2.00
Incremental Fit Indices		
TLI	0.990*	≥ 0.95
CFI	0.993*	≥ 0,95
Parsimony Fit Indices		
AGFI	0.946*	≥ 0.90
Notes: Acceptability : *accepted		

Test of the Hypotheses

Hypotheses are tested in this study by examining the path estimates, Critical Ratio (CR), and probability level. The results of the hypotheses testing using the AMOS application are shown in Table 4 below.

Table 4
HYPOTHESES TESTING RESULTS

Hypotheses	Path Estimate	Standard Error	Critical Ratio	Probability	Results
H1: Organizational reward has a significant and positive effect on attitude toward knowledge-sharing.	0.012	0.062	0.200	0.841	Not supported
H2: Reciprocal benefit has a significant and positive effect on attitude toward knowledge-sharing.	0.153	0.132	1.165	0.244	Not Supported
H3:Enjoyment in helping others has a significant and positive effect on attitude toward knowledge-sharing.	0.624	0.080	7.765	***	Supported
H4:Attitudes toward knowledge sharing have a significant and positive effect on the intention to share knowledge.	0.869	0.064	13.573	***	Supported
H5:Intention to share knowledge has a significant and positive effect on knowledge collecting.	0.488	0.082	5.975	***	Supported

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H6:Intention to share knowledge has a significant and positive effect on knowledge donating.	0.454	0.088	5.143	***	Supported
H7:Knowledge collecting has a significant and positive effect on knowledge donating	0.278	0.075	3.736	***	Supported

Table 4 showed that The test results of the seven hypotheses proposed based on the Theory of Planned Behavior framework showed that two hypotheses had empirically proven no significant and positive effect. In contrast, five hypotheses proved to have a significant and positive impact.

The organizational reward and the reciprocal benefit did not significantly affect attitudes toward knowledge-sharing. These findings confirm the study's results that neither extrinsic reward nor intrinsic reward had a significant effect on attitudes toward knowledge sharing (Akosile & Olatokun, 2019; Bock et al., 2005; Chennamaneni et al., 2012; Liao et al., 2013; Lin, 2007; Rahman & Hussain, 2014; Tohidinia & Mosakhani, 2010). Further, these findings also confirm the previous findings from Kankanhalli et al. (2005) revealed that contributors did not seek reciprocity when contributing knowledge. Similar to the research results from Chennamaneni et al. (2012), which also concluded that perceived reciprocal benefits have a more negligible effect on the knowledge sharing attitudes. These results imply that the organizational reward and the reciprocal benefit are not the primary factors driving the employees to do knowledge-sharing activities.

Meanwhile, the enjoyment in helping others had a significant and positive effect on attitudes toward knowledge sharing. This result is consistent with findings which found that the enjoyment in helping others has a positive and significant influence on knowledge sharing attitudes (Davenport & Prusak, 1998; Kankanhalli et al., 2005; Liao et al., 2013; Lin, 2007; Trialih et al., 2017; Wasko & Faraj, 2000). Thus, these findings imply that auditors get a pleasant feeling when sharing their knowledge to help their colleagues. This feeling can stimulate them to share their knowledge with others.

This study also confirms the Theory of Planned Behavior from Ajzen (1985), noting that personal factors are evaluations of individuals, both positive and negative, in carrying out behavior. In addition, this study showed a significant and positive effect of attitudes toward knowledge-sharing on the intention to share knowledge. These findings corroborate the previous results of the studies showing that attitudes toward knowledge sharing had a significant and positive effect on the intention to share knowledge (Bock & Kim, 2001; Bock et al., 2005; Chen et al., 2009; Chennamaneni et al., 2012; Fauzi et al., 2018; Lin, 2007; Oladipupo & Abdulrahman, 2018; Rahman et al., 2016; Ryu et al., 2003; Tohidinia & Mosakhani, 2010; Tsai et al., 2012; Wu & Zhu, 2012)

Further, the intention to share knowledge also had a significant and positive impact on knowledge sharing behavior consisting of knowledge collection and knowledge donation. Thus, this study confirms the research results from Tohidinia & Mosakhani (2010) that showed an influence of intention to share knowledge on the actual behavior of knowledge sharing in knowledge collection and knowledge donation. Furthermore, these findings generally confirm the previous findings, which found that there was a significant and positive relationship between the intention of sharing knowledge on the knowledge sharing behavior (Chennamaneni et al., 2012; Fauzi et al., 2018; Oladipupo & Abdulrahman, 2018; Rahman et al., 2016; Ryu et al., 2003; Wu & Zhu, 2012).

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Moreover, knowledge collection also has a positive and significant effect on knowledge donation. The results showed that knowledge collecting has a significant and positive effect on knowledge donating. This result confirms the previous research from Van Den Hoff and Ridder (2004), revealing that knowledge collecting influences knowledge donating. The more developing the process of knowledge collection is, the more likely the knowledge accessed can be donated. Furthermore, the better the knowledge collection mechanism is in one organization, the more knowledge can be granted to users. These findings also confirmed Nodari et al. (2016) research results, which revealed that knowledge donating results from initial formation in knowledge collecting

CONCLUSION

There are two significant findings generated from this study. Firstly, organizational reward and reciprocal benefit are proven not to be expected from knowledge-sharing activities. Employees are willing to share knowledge without concern about reward and reciprocity; they enjoy sharing knowledge to help their colleagues. Secondly, that enhancement in knowledge collection activities affects knowledge donation activities. These results can be beneficial in the development of e-learning practices in organizations. The knowledge portal, which tends to be a repository of knowledge, needs further development into a learning management system. Dynamic interaction is expected among people who want to share their knowledge and find the required knowledge. An adequate information and communication technology is crucial to support an e-learning practice in the organization.

The organization must begin to identify other factors that can encourage employees to share their knowledge. The organization must support employees to do knowledge-sharing activities by creating a culture of sharing and learning. Practical knowledge management methods and tools are also needed to encourage employees to do knowledge-sharing activities, such as community of interest, community of practice, shared learning, document management system, social network service, and collaborative virtual workspace. This study provides another perspective on knowledge-sharing behavior in the knowledge portal as a form of online learning that can be further discussed.

Despite the contribution of this paper's findings, some limitations may be of concern for future research. (1) our model needs to be further tested by adding subjective norm and perceived behavioral control as variables that influence intention and behavior. (2) it is necessary to examine other factors that can influence attitudes toward knowledge-sharing behavior, such as self-efficacy and reputation enhancement (3) This model must be tested in other organizations with knowledge portals to obtain more comprehensive findings for further development.

REFERENCES

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. *Action Control*, 11-39.

Ajzen, I., & Driver, B.L. (1991). Prediction of leisure participation from behavioral, normative, and control beliefs: An application of the theory of planned behavior. *Leisure Sciences*, *13*(3), 185-204.

Akosile, A., & Olatokun, W. (2019). Factors influencing knowledge sharing among academics in Bowen University, Nigeria. *Journal of Librarianship and Information Science*, *6*, 1-18.

Aulawi, H., Ramdhani, M.A., & Slamet, C. (2017). *Functional need analysis of knowledge portal design in higher education institution. 12*(2), 132-141.

Bagozzi, R.P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74-94.

Bock, G., & Kim, Y. (2001). Breaking the myths of rewards : An exploratory study of attitudes about knowledge sharing. *Pacific Asia Conference on Information Systems (PACIS)*, *78*.

Citation Information: Basuki, T.A., Yasin, M., & Suhud, U. (2021). Affecting factors of knowledge sharing behavior in the knowledge portal. *Academy of Strategic Management Journal, 20*(4), 1-13.

Bock, G.W., Zmud, R.W., Kim, Y.G., & Lee, J.N. (2005). Behavioral intention formation in knowledge sharing : examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS Quarterly*, *29*(1), 87-111.

Chen, I.Y.L., Chen, N., & Kinshuk. (2009). Examining the factors influencing participants knowledge sharing behavior in virtual learning communities. *Educational Technology & Society*, *12*(1), 134-148.

Chennamaneni, A., Teng, J.T.C., & Raja, M.K. (2012). A unified model of knowledge sharing behaviours: Theoretical development and empirical test. *Behaviour and Information Technology*, *31*(11), 1097-1115.

Davenport, T.H., & Prusak, L.L. (1998). Working knowledge : How organization manage what they know. *Harvard Business School Press*, *35*(6), 199.

Evans, M., Dalkir, K., & Bidian, C. (2014). A holistic view of the knowledge life cycle: The knowledge management cycle (KMC) model. *Electronic Journal of Knowledge Management*, *12*(2), 85-97.

Fauzi, M.A., Nya-Ling, C.T., Thurasamy, R., & Ojo, A.O. (2018). An integrative model of knowledge sharing in Malaysian Higher Learning Institute. *Kybernetes*, *47*(5), 1031-1052.

Fornell, C., & Larcker, D.F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1), 39.

Gerbing, D.W., & Anderson, J.C. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411-423.

Hair, F.J.J., Black, C.W., Babin, J.B., & Anderson, E.R. (2014). *Multivariate data analysis* (Seventh). Pearson Education Limited.

Hasfera, D., Effendi, M., & Jasrial. (2019). Design of vertical portal indigenous knowledge for minangkabau cultural learning. *Advances in Social Science, Education and Humanities Research, 178* (1st International Conference of Innovation in Education (ICoIE) 2018), 84-87.

Hunt, D. (2017). KM/KS : Opening doors to a world of opportunities. *Knowledge Services*, 13-16.

Kankanhalli, A., Tan, B.C.Y., & Wei, K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical ive. *MIS Quarterly*, *29*(1), 113-143.

Khalil, T., Atieh, K., Mohammad, A.U., & Bagdadlian, E.F. (2014). Examining the social and technical factors influencing school teachers knowledge sharing intentions in a teachers online professional community. *The Electronic Journal of Knowledge Management*, *12*(3), 157-165.

Khan, M.K., Danish, R.Q., Munir, Y., Hafeez, S., Alam, N., & Fatima, A. (2013). Association of stress, knowledge management, and change with organizational effectiveness in education sector of Pakistan. *South Asian Studies*, *28*(2), 295.

Kim, H., Lee, J., & Oh, S.E. (2020). Individual characteristics influencing the sharing of knowledge on social networking services: online identity, self-efficacy, and knowledge sharing intentions. *Behaviour & Information Technology*, *39*(4), 379-390.

Krebs, D.L. (1970). Altruism - Examination of concept and a review of literature. *Psychological Bulletin*, *73*(4), 258-302.

Kumar, S., Sangeetha, V., Singh, P., Burman, R.R., Bhowmik, A., & Venkatesh, P. (2017). Factors influencing stakeholders to use rice knowledge management portal factors influencing stakeholders to use rice knowledge management portal (RKMP). *Journal of Community Mobilization and Sustainable Development*, *12 (2)*, 179-187.

Liao, C., Hsu, F.C., & To, P.L. (2013). Exploring knowledge sharing in virtual communities. *Online Information Review*, *37*(6), 891-909.

Lin, F.R., & Huang, H.Y. (2013). Why people share knowledge in virtual communities? The use of Yahoo! Kimo Knowledge+ as an example. *Internet Research*.

Lin, H.F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*, *33*(2), 135–149.

Liou, D.K., Chih, W.H., Yuan, C.Y., & Lin, C.Y. (2016). The study of the antecedents of knowledge sharing behavior: The empirical study of Yambol online test community. *Internet Research*, *26*(4), 845-868.

Miri, S.K., & Sahu, N. (2019). Design and development of HSES Knowledge Portal. *International Journal of Information and Computing Science*, *6*(2), 85-90.

Nodari, F., Oliveira, M., & Maçada, A.C.G. (2016). Organizational performance through the donation and collection of interorganizational knowledge. *VINE Journal of Information and Knowledge Management Systems*, *46*(1), 85-103.

Oladipupo, S.O., & Abdulrahman, T.H. (2018). Predicting knowledge sharing behaviour among non-academic staff in University of Ibadan , Nigeria. *Library Philosophy and Practice*, 0-25.

Citation Information: Basuki, T.A., Yasin, M., & Suhud, U. (2021). Affecting factors of knowledge sharing behavior in the knowledge portal. *Academy of Strategic Management Journal, 20*(4), 1-13.

Rahman, M.S., & Hussain, B. (2014). The impact of trust, Motivation and rewards on knowledge sharing attitudes among the secondary and higher secondary level students' evidence from Bangladesh. *Library Review*, *63*(8), 637-652.

Rahman, M.S., Osmangani, A.M., Daud, N.M., & AbdelFattah, F.A.M. (2016). Knowledge sharing behaviors among non academic staff of higher learning institutions: Attitude, subjective norms and behavioral intention embedded model. *Library Review*, *65*(1-2), 65-83.

Rode, H. (2016). To share or not to share: The effects of extrinsic and intrinsic motivations on knowledge-sharing in enterprise social media platforms. *Journal of Information Technology*, *31*(2), 152–165.

Ryu, S., Ho, S.H., & Han, I. (2003). Knowledge sharing behavior of physicians in hospitals. *Expert Systems with Applications*, *25*(1), 113-122.

Saghapour, M., Iranmanesh, M., Zailani, S., & Goh, G.G.G. (2018). An empirical investigation of campus portal usage. *Education and Information Technologies*, *23*(2), 777-795.

Trialih, R., Wei, H.L., & Anugrah, W. (2017). Knowledge sharing behavior and quality among workers of academic institutions in Indonesia. *International Journal of Business & Society*, *18*.

Smith, D.H. (1981). Altruism, volunteers, and volunteerism. *Nonprofit and Voluntary Sector Quarterly*, *10*(1), 21-36.

Straub, D.W. (1989). Validating instruments in MIS research. *MIS Quarter*, *13*(2), 147-169.

Sugiyono. (2015). *Research and development methods* (1st ed.). Alfabeta.

Tohidinia, Z., & Mosakhani, M. (2010). Knowledge sharing behaviour and its predictors. *Industrial Management and Data Systems*, *110*(4), 611-631.

Tsai, M.T., Chen, K.S., Chien, J.L., & Chien, M.T.K.C.J. (2012). The factors impact of knowledge sharing intentions: The theory of reasoned action perspective. *Quality and Quantity*, *46*(5), 1479-1491.

Tsai, M.T., Chung, H., Cheng, N., & Lien, C. (2012). Understanding IT professionals knowledge sharing intention through KMS: a social exchange perspective. *Quality and Quantity*, *V*, 2739-753.

Van Den Hooff, B., & Ridder, J.A. (2004). Knowledge sharing in context: The influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management*, *8*(6), 117-130.

Vuori, V., & Okkonen, J. (2012). Knowledge sharing motivational factors of using an intra-organizational social media platform. *Journal of Knowledge Management*, *16*(4), 592-603.

Wasko, M.M.L., & Faraj, S. (2000). It is what one does : why people participate and help others in electronic communities of practice. *Journal of Strategic Information Systems 9*, 155-173.

Wasko, M.M.L., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly: Management Information Systems*, *29*(1), 35-57.

Wu, Y. & Zhu, W. (2012). An integrated theoretical model for determinants of knowledge sharing behaviours. *Kybernetes*, *41*(10), 1462-1482.

Zhang, Xi., Chen, X., Liu, S., & Gong, Y. (2017). Social capital , motivations, and knowledge sharing intention in health Q & A communities. *Management Decision*, *55*(7), 1536-1557.

Citation Information: Basuki, T.A., Yasin, M., & Suhud, U. (2021). Affecting factors of knowledge sharing behavior in the knowledge portal. *Academy of Strategic Management Journal, 20*(4), 1-13.