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Employee Performance, Knowledge Management, and Work Environment on Job Stress at PT. Mentari Terbit Engineering, Bandung City

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ABSTRACT
Work stress is a condition of tension that affects the physical and mental balance of employees, which in turn can reduce performance and productivity in the workplace. PT Mentari Terbit Engineering (MTE) faces challenges in maintaining optimal employee performance amidst the dynamics of a competitive work environment. For this reason, good human resource management, including the application of knowledge management and the creation of a comfortable work environment, is crucial in reducing work stress levels and improving employee performance. This study aims to analyze the effect of employee performance, knowledge management, and work environment on work stress at PT Mentari Terbit Engineering, Bandung City. Using quantitative methods, data were obtained through questionnaires on 50 employees selected by simple random. The data were then analyzed by Structural Equation Modeling (SEM) method using LISREL software. The results showed that work environment and work stress had a significant influence on employee performance, while knowledge management showed no significant influence. This study implies the importance of creating a conducive work environment to increase productivity and reduce stress levels in the work environment.

Keywords: Employee Performance, Knowledge Management, Work Environment, Work Stress.

INTRODUCTION

The survival of a company is determined by the success of the organization in managing existing human resources (Mahapatro, 2021). Human resources play a very important role in realizing the company's vision, mission and goals that have been set, and can determine the real achievement of the company with the available resources (Putri & Rahyuda, 2019). Hasibuan in (Sinurat Elperida Juniami, 2019) defines human resources as a science and art that regulates the relationship and role of labor so that it effectively and efficiently helps realize the goals of the company, employees and society. Human resources are very vital company assets, therefore their role and function cannot be replaced by other resources including modern technology

(Riniwati, 2016). Good human resources will be able to carry out company activities more optimally and minimize losses (Siagian, 2023).

PT Mentari Terbit Engineering (MTE) is a company engaged in the work of planning consultants, assessment and supervision of structural construction projects for buildings, bridges and docks. The number of MTE employees is 50 people.

Work stress is a condition of tension that causes physical and mental imbalance and has an impact on a person's emotions and conditions (Daniel, 2019). The company will experience losses if there are employees who experience work stress because it will have an impact on reducing performance. The company through the knowledge and talent management department has an important role as an asset to organize employees in increasing employee knowledge and i deas and reducing work pressure in anticipation of burnout at work (Kossyva et al., 2024).

Good performance can result in high work productivity. Employee performance is the result of work in quality and quantity that can be achieved by an employee in carrying out his duties in accordance with the responsibilities given to him (Sofuan & Setyowati, 2014). HR performance can be seen from the quality and quantity of the results of the work done, as well as the timeliness of job completion (Al-Musadieq et al., 2018). Poor performance will have an impact on the company's image and certainly slow down the process of achieving organizational goals. Negligence, lack of thoroughness and lack of responsibility in tasks are examples of poor employee performance. Therefore, improving employee performance is a serious concern in all fields of industry, both in large and small companies.

Employee performance will achieve maximum results if supported by their knowledge. The 21st century is known as the era of knowledge and information. Nonaka and Takeuchi (Widyatmika et al., 2019) stated that in order for knowledge in an organization to be transformed from the individual dimension to the collective dimension or from the tacit form to the explicit form, the organization can provide opportunities for people to interact with each other directly.

MTE in facing challenges to win the competitive business environment needs to have qualified employees. Through the application of Knowledge management that allows employees to share knowledge and information. The application of Knowledge management is one way that can be used to maintain employee work results.

Knowledge management is an effort for the company to manage knowledge into company assets (Omotayo, 2015). Knowledge management can increase employee knowledge easily and improve employee abilities quickly by obtaining information and training. Good work environment conditions are one of the factors supporting employee productivity which ultimately has an impact on increasing employee performance levels (Surijadi & Musa, 2020). The workplace environment is an important component of work life for employees because employees spend most of their time at work, and it affects them in one way or another (Hafeez et al., 2019). In the work environment, companies must be able to review how to make

employees feel comfortable with the work environment provided by the company that allows employees to work optimally.

The novelty of this study lies in its focus on integrating knowledge management, work environment, and work stress as interrelated factors influencing employee performance, specifically in the context of PT Mentari Terbit Engineering (MTE). Unlike previous studies that often examine these factors independently, this research explores how they collectively affect employee productivity and mental well-being in a mid-sized company specializing in structural construction consulting services. This study also emphasizes the role of knowledge-sharing mechanisms in mitigating work stress and enhancing employee performance, offering a unique perspective on managing human capital effectively.

Based on the background description above, the purpose of this study is to determine and analyze employee performance, knowledge management, work environment on work stress at PT Mentari Terbit Engineering Bandung City. This study provides practical and theoretical contributions. Practically, the findings will guide PT Mentari Terbit Engineering in designing strategies to create a supportive work environment, implement effective knowledge management systems, and reduce work stress, ultimately improving employee performance. Theoretically, this research contributes to the literature by providing a comprehensive framework that connects work environment, knowledge management, and stress management to employee productivity. It offers a foundation for future studies to explore these dynamics in other industries and organizational contexts.

RESEARCH METHOD

This study employed a quantitative research method and was conducted in 2024. The unit of analysis consisted of employees of PT Mentari Terbit Engineering, located in Bandung City. The data collection process involved obtaining primary data through questionnaires distributed to respondents. The questionnaire utilized a 5-point Likert scale to measure variables, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The sample size for the study was 50 respondents, selected using a simple random sampling technique to ensure that every employee had an equal chance of being included in the sample. This approach enhances the representativeness of the data. The collected data were analyzed using Structural Equation Modeling (SEM), a robust statistical technique for examining relationships between variables. The analysis was conducted using LISREL software version 8.7, which is widely recognized for its ability to perform complex modeling and hypothesis testing effectively.

RESULT AND DISCUSSION

Model Evaluation

Outer model evaluation

The outer model (measurement model) is measured by first order measurement with valid items where the loading factor is >0.50 and the calculated t value is > 2.09 (t table atα =0.05/2). Table 1 below displays the results of the outer model measurement.

Table 1 shows the validity and reliability measurements using Cronbach Alpha and CR composite reliability. The Loading Factor to assess Convergent validity and its significance (Prob and t-value) were evaluated, where the loading factor exceeded 0.50 and the calculated t-value of all indicators was greater than 2.09 with prob. <0.05.

The measurements used for internal consistency are Cronbach alpha and composite reliability (CR), which measure reliability based on the observed variable relationship of items. The reliability value is acceptable if Composite Reliability (CR) and Cronbach alpha > 0.70 (Sürücü & Maslakci, 2020). A high composite reliability is an excellent indication that the items measure the same construct. Overall, the measures used in this study have adequate reliability and validity.

Table 1. Validity and Reliability (Outer Model)

Variable	Indicator	Loading Factor	Standard Deviation	t count	Prob.	Cronbach's Alpha	Construct Reliability (CR)
Employee Performance	KK1 <- Employee Performance	0.830	0.039	21.349	0.000	0.942	0.951
	KK2 <- Employee Performance	0.783	0.076	10.358	0.000		
	KK3 <- Employee Performance	0.920	0.025	36.329	0.000		
	KK4 <- Employee Performance	0.797	0.047	16.841	0.000		
	KK5 <- Employee Performance	0.839	0.034	24.658	0.000		
	KK6 <- Employee Performance	0.876	0.029	30.118	0.000		
	KK7 <- Employee Performance	0.801	0.082	9.815	0.000		
	KK8 <- Employee Performance	0.828	0.039	21.011	0.000		
	KK9 <- Employee Performance	0.763	0.079	9.611	0.000		
Knowledge Management	KM1 <- Knowledge Management	0.832	0.082	10.208	0.000	0.945	0.955

Variable	Indicator	Loading Factor	Standard Deviation	t count	Prob.	Cronbach's Alpha	Construct Reliability (CR)
	KM2 <- Knowledge Management	0.873	0.059	14.730	0.000		
	KM3 <- Knowledge Management	0.904	0.038	23.895	0.000		
	KM4 <- Knowledge Management	0.910	0.013	71.080	0.000		
	KM5 <- Knowledge Management	0.847	0.089	9.504	0.000		
	KM6 <- Knowledge Management	0.864	0.059	14.680	0.000		
	KM7 <- Knowledge Management	0.836	0.067	12.438	0.000		
Environment Work	LK1 <- Work Environment	0.946	0.021	45.801	0.000	0.941	0.956
	LK2 <- Work Environment	0.912	0.047	19.281	0.000		
	LK3 <- Work Environment	0.939	0.019	48.746	0.000		
	LK4 <- Work Environment	0.848	0.050	17.076	0.000		
	LK5 <- Work Environment	0.854	0.058	14.747	0.000		
Work Stress	Stress1 <- Work Stress	0.841	0.032	26.583	0.000	0.879	0.910
	Stress2 <- Job Stress	0.856	0.040	21.499	0.000		
	Stress3 <- Job Stress	0.745	0.123	6.072	0.000		
	Stress4 <- Job Stress	0.834	0.046	18.011	0.000		
	Stress5 <- Job Stress	0.814	0.057	14.312	0.000		

Source: SmartPLSv3.0 output (2024)

Evaluation of Inner Model

The structural model referred to as the inner model shows the relationship (path) between constructs. Inner model evaluation is done using R-square, predictive relevance (Q-square value),

and Goodness of Fit (GoF). According to (Nitzl & Chin, 2017), the R-Square value is 0.67 strong, 0.33 medium, and 0.19 weak. GoF is used to validate measurement and structural models with values of 0-0.25 small, 0.25-0.36 medium, and >0.36 large. Prediction Relevance (Q-Square) is a test to determine the predictive ability with the blindfolding procedure. Q-Square values are 0.35 (large), 0.15 (medium), and 0.02 (small).

Table 2. Evaluation of Inner Mode (R-Square, f Square, Q Square and GOF)

	R Square	f Square	Q Square	GOF
Employee Performance	0,842	-	0,568	**0,692**
Knowledge Management	-	0.125	-	
Work Environment	-	0.259	-	
Work Stress	-	0.179	-	

Source: SmartPLSv3.0 output (2024)

Table 2 explains the magnitude of the influence of independent variables (exogenous) on endogenous with a strong R-square (above 0.67), GoF is in the large category (> 0.36) and Q-Square is in the large category (above 0.35), so the model is fit. The results of data processing with SmartPLS are presented in the path diagram as follows:

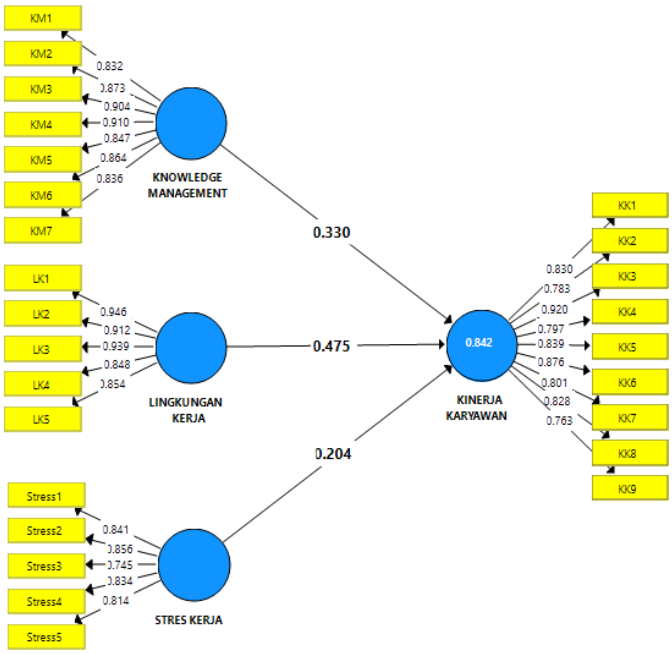

Figure 1. Path Diagram of Testing Results

Hypothesis Testing Results

Table 3. Hypothesis Testing Results

No.	Hypothesis		Path Coefficient	Std. Error	t-value	Prob.	R2	Conclusion
1	Knowledge Management	->	0,330	0,171	1,930	0,054	0,109	Not Significant

No.	Hypothesis	Path Coefficient	Std. Error	t-value	Prob.	R2	Conclusion
	Employee Performance						
2	Work Environment -> Employee Performance	0,475	0,180	2,645	0,008	0,226	Significant
3	Job Stress -> Employee Performance	0,204	0,062	3,319	0,001	0,042	Significant

Source: Data processed with SmartPls v3,

Based on the results in table 3, it is known that work environment and stress have a significant effect on employee performance where the t-count value> t table atα =0.05/2 (2.09) and Prob < 0.05, so the hypothesis is accepted. While knowledge management does not have a significant effect on employee performance where the t-count value = 1.930 < t table atα =0.05/2 (2.09) and has prob 0.054> 0.05. The work environment has a dominant influence with a coefficient of 0.475 and R2 = 0.226.

The results of this study highlight the significant role of work environment and work stress in influencing employee performance, with work environment showing the strongest impact. This finding is in line with previous research, such as (Sundariati, 2024), which emphasizes that a supportive and well-maintained work environment can foster employee motivation and productivity. In addition, the significant effect of job stress on employee performance corroborates the research of (Napitu & Tarigan, 2022)), which emphasizes the detrimental impact of unmanaged stress on work outcomes. Interestingly, the absence of a significant relationship between knowledge management and performance challenges the findings of (Nonaka & Takeuchi, 2019), which suggests that the mere presence of a knowledge sharing system may not be enough to improve performance without deeper integration into daily work processes. The results of this study suggest that companies such as PT Mentari Terbit Engineering should focus on creating a supportive work environment and implementing an effective stress management program while re-evaluating their knowledge management practices to ensure that they match the needs and goals of the organization.

CONCLUSION

This study found that work environment and stress level have a significant effect on employee performance at PT Mentari Terbit Engineering, while knowledge management showed no significant effect. These results suggest that companies need to focus more on creating a comfortable work environment as well as effective stress management strategies to improve employee productivity. Support from a good work environment can reduce stress and directly contribute to improved performance.

For future research, this contribution opens up opportunities to further examine the relationship between knowledge management and employee performance by considering additional factors such as leadership style and intrinsic motivation. Future research is also recommended to explore the implementation of more specific stress management programs and evaluate their impact on employee outcomes across different industry sectors.

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