

The Effect of Knowledge Sharing and Interpersonal Trust on Innovation: An Empirical Study in Indonesia Higher Education

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Abstract - This study investigates the effect of interpersonal trust among private university lecturers in Tangerang (i.e., trust in co-workers and leaders) on innovative behavior and examines the mediating effect of knowledge sharing on these relationship. A total of 74 lecturers from a private university in Tangerang participated in this research. The results revealed that trust in co-workers and trust in leaders had a positive effect on knowledge-sharing activities. Although the effect of trust in co-workers on innovative behavior is not significant, trust in leader has a significant effect on innovative behavior. The effect of lecturer knowledge sharing on innovative behavior was also found to be significant. In addition, the results showed that knowledge sharing had a full mediating effect on the relationship between trust in co-workers and innovative behavior and a partial mediating effect on the relationship between trust in leader and innovative behavior.

Keywords: Innovation, interpersonal trust, knowledge sharing.

I. INTRODUCTION

The importance of change and innovation in organizations to deal with a rapidly changing work environment is increasingly emphasized. Innovation refers to the pursuit of change that is oriented towards achieving organizational goals (Drucker, 1985). In the previous era, the organization's attention was on stable productivity, but in today's era, every organization strives for innovative performance, which can create high added value in a dynamic and complex organizational environment (Asbari, Wijayanti, Hyun, Purwanto, et al., 2020; Asbari, Pramono, Kotamena, Liem, et al., 2020; Basuki, Novitasari, et al., 2020; Cahyono et al., 2020; Gazali et al., 2020; Novitasari & Asbari, 2020; Purwanto, Saifuddin, et al., 2020; Santoso et al., 2020; Zaman et al., 2020). Investing in innovation is equivalent to holding options for the future, and organizational innovation is a source of sustainable competitive advantage for organizations (Berraies et al., 2014). In addition, innovation plays a role in developing new competitive ways of conducting business operations, facing challenges, overcoming pre-existing market and organizational arrangements (Asbari, Chi Hyun, Wijayanti, Imelda, et al., 2020; Asbari, Hyun, Wijayanti, Winanti, et al., 2020; Asbari & Novitasari, 2020; Goestjahjanti et al., 2020), reduce stress in the work environment and increase productivity and work quality (Asbari, Fayzhall, Goestjahjanti, Winanti, et al., 2020; Asbari & Novitasari, 2021; Fayzhall et al., 2020).

Organizational innovation begins with the innovative behavior of each member of the organization. Each member serves as the foundation for the organization to innovate in creating, realizing, and maintaining new ideas (Asbari, Wijayanti, et al., 2020; Asbari et al., 2021; Novitasari et al., 2020; Suprpti et al., 2020). Innovative behavior is defined as the intentional introduction and application in a role, group, or organization of a new idea, process, product, or procedure to a relevant unit of adoption and designed to significantly benefit an individual, group, organization, or society at large (West & Farr, 1989). The innovative behavior of lecturers in the workplace is the foundation of any high-performing organization (Turnipseed & Turnipseed, 2013) because the innovative ideas generated by innovative behavior serve as the basis for the development of competitiveness, both in products and services (Purwanto et al., 2021).

Previous studies have recognized knowledge as the key to enhancing innovation (eg, Lin, 2007; Mangiarotti & Mention, 2015; Radaelli et al., 2014). Knowledge sharing, in particular, is considered a determinant of innovative behavior. Knowledge sharing is a process that enables knowledge held by individuals and groups to be transferred to the organizational level, where it can be applied to the development of new products, services, and processes (Van Den Hooff & De Ridder, 2004). In other words, individual knowledge provides the raw materials that organizations need to create new knowledge and innovations (Agistiawati et al., 2020; Hutagalung et al., 2020). However, unless this knowledge is shared with other individuals and groups within the organization, it will remain in the individual's domain and will have little or no impact on organizational performance or innovation capability (Subramaniam & Youndt, 2005).

Innovative behavior has traditionally been considered more important in the manufacturing sector, where new product development is critical (Asbari et al., 2021; Novitasari et al., 2020; Novitasari & Asbari, 2020; Ong et al., 2020; Singgih et al., 2020). Relatively less attention is paid to innovative behavior in the service sector, despite its rapid growth and higher importance in overall economic activity (Gustafsson et al., 2010). However, along with the growth of the service sector and intense competition between business services, innovative management needs to be in place to ensure sustainable development and a leading competitive position (Agistiawati et al., 2020). In addition, researchers have identified what resources are relevant to successful innovation in the manufacturing sector (Asbari, et al., 2021; Purwanto et al., 2020; Putra et al., 2021; Sopa et al., 2020). However, studies focused on specific actions that influence innovative behavior among college lecturers are scarce. The main reason for this research gap may lie in the specific service context: Innovation in the service industry is considered a complex question. Gallouj & Djellal (2010) suggest that innovation in service organizations occurs when there is a change in one or more characteristics or skills that precisely define a particular service. In an era that emphasizes the need for change, creativity, and innovation in responding to the needs of students and the academic community, maintaining the quality of learning can result in a sustainable competitive advantage (Asbari et al., 2019; Asbari, Purwanto, Maesaroh, Hutagalung, et al., 2020; Basuki et al., 2020; Novitasari, Yuwono, Cahyono, Asbari, & Sajudin, 2020). Lecturers have an important role in ensuring higher education innovation, and their ability to be innovative has the potential to contribute to successful learning relationships (Slåtten & Mehmetoglu, 2015). Lecturers are asked to perform certain behaviors specified by the job description; thus, innovative behavior may not be often demanded of them. However, professional lecturers carry out their duties independently. Consequently, innovation about professional lecturers appears to be an important area of research.

Lecturer work is often characterized as unstructured work. The job demands a high level of interpersonal interaction along with the ability to deal with the needs and wants of heterogeneous stakeholders. Lecturers are allowed to use their discretion in different situations, and they rely on their abilities to determine the development and technical application of their teaching. Therefore, innovative behavior is emphasized more for lecturers than for other types of service providers, and they are seen as the heart of innovative services in universities (Chiu et al., 2011). Despite the important role of professional lecturers in ensuring organizational innovation, very little research has been done in this type of setting. In addition, professional lecturers take advantage of the new and unique experiences gained through interactions with students and fellow lecturers in the workplace, and their performance is based on the knowledge gained from their experiences (Asbari et al., 2020; Asbari & Novitasari, 2020; Kamar et al., 2020; Pramono et al., 2020; PURWANTO et al., n.d.; Sihite et al., 2020). If professional lecturers share their experiences and knowledge, this will improve the overall performance of higher education organizations. Thus, knowledge sharing is very important in higher education organizations (Asbari & Novitasari, 2020, 2021). For higher education institutions, which rely heavily on interactions between lecturers and lecturers, and lecturers with students, as well as lecturers with other educational stakeholders, it is very important to create a good knowledge-sharing culture. Andrews & Delahaye (2000) report that while knowledge sharing is important, it occurs only after mutual trust develops. Therefore, they emphasize the importance of trust in generating knowledge sharing. Researchers define trust as "a positive attitude towards others" (Rousseau et al., 1998) and a "desire for mutual need" (Mayer et al., 1995). Although there is no universally accepted definition of trust, it is generally agreed that trust enables cooperative behavior (Gambetta, 1988), promotes networking relationships (Miles and Snow, 1992), reduces conflict, and facilitates the rapid formation of ad hoc workgroups. (Meyerson et al., 1996). Nelson and Coopridge (1996) report that a high level of trust allows group members to open up to one another and to share knowledge. Similarly, Wang et al. (2014) note that trust is a critical element in effective knowledge sharing and innovative performance.

Several previous studies have shown that knowledge sharing fosters and positively influences innovative behavior (Subramaniam & Youndt, 2005). Similarly, knowledge-sharing functions as both a consequence of trust and an antecedent of innovative behavior. Thus, the researcher assumes that knowledge sharing mediates trust and innovative behavior. There are two distinct forms of trust in the existing literature, namely lateral trust and vertical

trust. Lateral trust characterizes the relationship between co-workers, and vertical trust refers to the relationship between subordinates or superiors (Barzoki et al., 2013). Therefore, in this study, we categorize trust among professional lecturers into two types, namely trust in colleagues and trust in leadership. Next, we examine how this type of interpersonal trust affects innovative behavior and explain the mediating role of knowledge sharing in this relationship. Our conceptual framework draws on the existing literature on organizational trust, knowledge management, and innovative behavior (eg, Clegg et al., 2002; Mooradian et al., 2006). The framework (see Figure 1) states that trust in co-workers and leaders has a significant effect on knowledge sharing, which in turn, has a positive effect on innovative behavior. That is, trust in co-workers and leaders influences innovative behavior directly and indirectly through knowledge sharing. In the next section, we provide reasons for the seven hypotheses that make up the conceptual framework.

II. LITERATURE REVIEW AND HYPOTHESIS

A. *Interpersonal Trust and Knowledge Sharing*

Trust among organizational members indicates an individual's belief in the veracity of the statements and behavior of others. Trust can exist in horizontal relationships between coworkers and in vertical relationships between leaders and subordinates (Cook & Wall, 1980; McCauley & Kuhnert, 1992). Lecturers may trust their co-workers but not their boss, or they may trust their boss but not their co-workers. Thus, the types of trust must be considered at different levels. Many previous studies have shown that mutual trust among organizational members is one of the many important factors for successful knowledge sharing in an organization. Nelson & Coopridge (1996) define mutual trust as the level of expectation that organizational members will pursue a common goal. They report that mutual trust encourages knowledge sharing, which ultimately results in superior organizational performance. Similarly, Staples & Webster (2008) found a strong positive relationship between trust and knowledge sharing, and they were positively related to knowledge sharing with team effectiveness outcomes.

If there is a lack of trust among co-workers, lecturers cannot achieve an active collaborative relationship that allows them to share knowledge. In such situations, they will hide or distort important knowledge or information (Nonaka, 1994). Sharing knowledge with untrustworthy people is considered risky. Chow & Chan (2008) argue that the greater the social trust among coworkers, the better their attitudes towards knowledge sharing. Similarly, Mooradian et al. (2006) reported that interpersonal trust among co-workers positively affects knowledge sharing, both within the designated department and with other departments. Hence, trust among co-workers should precede knowledge sharing. In other words, trust among co-workers is the basis for promoting knowledge sharing.

In a study on the relationship between knowledge sharing and trust in leadership, Renzl (2008) found that when the level of trust is high, knowledge sharing increases within the department as well as with other departments. An important factor that may hinder knowledge sharing among college lecturers is the fear of lecturers being taken advantage of and losing their power and value as a result of sharing knowledge. Trust in the leader can reduce this fear and positively affect knowledge sharing (Renzl, 2008). Kim (2014) emphasizes the importance of trusting leaders to share knowledge, explaining that lecturers who trust their superiors also trust information obtained from their superiors. Thus, the circulation of information becomes efficient. Based on findings from previous studies on the relationship between trust and knowledge sharing, we propose the following hypothesis:

H1: Lecturer's trust in leader has a positive effect on their knowledge-sharing behavior.

H2: Lecturer's trust in co-workers has a positive effect on their knowledge-sharing behavior.

B. *Interpersonal Trust and Innovative Behavior*

One characteristic common to all trust situations is the willingness to take risks (Johnson-George & Swap, 1982). In other words, different from other psychological states, trust requires one to embrace the weaknesses of others along with the risks that come with them. One of the several performance outcomes related to lecturers' trust in each other is innovative behavior. Innovative behavior is informal and voluntary. Therefore, it is a type of extra-role behavior (Katz and Kahn, 1978). An individual is fully responsible in case of failure. Because of this risk, there is a strong relationship between trust and innovative behavior (Nienaber & Schewe, 2014). In the organizational context, lecturers are highly dependent on their superiors for information, resources, and social support to develop, protect, and realize their new ideas (Cahyono et al., 2020; Lestari et al., 2020; Novitasari,

Asbari, et al., 2020; Wijayanti chi hyun, C., Hutagalung, leo, Asbari, M., Budi Santoso, P., & Purwanto, A., 2020). By trusting a leader, a lecturer will be more likely to develop new and useful ideas, because he will feel safe to explore new ways of doing things (Tan and Tan, 2000). If leaders and subordinates develop partnerships and form groups, leaders can give their subordinates more opportunities to use their wisdom and decision-making, which can promote innovative behavior (Young, 2012). In addition, if the level of trust between leaders and subordinates increases, the innovative behavior of lecturers for organizational growth will also increase.

A high level of interpersonal trust among co-workers allows mutual respect to prevail, reduces complexity within the organization, and enables lecturers to develop positive affective responses (Yilmaz & Hunt, 2001). When a strong bond of trust develops among coworkers, new ideas and feedback on those ideas are easily shared. It becomes more likely that coworkers will accept and adopt each other's ideas. Furthermore, changes in work-related activities will occur, and these changes will encourage each individual to strive to develop innovative behavior (Kim et al., 2007). Collaborative efforts among co-workers are essential for generating ideas (Amabile et al., 2005). Although idea generation and evaluation in organizations can sometimes be solitary activities, more generally, workgroup members and co-workers influence individual innovation (Scott & Bruce, 1994). Similarly, Amabile et al., (2005) stated that collaboration among colleagues is important to generate innovative ideas. Based on findings from previous studies on the relationship between trust and innovative behavior, we propose the following hypothesis:

H3: Lecturer's trust in leader has a positive effect on their innovative behavior.

H4: Lecturer's trust in co-workers has a positive effect on their innovative behavior.

C. Knowledge Sharing and Innovative Behavior

Researchers have suggested that knowledge assets can increase an organization's opportunities to create and implement innovations (Mangiarotti & Mention, 2015). Highlighting the importance of knowledge for innovation, Thornhill (2006) reports that an organization's level of knowledge assets is proportional to its level of innovation. Since knowledge is embedded in individuals, it is necessary to share knowledge among organizational members to establish new routines and mentalities that will help them in solving problems (Nonaka et al., 2006). Therefore, organizations need practices in knowledge creation and, more importantly, knowledge sharing (Alavi & Leidner, 2001). According to Mehrabani & Shajari (2012), knowledge sharing among organizational members tends to generate new ideas for product development and process innovation. Researchers who focus on the relationship between knowledge sharing and innovative behavior agree that effective knowledge sharing results in innovative behavior (Subramaniam & Youndt, 2005). This is because creative ideas form the basis of innovation, and these ideas are generated through effective communication among lecturers, which leads to a strong tendency among them to strive for innovation. Darroch (2005) states that the dissemination of knowledge in an organization affects innovative behavior. This previous study showed that knowledge sharing among lecturers is the basis for creating knowledge in organizations and plays an important role in encouraging innovative behavior. Therefore, we put forward the following hypothesis:

H5: Lecturer's knowledge sharing has a positive effect on their innovative behavior.

D. Mediating Knowledge Sharing between Interpersonal Trust and Innovative Behavior

As previously explained, several studies have shown that knowledge sharing fosters and positively influences innovative behavior (Darroch, 2005; Subramaniam & Youndt, 2005). Similarly, knowledge-sharing functions as both a consequence of trust and an antecedent of innovative behavior. Thus, the researcher assumes that knowledge sharing mediates trust and innovative behavior. Next, we examine how this type of interpersonal trust affects innovative behavior and explain the mediating role of knowledge sharing in this relationship. Our conceptual framework draws on the existing literature on organizational trust, knowledge management, and innovative behavior (e.g., Mooradian et al., 2006) which suggests that trust in co-workers and leaders has a significant effect on knowledge sharing, which, in turn, has a positive effect on innovative behavior. That is, trust in co-workers and leaders influences innovative behavior directly and indirectly through knowledge sharing. Therefore, we put forward the following hypothesis:

H6: Lecturer's trust in leader has a positive effect on their innovative behavior through mediation of knowledge sharing.

H7: Lecturer's trust in co-workers has a positive effect on their innovative behavior through the mediation of knowledge sharing.

According to Sekaran & Bougie (2016), the theoretical framework is the foundation that underlies all research projects. From the theoretical framework, hypotheses can be formulated that can be tested to determine whether or not the formulated theory is valid. Then it will be measured by the appropriate statistical analysis. Referring to the theory and previous research, the authors build a research model as follows:

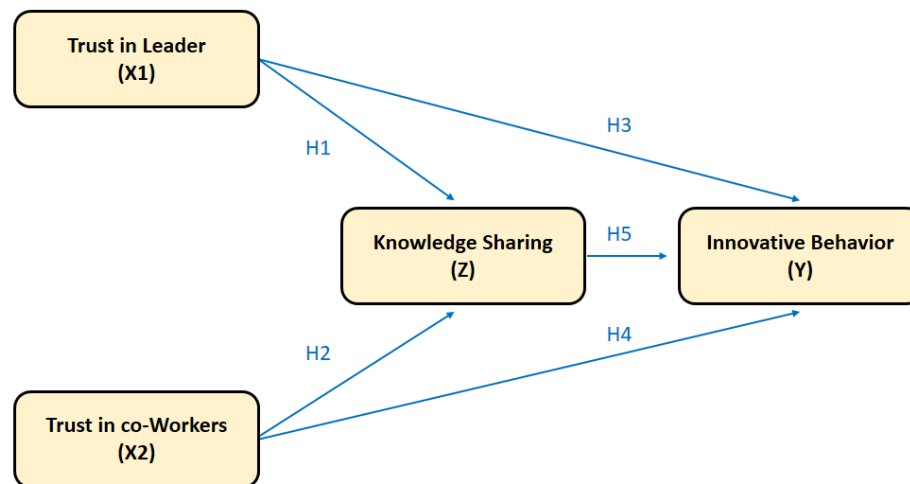


Figure 1. Research Conceptual Model

III. RESEARCH METHOD

The method used in this study is quantitative. Data was collected by distributing questionnaires to all lecturers at a private university in Tangerang. The population in this study were lecturers from a private university in Tangerang, totaling 85 people. Questionnaires were distributed using a simple random sampling technique. The results of the questionnaire that returned as many as valid were 74 samples. So the number of samples is 87% of the total population.

Trust instruments have been defined in various ways in the existing literature. This study focused on aspects of interpersonal relationships proposed by Cook & Wall (1980). According to them, trust refers to the degree to which a person is willing to assume good intentions and have confidence in the words and actions of others. Based on this definition of trust, interpersonal trust in service organizations is classified into trust in co-workers and trust in leaders. Trust in co-workers refers to the level of trust in the abilities and belief in the trustworthy intentions of co-workers. Researchers measure this construct using five items developed by Cook & Wall (1980) and validated by Seo et al. (2016). Furthermore, trust in the leader refers to the level of confidence and trust in the sincerity, fairness, ability, and similar attributes of the leader. Researchers measure this construct using five items developed by Cook & Wall (1980) and Podsakoff et al. (1990) and have been validated by Seo et al. (2016). Knowledge sharing refers to the actual sharing of knowledge acquired by lecturers through their individual experiences in the workplace. This study uses four items from Lee's (2001) measurement standard for knowledge sharing and two items from Faraj and Sproull's (2000) study. So, the writer uses six items to measure the level of knowledge sharing. Innovative behavior means that lecturers offer new ideas to improve organizational performance; then, they work to turn those ideas into reality. We adapted the five items developed by Scott and Bruce (1994) to measure innovative behavior. All variables were measured on a five-point Likert-type scale. Each item of closed questions/statements is given five answer options, namely: strongly agree score 5, agree score 4, neutral score 3, disagree score 2 and strongly disagree score 1. The method for processing data is PLS and uses SmartPLS version 3.0 software as a tool.

IV. RESULT AND DISCUSSION

A. Result

A total of 74 lecturers participated. The most men (72%), then women (28%). They have different age groups, under 30 years (32%), ranging from 30-40 years (57%), and over 40 years (11%). The tenure as a lecturer also varies, some of them are under 5 years (38%), ranging from 5-10 years (48%), and more than 10 years (14%). The majority of education is S2 (84%), then S3 (16%).

Table 1. Sample Descriptive Information

Criteria		Total	%
Age (per January 2020)	< 30 years	24	32%
	30 - 40 years	42	57%
	> 40 years	8	11%
Working period	< 5 years	28	38%
	5-10 years	36	48%
	> 10 years	10	14%
Last Education	Doctoral (S3)	12	16%
	Master (S2)	62	84%

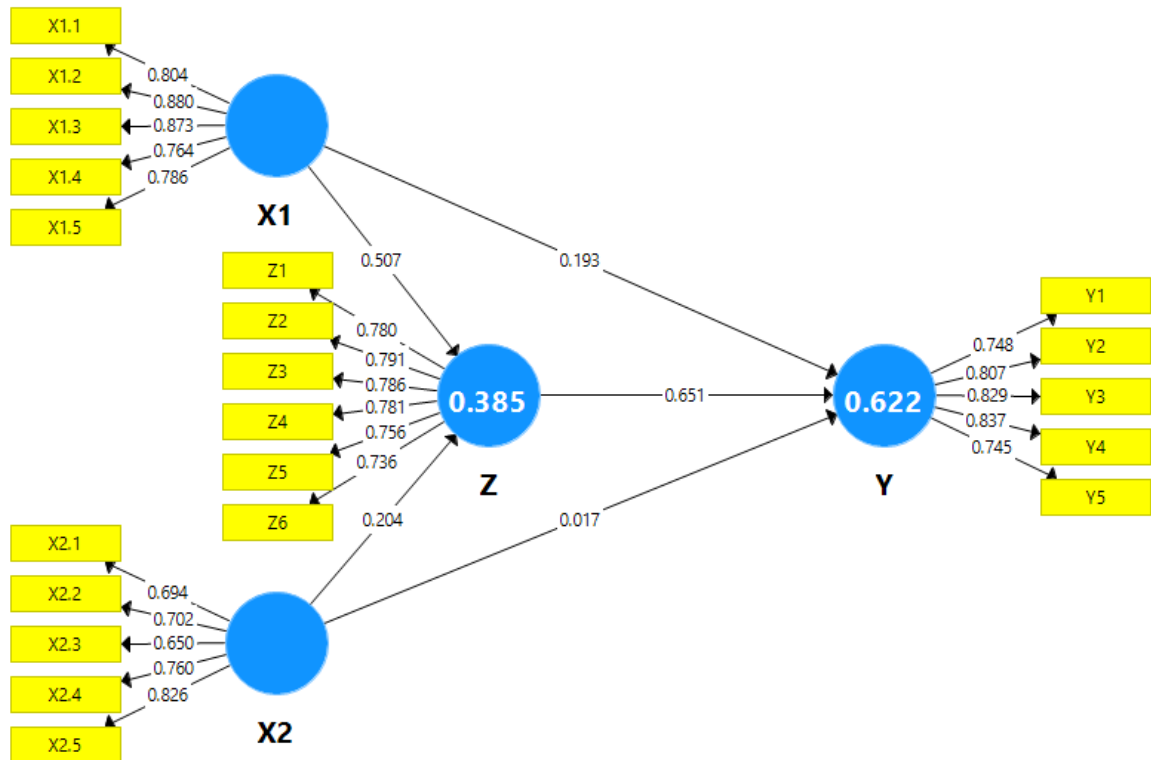
The measurement model testing phase includes testing of convergent validity, discriminant validity. Meanwhile, to test construct reliability, Cronbach's alpha and composite reliability were used. The results of the PLS analysis can be used to test research hypotheses if all indicators in the PLS model have met the requirements of convergent validity, discriminant validity, and reliability testing.

Convergent validity test is done by looking at the loading factor value of each indicator to the construct. In most references, a factor weight of 0.5 or more is considered to have strong enough validation to explain latent constructs (Chin, 1998; Ghazali, 2014; Hair et al., 2010). In this study, the minimum acceptable loading factor is 0.5, provided that the AVE value of each construct is > 0.5 (Ghozali, 2014). After going through the processing of SmartPLS 3.0, all indicators have a loading factor value above 0.5 or provided that the AVE value is above 0.5. The fit or valid model of this study can be seen in Figure 2. Thus, the convergent validity of this research model has met the requirements. The value of loadings, Cronbach's alpha, composite reliability, and AVE for each construct can be seen in Figure 2 and Table 3.

Discriminant validity is carried out to ensure that each concept of each latent variable is different from other latent variables. The model has good discriminant validity if the AVE squared value of each exogenous construct (the value on the diagonal) exceeds the correlation between the construct and other constructs (the value below the diagonal) (Ghozali, 2014). The results of the discriminant validity test are using the AVE squared value, namely by looking at the Fornell-Larcker Criterion Value obtained as shown in Table 4. The discriminant validity test results in table 3 above show that all constructs have an AVE square root value above the correlation value with other latent constructs (via the Fornell-Larcker criteria). Likewise, the cross-loading value of all items from one indicator is greater than the other indicator items as mentioned in Table 3, so it can be concluded that the model has met discriminant validity (Fornell & Larcker, 1981). Furthermore, a collinearity evaluation was carried out to find out whether there was collinearity in the model. To find collinearity, it is necessary to calculate the VIF of each construct. If the VIF score is higher than 5, then the model has collinearity (Hair et al., 2014). As shown in Table 4, all VIF scores are less than 5, meaning that this model does not have collinearity problems. Construct reliability can be assessed from the value of Cronbach's alpha and composite reliability of each construct. The recommended value of composite reliability and Cronbach's alpha is more than 0.7 (Ghozali, 2014). The results of the reliability test in table 2 above show that all constructs have composite reliability and Cronbach's alpha values greater than 0.7 (> 0.7). In conclusion, all constructs have met the required reliability.

Hypothesis testing in PLS is also known as the inner model test. This test includes a test of the significance of direct and indirect effects as well as measuring the magnitude of the effect of exogenous variables on endogenous variables. To determine the effect of trust in leader and trust in co-workers on innovative behavior through knowledge sharing as a mediating variable, direct and indirect influence tests are needed. The effect test was carried out using the t-statistical test in the partial least squared (PLS) analysis model using the SmartPLS

3.0 software. With the bootstrapping technique, the R Square value and the significance test value were obtained in Table 5 and Table 6.



Gambar 2. Research Model Valid

Tabel 2. Items Loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE)

Variables	Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE
Trust in Leader (X1)	X1.1	0.804	0.882	0.912	0.675
	X1.2	0.880			
	X1.3	0.873			
	X1.4	0.764			
	X1.5	0.786			
Trust in co-Workers (X2)	X2.1	0.694	0.803	0.848	0.532
	X2.2	0.702			
	X2.3	0.650			
	X2.4	0.760			
	X2.5	0.826			
Knowledge Sharing (Z)	Z1	0.780	0.862	0.899	0.597
	Z2	0.791			
	Z3	0.786			
	Z4	0.781			
	Z5	0.756			
	Z6	0.736			
Innovative Behavior (Y)	Y1	0.748	0.852	0.897	0.630
	Y2	0.807			
	Y3	0.829			
	Y4	0.837			
	Y5	0.745			

Tabel 3. Discriminant Validity

Variables	X1	X2	Y	Z
Trust in Leader (X1)	0.823			
Trust in co-Workers (X2)	0.592	0.729		
Innovative Behavior (Y)	0.416	0.419	0.793	
Knowledge Sharing (Z)	0.592	0.585	0.369	0.771

Tabel 4. Collinearity Statistics (VIF)

Variabel	X1	X2	Y	Z
Trust in Leader (X1)			1.630	1.213
Trust in co-Workers (X2)			1.280	1.213
Innovative Behavior (Y)				
Knowledge Sharing (Z)			1.625	

Tabel 5. Nilai R Square

	R Square	R Square Adjusted
Innovative Behavior (Y)	0.622	0.621
Knowledge Sharing (Z)	0.385	0.383

Tabel 6. Hypotheses Testing

Hypotheses	Relationship	Beta	SE	T Statistics	P-Values	Decision
H1	X1 -> Z	0.507	0.032	15.662	0.000	Supported
H2	X2 -> Z	0.204	0.028	7.389	0.000	Supported
H3	X1 -> Y	0.193	0.027	7.169	0.000	Supported
H4	X2 -> Y	0.017	0.025	0.688	0.491	Not Supported
H5	Z -> Y	0.651	0.025	26.258	0.000	Supported
H6	X1-> Z-> Y	0.330	0.026	12.485	0.000	Supported
H7	X2-> Z-> Y	0.133	0.019	6.992	0.000	Supported

Based on Table 5 above, the R Square value of knowledge sharing (Z) is 0.385 which means that the knowledge sharing variable (Z) can be explained by the variable trust in leader (X1) and trust in co-workers (X2) of 38.5%, while the rest is equal to 61.5% is explained by other variables not discussed in this study. The R Square value of lecturer's innovative behavior (Y) is 0.622 which means that the variable of lecturer's innovative behavior (Y) can be explained by the variables of trust in leader (X1), trust in co-workers (X2), and knowledge sharing (Z) of 62.2%, while the remaining 37.8% is explained by other variables not discussed in this study. Meanwhile, Table 6 displays the t-statistics and p-values that show the influence between the research variables that have been mentioned.

B. Discussion

This study investigates how trust in co-workers and leaders influences innovative behavior among lecturers; Next, the mediating role of knowledge sharing in this effect is explored. In a competitive organizational environment, sharing knowledge with others indicates that one is willing to take the risks involved in sharing knowledge. If lecturers do not trust each other, they are likely to be sensitive to this risk, and they may hide or alter important information. However, if there is a high level of trust, they will form a work environment where they can take risks and help one another, and they are more likely to share knowledge in such an environment. According to Mayer et al. (1995), it is important to understand the role of risk in the trust process because one must take risks to engage in the act of trusting. They propose that the result of trust is risk-taking in a relationship.

As the person in charge of learning in student classes, lecturers as service providers utilize a lot of subjective knowledge, namely knowledge that is collected from time to time through work experience. This subjective knowledge can be transferred vertically between leaders and subordinates as well as horizontally between colleagues. In other words, when certain information is transferred from superiors to subordinates, subordinates must be confident enough in the accuracy of the information to share them. When subordinates trust their superiors, they also trust the information received from superiors, which makes the circulation of information active (Kim, 2014). Several studies have concluded that trust in leadership results in higher levels of cooperation; thus, lecturers will be more willing to share knowledge, consequently improving performance (Renzl, 2008). When there is a high level of trust among co-workers, an individual can expect support for his new idea from co-workers and will try various changes in his work (Kim et al., 2007). In other words, trust in co-workers can positively influence the innovative behavior of a lecturer (Berraies et al., 2014). However, the results of this study indicate that trust in coworkers does not directly affect innovative behavior.

This finding shows that although lecturers can develop good relationships with each other, they cannot produce satisfactory innovative behavior unless there is direct communication between them. That is, it is unreasonable to expect that trust among co-workers will by itself enable each lecturer to pursue innovative behavior and implement various changes. We assume this is because most service providers run individual tasks on their schedule; In addition, many service providers are casual workers. Therefore, the trust between them does not directly affect their innovative behavior. On the other hand, the results of this study indicate that trust in the leader significantly influences innovative behavior. When lecturers trust their superiors, leadership, in return, gives them more freedom to use their discretion in making decisions (Tan & Tan, 2000). This makes it easier for lecturers to try new ideas/methods in the workplace, which ultimately results in innovative behavior. Golipour et al. (2011) suggest that lecturers' trust in their superiors makes them more motivated and more willing to take

initiatives and develop new ideas. Furthermore, Scott & Bruce (1994) report that more harmonious interactions between leaders and subordinates mean that subordinates are given greater autonomy in carrying out tasks and making decisions at work; therefore, more innovative behavior can be expected from them. Thus, a lecturer must be confident in his or her independence in performing work-related tasks to manage the risks associated with innovative behavior, and trust in the leadership allows the expectation that the leader will support independent performance and allow flexible innovative behavior. The results of this study support the findings of previous studies that there is a positive relationship between trust in leadership and innovative behavior (eg, Berraies et al., 2014).

Effective knowledge sharing by organizational members benefits the organization and the people involved. Knowledge will gradually decrease without effective sharing (Kearns & Lederer, 2003). The findings from this study that knowledge sharing influences innovative behavior emphasize the importance of knowledge sharing as an antecedent to innovative behavior reported in previous studies (eg, Darroch, 2005; Thornhill, 2006). Darroch (2005) identified two types of knowledge generated in an organization; tangible knowledge (eg, human capital profiles, data, and explicit information) and intangible knowledge (eg, information knowledge, skills, and lecturer experience). The spread of this type of knowledge affects the innovative behavior of lecturers. Thornhill (2006) proved that knowledge plays a key role in the innovation process and that organizational knowledge assets affect the level of innovation.

Effective communication in organizations fosters a lecturer's propensity for innovation (eg, Park et al., 2014). Park et al. (2014) noted that lecturers can and should contribute to making organizations more innovative through their informed behavior related to their work assignments and routines. Therefore, an effective organization must have a system for its lecturers to participate in the managerial process where they can help identify creative ways to innovate. The results of this study that knowledge sharing among lecturers positively affects innovative behavior can be understood in the same vein. Active communication among lecturers is the basis for generating new ideas and providing opportunities for the support and assistance of their colleagues. The more lecturers share their knowledge, they will be able to make various changes related to work.

Finally, additional analysis in this study demonstrates the full mediating role of knowledge sharing in the relationship between trust in coworkers and innovative behavior. For lecturers, although trust in co-workers does not have a direct influence on individual innovative behavior, the findings of this study imply that knowledge-sharing activities resulting from trust in co-workers can be the basis for innovative behavior. In comparison, knowledge sharing has a partial mediating role in the relationship between trust in leadership and innovative behavior. That is, although trust in leaders can directly influence innovative behavior, it also has an indirect influence through knowledge-sharing activities.

V. CONCLUSION

This study investigates the variables that cause innovative behavior in lecturers to increase the competitiveness of higher education organizations. In particular, we analyzed the relationship between lecturers' innovative behavior and their trust in colleagues and leaders. In addition, we examined the mediating effect of knowledge sharing on this relationship. About theoretical contributions, this study confirms that sharing knowledge and trust in colleagues and leaders is important for the innovative behavior of lecturers. That is, this study verifies that it is very important for lecturers to build trust with each other through harmonious relationships to encourage innovative behavior. The results of this study highlight the importance of group dynamics where lecturers can increase mutual trust. In addition to this direct influence, the results of the study show that trust has an indirect influence on innovative behavior through knowledge sharing.

The results of this study also have practical meaning. There are unavoidable obstacles to knowledge-sharing activities in higher education organizations. For example, lecturers consider the knowledge gained through work experience as part of their abilities. Therefore, they will be reluctant to share their knowledge with others, or they will only share part of their knowledge (Aman & Asbari, 2020; Asbari, Nurhayati, et al., 2019; Asbari & Novitasari, 2020; Purwanto, Asbari, et al., 2020; Santoso, Tukiran, et al., 2020). This type of individualistic behavior hinders the transfer of knowledge within the organization and cuts off communication among lecturers. Therefore, it needs to be managed at the organizational level; Increasing trust between lecturers is one way to overcome this problem. Managers of service organizations must support the activities of the formal or informal community of lecturers and create a friendly work environment. Berraies et al. (2014) suggested empowering lecturers as a management practice to increase organizational trust. Knowledge-sharing activities should be

encouraged along with efforts to build trust. Creating a healthy knowledge-sharing culture along with a knowledge-sharing system will encourage innovative behavior of lecturers.

This study is valuable because it empirically investigates the variables that influence innovative behavior, using lecturers as a specific target of analysis. However, one of the limitations of this study is that we interpret and analyze variables as unidimensional concepts, even though the variables used in this study are derived from multidimensional concepts. Regarding interpersonal trust, a multi-dimensional approach that includes cognitive trust and emotional trust is possible, in addition to the multilayer approach of vertical trust and horizontal trust. Second, the concept of innovative behavior includes innovation at the organizational and collective levels, and this type of innovation has a different meaning compared to innovation at the individual level. Future studies will yield more significant results if innovative behavior is examined more concretely and with a wider scope. Third, because this study is based on self-reported data, general method variance may be an issue. Further research is needed to take into account the perspectives of other lecturers in the organization to minimize the limitations of self-reported data. Finally, this research focused exclusively on fitness club personal fitness trainers. Therefore, it is not appropriate to generalize the findings from this study sample to all college organizations. To overcome this limitation, this research can be replicated in different work environments. In other words, future research could extend research design to other professions and include cross-organizational comparisons.

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