

Analysis of The Effect of Work Environment and Knowledge Sharing on Employee Performance in Innovative Behavior Mediation

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ABSTRACT

Purpose - This study aims to analyze the effect of the work environment and Knowledge sharing on employee performance by mediating innovative behavior.

Design/methodology/approach - The sampling method used was the census method. The research subjects were the Settlement Infrastructure Agency for DI Yogyakarta Region employees, while data retrieval employed a questionnaire for 146 respondents. However, questionnaires only processed data for 100 respondents. Data analysis used Partial Least Square (PLS) inferential, variance-based SEM with SmartPLS Version 3.0 software.

Findings - The results showed that the work environment and knowledge sharing had a positive and significant effect on employee performance, the work environment had no effect on innovative behavior or was not proven, knowledge sharing had a positive and significant effect on innovative behavior, innovative behavior had a positive and significant effect on employee performance. The mediation results showed that innovative behavior could partially mediate the influence of the work environment and Knowledge sharing on employee performance. The role of innovative behavior in mediating the work environment and Knowledge sharing had a positive and significant effect on employee performance, so, in this study, innovative behavior could mediate the work environment and Knowledge sharing on employee performance.

Research limitations/implications – Respondents who returned the questionnaires to the researchers were not 100% of the total sample population, so the analysis results were not the same as the hypothesis.

Originality/value - The novelty of this research is to examine the role of mediating innovative behavior in the influence of KS and the work environment on employee performance in public service employees who have different characteristics when compared to employees of non-public organizations.



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Keywords: Work Environment; Knowledge sharing; Innovative behavior; Employee performance

INTRODUCTION

To face new challenges and competition, an organization should consider many factors, especially government agencies, including an employee, an important organizational asset. Government agencies must be able to maintain and improve the quality of employees to produce optimal employee performance. Without well-performing human resources, the agency will experience stagnation or even a decline in organizational performance, so the vision and mission are not achieved according to the target. Performance is defined as work

results that can be achieved by a person or group of people in the organization, under the authority and responsibility of each, to achieve the goals of the organization concerned legally, not violating the law and under morals and ethics (Mazidah & Laily, 2020). Angie (2021) found that employee performance can be assessed from quality, quantity, working time, and collaboration in achieving the goals set by the organization, agency, or company. Performance is what employees do or do not do. In contrast, employee performance affects how much they contribute to the organization, which includes output quantity, output quality, work attendance, and cooperative attitude (Pawirosumarto et al., 2017).

Regarding organizational structure, the Settlement Infrastructure Agency for DI Yogyakarta Region is a unit of work under the Directorate General of Cipta Karya, the Ministry of Public Works, and People's Housing. Based on the Regulation of the Minister of Public Works and People's Housing Number 16 of 2020 concerning the Organization and Work Procedure of the Technical Implementation Unit at the Ministry of Public Works and People's Housing, the Regional Settlement Infrastructure Work Unit has the task of carrying out planning, technical preparation, implementation, monitoring and evaluation of the construction of settlement facilities and infrastructure, management information on the implementation of settlement construction, post-disaster management, and facilitation of asset handover (DJCK Kementrian PUPR, 2020). Therefore, Settlement Infrastructure Agency for DI Yogyakarta Region is supported by elements of human resources (man), materials (materials), capital (money), tools (machines), and methods (methods) to achieve goals and objectives strategic (BPPW DIY, 2021). Human resources implementing the tasks and functions of the organization are supported by 146 people, consisting of 59 Civil Servants and 87 Non-Civil Servants (BPPW DIY, 2021).

The work environment exists in the environment of workers who can affect themselves in carrying out their duties, such as temperature, humidity, ventilation, lighting, noise, cleanliness of the workplace, and the adequacy of work equipment. The work environment consists of Physical and Non-physical (Sedarmayanti, 2015). The work environment is the employee's internal and external environment that can affect employees in doing their jobs (Nurhasanah & Purwanto, 2022). A good office space arrangement positively affects employee performance because it facilitates communication and coordination and helps supervise to increase employee work efficiency. Adequate arrangements of places can facilitate access between employees in communicating to share Knowledge which has an impact on increasing knowledge in their performance. It is another case if, in a team, the room or workplace between members is different. This condition will have an impact on sharing Knowledge, which is hampered, which causes work completion to be hampered too (Syaputri et al., 2018).

Ajebgomogun & Diyaolu (2019) argued that knowledge sharing is a significant aspect of knowledge management, an important concept of any organization. Riadi (2020) mentioned two dimensions are needed in sharing Knowledge: 1). knowledge Donating, 2). Knowledge Collection. Knowledge donating is exchanging and communicating with other people with intellectual capital from one's person. Knowledge collection is a collection of

Knowledge that refers to consulting with colleagues to encourage them to share their knowledge capital. Pasaribu (2009) stated that knowledge sharing is a culture of social interaction, including exchanging Knowledge between employees, experiences, and skills throughout the organization to create a common basis for collaboration. Knowledge Sharing is one of the main processes in Knowledge Management aimed at maximizing knowledge utilization by distributing Knowledge to members who need it (Fikri, 2022). Knowledge sharing is human behavior, which includes exchanging explicit and implicit experiences and imparting ideas and skills that facilitate Knowledge for innovation in the workplace (Yeboah, 2023). Knowledge sharing is a vital social asset for organizations, leading to better performance and increasing organizational success (Hong et al., 2022). The better and increased the knowledge sharing provided to employees, the performance will increase. If knowledge sharing is bad, the employee's performance will also decrease. Otherwise, employee performance will increase if knowledge sharing is implemented well (M Naufal Arfan, 2023).

Innovative behavior is individual behavior that aims to reach the introduction stage or introduce ideas, processes, products, or procedures that are new and useful in work, groups, or organizations. According to de Jong & Kemp (2003), a person's actions are oriented to the company's interests, where employees convey their new ideas and apply them to the company's advantage. Innovative behavior is "identifying problems and generating ideas, seeking support, taking action and realizing ideas" (Pian et al., 2019). An innovative work behavior is the intentional creation and application of new ideas or innovations (new products or processes) in the workplace to improve individual, group, or organizational performance. Employees' innovative behavior is divided into generating and implementing innovative ideas (Kmieciak, 2020). An employee with innovative behavior will be critical and make any effort to get something new in his work environment so that it is more useful and has added value, so an employee with innovative behavior will try to solve various problems using an effective and efficient approach.

The planning of the physical work environment relates to other areas of office planning. Everything must be carefully coordinated. For example, the office layout must be linked to lighting and sound-controlled machines to reduce noise. In carrying out organizational tasks, the workplace setting determines the smooth running of activities and comfortable work and supports the achievement of the completion of work. Office layout is a factor that has an important role in determining the smoothness of work. Efficient office space arrangement supports optimal employee performance. A good office space arrangement affects employee performance because it facilitates communication, facilitates coordination, and assists in supervision to increase employee work efficiency (Syaputri et al., 2018). This research analyzes the effect of work environment and knowledge sharing on employee performance by mediating innovative behavior. With these variables, the head office can adopt strategic policies to improve employee performance within Settlement Infrastructure Agency for DI Yogyakarta Region.

LITERATURE REVIEW

Employee Performance

The definition of performance is words of job performance and actual performance, which means actual performance or achievement achieved by someone. Performance can be interpreted as work results that can be achieved by a person or group of people in the organization, under the authority and responsibility of each, to achieve the goals of the organization concerned legally, not violating the law and under morals and ethics (Mazidah & Laily, 2020). Performance is what employees do or do not do. Employee performance affects how much they contribute to the organization, which includes output quantity, output quality, work attendance, and cooperative attitude (Pawirosumarto et al., 2017). An employee's performance greatly influences the success rate of an organization, agency, or company. An increase in performance indicates that employees' achievements can increase or contribute well, while a decrease in performance indicates a decrease in the results they produce (Hasyim et al., 2021). Performance indicators include Quality, Quantity of Work, Reliability, and Work Attitude. The statements from these indicators are shown in Table 1.

Table 1. The statements of employee performance variables

No	Statements
Work Quality	
1	I always work according to SOP.
2	I can complete tasks thoroughly.
3	The job that I have completed conforms with the job description that has been given.
Working Quantity	
1	I always complete the amount of work on time.
2	I can do additional tasks assigned by my boss on time without interrupting routine tasks.
3	I try not to procrastinate on the work my boss gives me.
Work Reliability	
1	I always follow the instructions before doing the task/work.
2	I have the initiative to help colleagues in completing work when needed.
3	I'm always careful when I get work done.
Work attitude	
1	I have a good work attitude in collaborating with colleagues.
2	I am always optimistic at work.
3	I am always present at work at the appointed time.

Work Environment

The work environment is everything around the worker, affecting his carrying out the assigned tasks. The work environment in an organization is one important factor to consider. The work environment does not produce products or outputs directly in an organization but significantly influences employee performance. Sedarmayanti (2015) stated that the work environment consists of two types: stated two types of work environment 1). Physical work environment, physical conditions around the workplace that can affect employees directly or indirectly; 2). Non-physical work environment, all conditions or events related to work relations, boss and employees or fellow employees.

The work environment is everything in the employee's internal and external environment that can affect employees in doing their jobs (Nurhasanah & Purwanto, 2022). Banin et al. (2020) also stated that the work environment positively and significantly impacts employee performance. The work environment variable indicators include Lighting in workplace, temperature in the workplace, Safety in the workplace, and Cleanliness (Mangkunegara, 2005). The statements from these indicators are shown in Table 2.

Table 2. Statements of the work environment variable

No	Statements
Physical Work Environment	
1	The light at work is sufficient.
2	The air circulation at work is sufficient.
3	There is no noise at work.
Non-Physical Work Environment	
1	Supervision has been carried out properly.
2	The working atmosphere among employees is good.
3	Communication between employees goes well.

Knowledge Sharing

Knowledge sharing is sharing information, expertise, and skills within an organization, both among colleagues and between bosses and staff. Knowledge sharing can grow and thrive when it finds suitable conditions determined by three key factors: people, organization, and technology. Knowledge sharing is one method in knowledge management that provides opportunities for members of groups, organizations, agencies, or companies to share Knowledge, techniques, experiences, and ideas owned by members with other members (Subagyo, 2007). Riadi (2020) stated that knowledge sharing is an activity in knowledge management used to provide and disseminate Knowledge, concepts, experiences, or skills to a person, department, organization, agency, or company to create a basis for collaboration.

Ajebomogun & Diyaolu (2019) suggested that sharing Knowledge is a significant aspect of knowledge management that is an important concept of every organization. Knowledge sharing is a culture of social interaction, including exchanging Knowledge between employees, experiences, and skills throughout the entire department or organization. It creates a common basis for collaboration (Pasaribu, 2009). Rohim & Budhiosa (2019) stated that Knowledge sharing positively and significantly affected employee performance. Individuals who often carry out knowledge-sharing activities will tend to experience an increase in their performance achievement. Hooff & Ridder (2004), two dimensions are needed to share knowledge: 1). Knowledge Donating, 2). Knowledge Collection. Knowledge-sharing variable indicators consist of Knowledge Donating and Knowledge Collecting. The statement of these indicators is shown in Table 3.

Table 3. Statements of the knowledge-sharing variable

No	Statement
Knowledge Donating	
1	When I learn something new, I pass it on to my colleagues.
2	I share the work information that I have with my colleagues.
3	I think it's important that my colleagues know what work I do.
Knowledge Collecting	
1	When I need certain Knowledge, I ask to be taught by my colleagues about it.
2	I'm curious about what my colleagues know.
3	When a colleague is good at something, I ask them to teach me how to do it.

Innovative Behavior

Innovative behavior is defined as a person's actions oriented towards the company's interests, in which employees convey their new ideas and apply them for the company's benefit. Innovative behavior aims to reach the introduction stage or introduce new and useful ideas, processes, products, or procedures in work, groups, or organizations (de Jong & Kemp, 2003). Innovative behavior aims to reach the introduction stage or introduce new and useful ideas, processes, products, or procedures in work, groups, or organizations. According to Phung et al. (2019), more knowledge-sharing leads to excellent personal and innovative work behavior. Innovative work behavior can help organizations achieve their goals and improve performance (Soebardi, 2020). Yasa et al. (2021) stated that innovative behavior positively influences employee performance. A higher level of innovative behavior can improve employee performance. Indicators of innovative behavior variables are idea exploration, idea generation, idea championing, and idea implementation (Hadi et al., 2020). The statements from these indicators are shown in Table 4.

Table 4. Innovative variable behavior statement items

No	Statement
Idea Exploration	
1	I always find opportunities to add performance, to be better.
2	I like doing new things related to work.
3	I think about work processes effectively.
Idea generation	
1	I convinced my colleagues that my opinion was an innovation to increase agency performance.
2	I always make my teammates enthusiastic about my new ideas.
3	With my ideas, I can always solve problems well.
Idea championing	
1	I'm constantly looking for new ways/ideas to add performance well.
2	I'm fighting for new ideas fiercely.
3	I can communicate every idea effectively.
Idea implementation	
1	I always try to realize the ideas I create.
2	I always implement ideas with my colleagues.
3	I am willing to receive and adopt new ideas.

CONCEPTUAL FRAMEWORK

A conceptual framework explains interconnections variables that will be studied and describe the research process, shown in Figure 1.

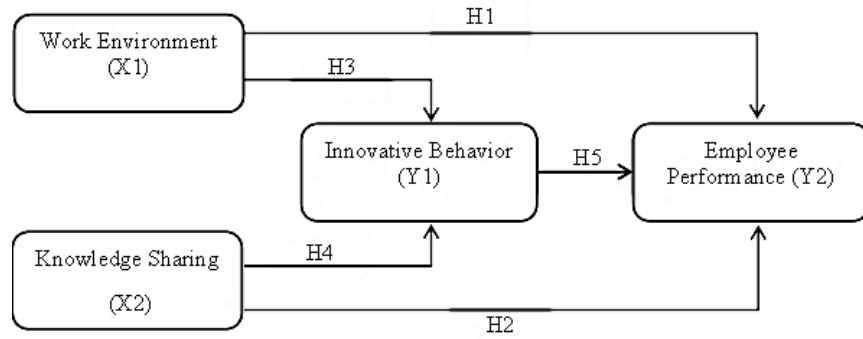


Figure 1. Framework of thought

HYPOTHESIS DEVELOPMENT

Effect of Work Environment on Employee Performance

Human life is inseparable from the various circumstances of the surrounding environment. Between humans and the environment, there is a close relationship. Hasyim et al. (2021) found that the work environment positively and significantly affected employee performance. Likewise, the research conducted by (2020) stated that the work environment has positively affected employee performance. Banin et al. (2020) also stated that the work environment has positive and significant implications for employee performance. Based on the description and explanation above, the hypothesis can be taken that the work environment (X1) variables affect employee performance (Y2).

H1. The work environment has a positive effect on employee performance.

Effect of Knowledge Sharing on Employee Performance

Sharing Knowledge can be done at any time without having to wait for certain needs or conditions. The Knowledge shared is unlimited because it can cover all information in general. Employees can exchange ideas about self-development from outside or any information that will increase the employee's knowledge capacity. Hypothesis test results by Sanosra et al. (2020) showed that knowledge sharing positively and significantly affected employee performance. Research conducted by Rohim & Budhiasa (2019) also found that the work environment had positive and significant implications for employee performance. Based on the description and explanation above, the hypothesis can be taken that the knowledge sharing (X2) variables affect employee performance.

H2. Knowledge sharing has a positive effect on Employee Performance.

Effect of Work Environment on Innovative Behavior

Kmiecik (2020) mentioned that innovative work behavior is the intentional creation and implementation of new ideas or innovations (new products or processes) in the workplace to improve individual, group, or organizational performance. Pian et al. (2019) argued that innovative behavior is "identifying problems and generating ideas, seeking support, taking action and realizing ideas." Previous research conducted by Dewi et al. (2018) found that the

work environment positively and significantly affected innovative behavior among employees. Based on the description and explanation above, the hypothesis can be taken that the variables of the work environment (X1) affect on innovative behavior variable (Y1).

H3. The work environment has a positive effect on Innovative Behavior.

Effect of Knowledge Sharing on Innovative Behavior

In an organizational context, knowledge sharing among employees involves valuable implicit or explicit knowledge, creates new knowledge, develops organizational knowledge, and benefits the organization. In particular, knowledge sharing enhances innovation at the individual and organizational levels (Kmieciak, 2020). Employee innovation behavior is positively influenced by knowledge sharing, innovation spirit, and absorptive capacity (Ye et al., 2021). Phung et al. (2019) proved that knowledge sharing positively and significantly affected innovative employee behavior. Pian et al. (2019) found that Knowledge sharing significantly positively affected innovative behavior in employees. Likewise, Phung et al. (2019) stated that knowledge sharing positively and significantly affected employees' innovative behavior. Munir & Beh (2019) also found that knowledge sharing significantly affected employees' innovative behavior. Based on the description and explanation above, the hypothesis can be taken that the knowledge sharing (X2) variables affect employees' innovative behavior (Y1).

H4. Knowledge Sharing has a positive effect on Innovative Behavior.

Effect of Innovative Behavior on Employee Performance

An employee with innovative behavior will be critical and make any effort to get something new in his work environment so that it is more useful and has added value so that someone who behaves innovatively will try to solve various problems effectively and efficiently. Hadi et al. (2020) stated that innovative behavior has a significant positive effect on employee performance. Yasa et al. (2021) discovered that innovative behavior positively influenced employee performance. So does research by Study Fikri (2022) stated that innovative behavior had a significant effect on employee performance. Based on the description and explanation above, the hypothesis can be taken that innovative behavior (Y1) affects employee performance (Y2).

H5. Innovative behavior has a positive effect on employee performance.

Effect of Work Environment on Employee Performance by Mediating Innovative Behavior

Innovative behavior aims to reach the introduction stage or introduce new and useful ideas, processes, products, or procedures in work, groups, or organizations. Innovation is a key element for differentiation and organizational success. In this sense, there is increasing interest in analyzing how innovation is promoted in organizations and studying the mechanisms or factors that lead to innovation capacities (Canet-Giner et al., 2020). Ajiardani & Anjaningrum (2022), Innovation work behavior has an important role as a mediator of the effect of the

physical work environment on employee performance. Based on the description, the work environment (X1) affects employee performance (Y2) by mediating innovative behavior (Y1). H6. The work environment positively affects employee performance by mediating innovative behavior.

Effect of Knowledge Sharing on Employee Performance by Mediating Innovative Behavior

Sharing knowledge is a significant aspect of knowledge management, an important concept of every organization (Ajegbomogun & Diyaolu, 2019). It describes how to transform personal and organizational information into personal and collective knowledge that may include the skills needed to carry out various organizational tasks. Knowledge sharing is a vital social asset for organizations, leading to better job performance and enhancing organizational success (Hong et al., 2022). Fikri (2022) found that Innovative Behavior as an intervening variable can significantly mediate the effect of knowledge sharing on Employee Performance. Based on the description, knowledge sharing (X2) affects employee performance (Y2) by mediating innovative behavior (Y1).

H7. Knowledge sharing has a positive effect on employee performance by mediating innovative behavior.

RESEARCH METHODS

The research subjects were the Settlement Infrastructure Agency employees for DI Yogyakarta Region. The objects of this research are work environment variables, knowledge sharing, innovative behavior, and employee performance. The population of this study consisted of 146 employees working at the Settlement Infrastructure Agency for DI Yogyakarta Region, consisting of 59 Civil Servants and 87 Non-Civil Servants. The sampling method in this study is the census method. Census is a way of collecting data when all population elements are investigated individually. Data collection used a questionnaire distributed to all employees, as many as 146 respondents. Of the 146 respondents, 100% filled out and returned the questionnaire, or 68%.

An operational definition is the provision or determination of meaning for a variable, specifying the activities, implementation, or operations needed to measure, categorize, or manipulate variables. In this research, there are 3 (three) types of variables used: 1). Independent variables - work environment (X1) and Knowledge sharing variables (X2), 2). Dependent variable - employee performance (Y2), 3). Intervening/mediation variable - innovative behavior (Y1). Data analysis used Partial Least Square (PLS) inferential, variance-based SEM with SmartPLS Version 3.0 software.

RESULTS

Inferential Analysis

To conduct inferential analysis in the study, the tool used was Partial Least Square (PLS), a variance-based SEM with Smartpls software version 3.0. The PLS test sequence is an indicator test, fit model test, and hypothetical test.

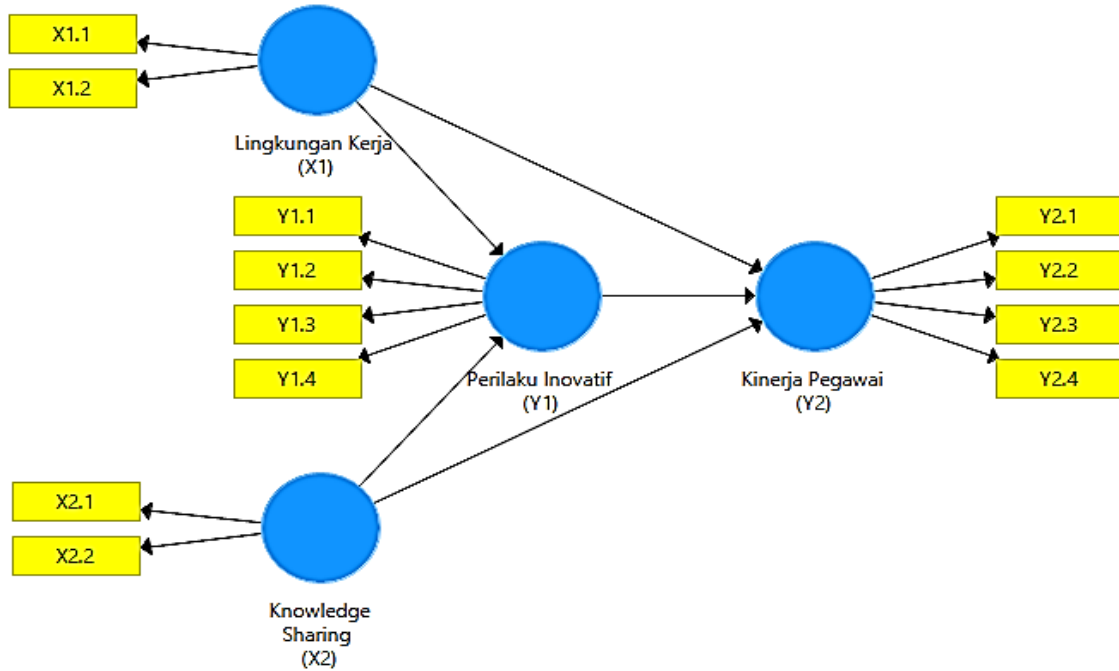


Figure 2. Latent Variable Model

Indicator Test

From this indicator test, the output validity and reliability of the model are measured by the following criteria: Convergent Validity, Discriminant Validity, and Composite Reliability.

Table 5. Convergent Validity

Indicator	Work Environment	Knowledge Sharing	Innovative Behavior	Employee Performance	Status
	X1	X2	Y1	Y2	
X1.1	0.888				Valid
X1.2	0.913				Valid
X2.1		0.888			Valid
X2.2		0.823			Valid
Y1.1			0.822		Valid
Y1.2			0.875		Valid
Y1.3			0.900		Valid
Y1.4			0.916		Valid
Y2.1				0.905	Valid
Y2.2				0.874	Valid
Y2.3				0.877	Valid
Y2.4				0.900	Valid

Source: Primary data processed in 2023

Table 6. Discriminant Validity

Indicator	Work environment	Knowledge sharing	Innovative Behavior	Employee Performance	Status
	X1	X2	Y1	Y2	
X1.1	0.888	0.419	0.310	0.411	Valid
X1.2	0.913	0.423	0.346	0.467	Valid
X2.1	0.450	0.888	0.397	0.526	Valid
X2.2	0.341	0.823	0.352	0.402	Valid
Y1.1	0.375	0.460	0.822	0.614	Valid
Y1.2	0.243	0.312	0.875	0.578	Valid
Y1.3	0.286	0.343	0.900	0.723	Valid
Y1.4	0.366	0.416	0.916	0.707	Valid
Y2.1	0.394	0.429	0.671	0.905	Valid
Y2.2	0.409	0.348	0.707	0.874	Valid
Y2.3	0.440	0.553	0.629	0.877	Valid
Y2.4	0.490	0.609	0.663	0.900	Valid

Source: Primary data processed in 2023

Table 7. Composite Reliability

Variables	Composite Reliability	Average Variance Extracted (AVE)	Status
Work Environment (X1)	0.896	0.811	Reliable
Knowledge sharing(X2)	0.845	0.732	Reliable
Innovative Behavior (Y1)	0.931	0.773	Reliable
Employee Performance (Y2)	0.938	0.791	Reliable

Source: Primary data processed in 2023

Model Fit Test

Model fit testing is carried out by comparing the estimates generated by SmartPLS with cut-offs or predetermined criteria. The results of the SmartPLS estimation with the criteria are shown in Table 8.

Table 8. Model Fit Test Results

Fit Summary	Cut Off	Estimation	Explanation
SRMR	< 0.10	0.070	Good
d_ ULS	Output Confidence Interval Larger Original Sample (OS)	CI(0.450) > OS(0.378)	Good
d_ G	Output Confidence Interval Larger Original Sample (OS)	CI(0.330) > OS(0.269)	Good
Chi-Square	χ^2 Statistics < χ^2 Tables,	161.243 > 123.225	Not good
NFIs	Approaching value 1	0.803	Good
RMS Theta	< 0.12	0.243	Not good

Source: Primary data processed in 2023

Hypothesis testing

The inner or structural model is a hypothesis test describing the relationship and influence between latent variables based on substantive theory. Hypothesis testing compares the Sig alpha value (0.05) with the p-value. The analysis using smartpls obtained the results shown in Table 9.

Table 9. Hypothesis Test Results

	Hypothesis	Symbol	Parameter Coefficient (Original Sample)	P Values	Status
H1	The Effect of Work Environment on Employee Performance	(+)	0.176	0.009	Proven
H2	The Effect of Knowledge sharing on Employee Performance	(+)	0.204	0.005	Proven
H3	The Effect of the Work Environment on Innovative Behavior	(+)	0.205	0.100	Not proven
H4	The Effect of Knowledge Sharing on Innovative Behavior	(+)	0.343	0.016	Proven
H5	The Effect of Innovative Behavior on Employee Performance	(+)	0.597	0.000	Proven

Source: Primary data processed in 2023

DISCUSSION

The results of hypothesis testing using SmarPLS 3 in Table 9 can be explained as follows.

The Effect of Work Environment on Employee Performance

H1 is proven or accepted by the original sample coefficient value of 0.176 and the t-statistic value of 2.623, while the p-value is $0.009 < 0.05$. These results are consistent with Hasyim et al. (2021), finding that the work environment positively and significantly affects employee performance. Likewise, Girdwichai & Sriviboon (2020) showed that the work environment proved to have a positive effect on employee performance. Banin et al. (2020) also found that the work environment had positive and significant implications for employee performance. Based on the explanation above, the researcher concludes that the work environment positively and significantly affects employee performance.

The Effect of Knowledge sharing on Employee Performance

H2 is proven or accepted by the original sample coefficient value of 0.204 and the t-statistic value of 2.791, while the p-value is $0.005 < 0.05$. These results are consistent with previous research by Rohim & Budhiasa (2019), finding that Knowledge sharing has a positive and significant effect on employee performance. Individuals who often carry out knowledge-sharing activities will tend to experience an increase in their performance achievement. So is the research done by Sanosra et al. (2020) that knowledge sharing positively and significantly affected employee performance. Based on the explanation above, the researcher concludes that knowledge sharing positively and significantly affects employee performance.

The Effect of the Work Environment on Innovative Behavior

H3 is not proven or rejected by the original sample coefficient value of 0.205 and the t-statistic value of 1.647, while the p-value is $0.100 > 0.05$. This study found that the work environment was not proven to influence innovative employee behavior. Based on the results of individual description analysis, the work environment variable with the statement "I am willing to accept and adapt new ideas" with a value of 68% answered agree. Suppose it is correlated with the work environment variable with the statement "No noise at work," which answers

neutral by 25%. In that case, the atmosphere of the work environment, even though it is in uncomfortable conditions, employees are not disturbed by the atmosphere, so it does not affect them in innovating or getting ideas and ideas. Innovative behavior is individual behavior that is useful in work, groups, or organizations.

In contrast, Dewi et al. (2018) found a positive relationship between perceptions of the work environment and employees' innovative behavior, and is accepted significantly. The more positive the employee's perception of the work environment, the higher the innovative behavior tends to be. Endarwati et al. (2022) showed that the work environment did not affect innovative behavior. Based on the explanation above, the researcher concludes that the work environment around the office area doesn't affect innovative employee behavior.

The Effect of Knowledge Sharing on Innovative Behavior

H4 is proven or accepted by the original sample coefficient value of 0.343 and the t-statistic value of 2.42, while the p-value is $0.016 < 0.050$. Similarly, Pian et al. (2019) showed that knowledge sharing positively impacted innovative behavior. So are the results of research by Phung et al. (2019), finding that knowledge sharing had a positive and significant effect on innovative work behavior. Phung et al. (2019) proved that higher knowledge sharing leads to superior personal innovative work behavior. Munir & Beh (2019) also stated that knowledge sharing affected innovative work behavior. Ye et al. (2021) found that employee innovation behavior positively affected knowledge sharing, innovation spirit, and absorptive capacity.

Hence, knowledge sharing positively and significantly affects innovative work behavior. The higher the intensity of knowledge sharing, either between colleagues or head office and subordinates, will increase innovative employee behavior. The link between knowledge sharing and innovation is that Knowledge sharing supports an organization's efforts and innovation power. Knowledge sharing makes an important contribution to all innovation value chain activities. A strong knowledge-sharing base within the organization is a good starting point for implementing innovation.

The Effect of Innovative Behavior on Employee Performance

H5 is proven or accepted by the original sample coefficient value of 0.597 and the t-statistic value of 11.285, while the p-value is $0.000 < 0.050$. This finding is similar to Hadi et al. (2020), stating that innovative behavior significantly positively affected employee performance. Likewise, Yasa et al. (2021) showed that innovative behavior positively affected employee performance. Fikri (2022) also found that innovative behavior significantly affected employee performance.

Hence, innovative behavior positively and significantly affects employee performance. The higher the level of innovative behavior of a person or employee, will be able to improve the employee's performance at work. Employees with innovative behavior can create or combine creative ideas into something new and have the courage to develop these ideas in agencies or organizations.

Mediation Analysis

Mediation analysis compared the Direct Effect (DE) and Total Effect (TE) values. The total effect is the sum of the Direct Effect with the Indirect Effect.

Table 10. Mediation Analysis Criteria

VARIABLE	DIRECT	INDIRECT EFFECT	TOTAL EFFECT	MEDIATION
	EFFECT (DE)	(IE)	(TE)	EFFECT
	(X1 → Y2)	(X1 → Y1 → Y2)	(DE + IE)	TE - DE
X1	0.176 (0.014)	0.122 (0.140)	0.298 (0.001)	(0.298-0.176) = 0.122
X2	0.204 (0.006)	0.205 (0.015)	0.409 (0.000)	(0.409-0.204) = 0.205

Source: Primary data processed in 2023

The mediation analysis using SmarPLS 3, according to Table 10, can be explained as follows:
The Effects of Work Environment on Employee Performance with Mediating Innovative Behavior

The bootstrapping Smartpls analysis shows values of $0.298 > 0.176$, while the value of the mediating effect is 0.122. The analysis shows that innovative behavior acts as a variable that increases the strength effect of work environment variables on employee performance. Similarly, Ajiardani & Anjaningrum (2022) found that innovative work behavior mediated work involvement and the physical work environment on employee performance. The role of innovative behavior mediates work environment variables with positive and significant employee performance. Hence, innovative behavior mediating the work environment with employee performance has a positive and significant effect.

The Effects of Knowledge Sharing on Employee Performance with Mediating Innovative Behavior

The bootstrapping Smartpls analysis shows values of $0.409 > 0.204$, while the value of the mediating effect is 0.205. The analysis shows that innovative behavior acts as a variable that increases the strong effect of knowledge-sharing variables on employee performance. Fikri (2022) shows that innovative behavior as an intervening variable can significantly mediate the effect of knowledge sharing on employee performance. Hence, employees' innovative behavior in mediating Knowledge sharing with employee performance has a positive and significant effect.

CONCLUSION

Based on the analysis and discussion above, the work environment and knowledge sharing positively and significantly affected employee performance. In contrast, the work environment did not affect innovative behavior. Knowledge sharing had a positive and significant effect on employees' innovative behavior. Innovative behavior positively and significantly affects employee performance at the Settlement Infrastructure Agency for DI Yogyakarta Region. Work environment and knowledge sharing positively and significantly affected employee performance by mediating innovative behavior. The role of innovative behavior in mediating

the work environment and knowledge sharing on employee performance had a positive and significant effect. Therefore, innovative behavior could mediate the work environment and knowledge sharing on employee performance. This study is still far from perfect. Future researchers can compare respondents from public and non-public organizations, adding other variables not included in this study, such as intellectual capital as a mediator.

REFERENCES

- Ajegbomogun, F. O., & Diyaolu, O. B. (2019). Availability of library facilities, knowledge sharing as determinants of job performance of library staff in Southwest Nigeria. *Library Philosophy and Practice*, 2019, 1–20.
- Ajiardani, R. L. B., & Anjaningrum, W. D. (2022). Bagaimana Keterlibatan Kerja, Perilaku Kerja Inovasi, dan Lingkungan Kerja Fisik Menjelaskan Kinerja Karyawan Vosco Group? *Jurnal Ecogen*, 5(3), 328. <https://doi.org/10.24036/jmpe.v5i3.13379>
- Anggi. (2021). *Kinerja Karyawan: Pengertian dan Faktor yang Mempengaruhi Kinerja karyawan*. accurate.id. <https://accurate.id/marketing-manajemen/kinerja-karyawan/>
- Banin, Q. Al, Eliyana, A., & Latifiyah, E. R. (2020). Enhancing employee performance with work motivation as a mediation variable. *Systematic Reviews in Pharmacy*, 11(9), 333–346. <https://doi.org/10.31838/srp.2020.9.50>
- BPPW DIY. (2021). *Laporan Akuntabilitas Kinerja Instansi Pemerintah Balai PPW DIY Tahun 2021*.
- Canet-Giner, T., Redondo-Cano, A., Saorín-Iborra, C., & Escribá-Carda, N. (2020). Impact of the perception of performance appraisal practices on individual innovative behavior. *European Journal of Management and Business Economics*, 29(3), 277–296. <https://doi.org/10.1108/EJMBE-01-2019-0018>
- de Jong, J. P. J., & Kemp, R. (2003). Determinants of Co-Workers' Innovative Behaviour: An Investigation into Knowledge Intensive Services. *International Journal of Innovation Management*, 07(02), 189–212. <https://doi.org/10.1142/s1363919603000787>
- Dewi, L. F. A. A., Yuniasanti, R., & Prahara, S. A. (2018). Hubungan Persepsi Terhadap Lingkungan Kerja Dengan Perilaku Inovatif Karyawan Bagian Penjualan. *Insight: Jurnal Ilmiah Psikologi*, 19(1), 13. <https://doi.org/10.26486/psikologi.v19i1.597>
- DJCK Kementerian PUPR. (2020). *Rencana Strategis Dirjen Cipta Karya Kementerian Pekerjaan Umum dan Perumahan Rakyat 2020 - 2024*.
- Endarwati, W. D., Subiyanto, E. D., & Septyarini, E. (2022). PENGARUH GAYA KEPEMIMPINAN, LINGKUNGAN KERJA DAN KEPUASAN KERJA TERHADAP PERILAKU INOVATIF PEGAWAI SMK NASIONAL BERBAH. *J-MACC : Journal of Management and Accounting*, 5(2), 12–22. <https://doi.org/10.52166/j-macc.v5i2.3474>
- Fikri, F. (2022). *Pengaruh knowledge sharing dan motivasi terhadap kinerja karyawan melalui perilaku inovatif sebagai variabel intervening*. 20, 1–20.
- Girdwichai, L., & Sriviboon, C. (2020). Employee motivation and performance: Do the work environment and the training matter? *Journal of Security and Sustainability Issues*, 9(4), 42–54. [https://doi.org/10.9770/JSSI.2020.9.J\(4\)](https://doi.org/10.9770/JSSI.2020.9.J(4))

- Hadi, S., Putra, A. R., & Mardikaningsih, R. (2020). Pengaruh Perilaku Inovatif Dan Keterlibatan Kerja Terhadap Kinerja Karyawan. *Jurnal Baruna Horizon*, 3(1), 186–197. <https://doi.org/10.52310/jbhorizon.v3i1.138>
- Hasyim, E. F., Subiyanto, D., & Septyarini, E. (2021). Pengaruh Lingkungan Kerja dan Komunikasi terhadap Kinerja Karyawan dengan Knowledge Sharing sebagai Intervening. *Inovasi*, 17(3), 430–438.
- Hong, J. C., Lee, Y. F., Chen, H. H., & Nguyen, H. B. N. (2022). Knowledge Sharing Types as Predictors of Job Performance Mediated by Problem-Solving Self-Efficacy in the Information System Integration Service Industry. *Frontiers in Psychology*, 13(May), 1–10. <https://doi.org/10.3389/fpsyg.2022.857782>
- Kmieciak, R. (2020). Trust, knowledge sharing, and innovative work behavior: empirical evidence from Poland. *European Journal of Innovation Management*. <https://doi.org/10.1108/EJIM-04-2020-0134>
- M Naufal Arfan, T. (2023). *Pengaruh Knowledge Sharing dan Kompetensi terhadap Kinerja Karyawan di PT. PLN (Persero) Unit Pelaksana Pengendalian Pembangkit Bengkulu. 1*, 65–69. <https://doi.org/10.33087/jiubj.v23i1.2746>
- Mangkunegara, A. . A. P. (2005). *Manajemen Sumber daya Manusia Perusahaan*. PT Remaja Rosdakarya.
- Mazidah, A., & Laily, N. (2020). Pengaruh knowledge sharing terhadap perilaku inovatif dan kinerja karyawan. *Jurnal Ilmu dan Riset Manajemen*, 9(2), 1–22.
- Munir, R., & Beh, L. S. (2019). Measuring and enhancing organisational creative climate, knowledge sharing, and innovative work behavior in startups development. *Bottom Line*, 32(4), 269–289. <https://doi.org/10.1108/BL-03-2019-0076>
- Nurhasanah, N., & Purwanto, S. K. (2022). Systematic Literature Review: Measurement Model of Lecturer Performance and Organizational Citizenship Behaviours Based on Work Environment Characteristics, Innovation, and Knowledge Sharing. *Central Asia and the Caucasus*, 23(1), 3794–3803.
- Pasaribu, M. (2009). *Knowledge Sharing: Meningkatkan Kinerja Layanan Perusahaan (PT Elex Me)*.
- Pawirosumarto, S., Sarjana, P. K., & Gunawan, R. (2017). The effect of work environment, leadership style, and organizational culture towards job satisfaction and its implication towards employee performance in Parador Hotels and Resorts, Indonesia. *International Journal of Law and Management*, 59(6), 1337–1358. <https://doi.org/10.1108/IJLMA-10-2016-0085>
- Phung, V. D., Hawryszkiewicz, I., & Chandran, D. (2019). How knowledge sharing leads to innovative work behaviour: A moderating role of transformational leadership. *Journal of Systems and Information Technology*, 21(3), 277–303. <https://doi.org/10.1108/JSIT-11-2018-0148>
- Pian, Q. Y., Jin, H., & Li, H. (2019). Linking Knowledge sharing to innovative behavior: the moderating role of collectivism. *Journal of Knowledge Management*, 23(8), 1652–1672. <https://doi.org/10.1108/JKM-12-2018-0753>

- Riadi, M. (2020). *Knowledge Sharing (Pengertian, Dimensi, Pengelolaan, Indikator dan Faktor Pendorong)*. <https://www.kajianpustaka.com/2020/11/knowledge-sharing.html>
- Rohim, A., & Budhiasa, I. G. S. (2019). Organizational culture as moderator in the relationship between organizational reward on knowledge sharing and employee performance. *Journal of Management Development*, 38(7), 538–560. <https://doi.org/10.1108/JMD-07-2018-0190>
- Sanosra, A., Hakim, A. R., Cahyono, D., Qomariah, N., & MuhammadThamrin. (2020). *LEADERSHIP STYLE IN IMPROVING EMPLOYEE PERFORMANCE WITH WORK CULTURE AS AN*. 200, 919–936.
- Sedarmayanti. (2015). *Manajemen Sumber Daya Manusia*. Refika Aditama.
- Soebardi, R. (2020). Perilaku inovatif. *Jurnal Psikologi Ulayat*, 1(1), 57–74. <https://doi.org/10.24854/jpu4>
- Subagyo, A. (2007). *Studi kelayakan : teori dan aplikasi*. PT. Elex Media Komputindo.
- Syaputri, Z., Nawati, I., Tri Wida Yanti, & Rina, L. (2018). Efisiensi Penataan Ruang Kantor dalam Menunjang Kinerja Karyawan. *Prosiding Seminar Nasional Pendidikan Administrasi Perkantoran (SNPAP)*, 154–160.
- 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. <https://doi.org/10.1108/13673270410567675>
- Yasa, N. N. K., Rahmayanti, P. L. D., Sugianingrat, I. A. P. W., Dharmanegara, I. B. A., & Suharto, R. B. (2021). Peran Perilaku Inovatif dan Komitmen Organisasional Memediasi Pengaruh Kebahagiaan Kerja Terhadap Kinerja Karyawan. *MIX: Jurnal Ilmiah Manajemen*, 11(2), 258–273.
- Ye, P., Liu, L., & Tan, J. (2021). Influence of knowledge sharing, innovation passion and absorptive capacity on innovation behaviour in China. *Journal of Organizational Change Management*, 34(5), 894–916. <https://doi.org/10.1108/JOCM-08-2020-0237>
- Yeboah, A. (2023). Knowledge sharing in organization: A systematic review. *Cogent Business and Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2195027>