

## **The Effect of Work Commitment and Organizational Culture on Employee Performance with Work Environment Mediation (*Case Study of PT PLN Indonesia Power UBP Barito in South Kalimantan*)**

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### **Abstract**

*In the era of industrial transformation and digitalization in the energy sector, the success of public organizations such as PT PLN Indonesia Power UBP Barito increasingly depends on employees who demonstrate strong commitment and a positive work culture. The study aims to examine the influence of employee commitment and organizational culture on employee performance and to analyze the mediating role of the work environment in this relationship. This study employed a quantitative approach with an explanatory design. The population consisted of 130 employees of PT PLN Indonesia Power UBP Barito, from which 98 respondents were selected as the sample using the Slovin formula. Data were collected through a Likert-scale questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS version 4. The findings indicate that employee commitment and organizational culture have a positive and significant effect on employee performance. Furthermore, the work environment was found to partially mediate the relationship between both independent variables and performance. These results highlight that strong employee commitment, a positive organizational culture, and a supportive work environment collectively enhance employee effectiveness and performance at PT PLN Indonesia Power UBP Barito.*

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## **INTRODUCTION**

Employee performance is a key indicator that determines an organization's success in achieving its strategic objectives. In the context of modern organizations, particularly in the era of Industry 4.0, the ability to manage human resources (HR) effectively has become a distinguishing factor between adaptive organizations and those that lag behind. Human resources are no longer viewed merely as factors of production, but as strategic assets that influence organizational competitive advantage. The World Economic Forum (2023) emphasizes that workforce quality and competitiveness are essential prerequisites for sustainable global economic growth.

In Indonesia, a study by Mariyani, Aripin, and Darmanto (2023) reveals that internal organizational factors such as work culture, organizational commitment, and the work environment explain up to 63.3% of the variation in employee performance in the public sector. This finding indicates that employee performance is not solely determined by external factors such as government policies or regulations, but is also significantly shaped by effective internal management of values, commitment, and the work climate. However, the remaining unexplained

variation suggests the need for a deeper understanding of the complex relationships among these factors.

PT PLN Indonesia Power UBP Barito, as a power generation unit under a state-owned enterprise, faces tangible challenges in maintaining and improving employee performance amid increasing demands for efficiency and occupational safety. Internal data indicate a persistent gap between performance targets and actual outcomes, partly attributable to organizational culture that has not been fully internalized, varying levels of work commitment across departments, and suboptimal working conditions. These issues are particularly critical given that the energy sector is characterized by high operational risk, requiring consistent coordination, discipline, and strict adherence to procedures. Therefore, it is essential to comprehensively examine how work commitment and organizational culture influence employee performance, as well as how the work environment functions as a mediating variable that strengthens these relationships.

Theoretically, this study is grounded in several major frameworks. Meyer and Allen's (1991) Three-Component Model of Commitment posits that affective, normative, and continuance commitment motivate employees to contribute optimally to organizational goals. Schein's (2010) Organizational Culture Theory highlights the role of shared values and norms in shaping workplace behavior, suggesting that a strong culture fosters consistent and results-oriented performance. Sedarmayanti's (2017) Work Environment Theory asserts that both physical and social working conditions influence motivation, comfort, and productivity. Meanwhile, Armstrong and Taylor's (2020) Performance Theory emphasizes that performance results from the interaction of individual capability, motivation, and environmental support. The integration of these theories suggests that the work environment serves as a logical mediating mechanism through which commitment and organizational culture translate into employee performance.

Nevertheless, prior empirical studies present inconsistent findings, warranting further investigation. Rahmat (2020) found that organizational culture significantly affects performance with work commitment as a mediating variable, whereas Hidayati and Supriyanto (2021) reported that the work environment strengthens employee commitment but does not always directly influence performance. In contrast, studies by Karoso (2022) and Rifai (2023) demonstrate that the effect of organizational culture on performance becomes insignificant when the work environment is not taken into account. These conflicting results suggest that the work environment may function as a crucial linking variable that explains inconsistencies in the relationship between commitment, organizational culture, and performance.

Recent studies by Dewi and Sukarno (2021) and Susanti and Hidayat (2021) further support the view that the work environment can act as a mediating variable bridging psychological

factors and employee performance. A comfortable, safe, and supportive work environment enhances morale and job satisfaction, which ultimately leads to improved performance. Accordingly, positioning the work environment as a mediating variable in the relationship between work commitment and organizational culture on employee performance represents a sound conceptual approach for capturing organizational behavior dynamics more comprehensively.

This study contributes by integrating three key factors work commitment, organizational culture, and the work environment into a single conceptual model tested simultaneously using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. Theoretically, this research enriches the literature on organizational behavior and human resource management, particularly within high-risk public organizations such as those in the energy sector. Practically, the findings are expected to assist management at PT PLN Indonesia Power UBP Barito in formulating effective strategies to enhance employee performance through strengthening commitment, fostering a positive organizational culture, and creating a more productive and safe work environment. Thus, this study not only addresses theoretical gaps in the examination of organizational variable relationships but also provides tangible contributions to managerial practice aimed at improving human resource effectiveness in Indonesia's energy sector.

## METHODS

This study employed a quantitative approach with a causal explanatory research design. According to Sugiyono (2021), quantitative research aims to test hypotheses using numerical data that are statistically analyzed, enabling the results to be generalized. A causal-explanatory design was adopted to explain both direct and indirect effects of independent variables on the dependent variable through a mediating variable (Creswell & Creswell, 2022). The variables examined in this study include Work Commitment (X1), Organizational Culture (X2), Work Environment (Z) as the mediating variable, and Employee Performance (Y).

The research was conducted at PT PLN Indonesia Power UBP Barito, South Kalimantan. The study population consisted of all permanent employees, totaling 130 individuals. The sampling technique applied was probability sampling using proportionate stratified random sampling to ensure adequate representation from each organizational division. The sample size was determined using the Slovin formula, resulting in 98 respondents who were considered representative of the population. The inclusion criteria comprised permanent employees with a minimum of one year of tenure and active involvement in the organization's operational activities.

The research data consisted of both primary and secondary data. Primary data were collected through a structured questionnaire using a five-point Likert scale to measure respondents' perceptions of all research variables. The research instrument was developed based on relevant

indicators and was tested for validity and reliability through outer model evaluation. Secondary data were obtained from internal company documents, such as performance reports, organizational structure records, and standard operating procedures, which served as supporting data and facilitated data triangulation to enhance the credibility of the findings.

Data analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS version 4 software. This method was selected because it allows for the simultaneous examination of relationships among latent variables, including mediating effects, and does not require normal data distribution or large sample sizes. The analytical procedure involved evaluating the measurement model (outer model) to assess construct validity and reliability, followed by evaluating the structural model (inner model) to examine path coefficients,  $R^2$ ,  $f^2$ ,  $Q^2$  values, and the statistical significance of the relationships among variables. This approach is expected to yield comprehensive and accurate analytical results in line with the objectives of the study.

## RESULTS AND DISCUSSION

### Results

Based on the results of the outer loadings test, all indicators of the Organizational Culture, Employee Performance, and Work Environment variables show loading values above the minimum threshold of 0.70. The loading values for these three variables range from 0.830 to 0.910, indicating that each indicator makes a strong and valid contribution to measuring its respective latent construct. Therefore, these variables meet the criteria for good convergent validity.

For the Work Commitment variable (X1), three indicators KK(1), KK(2), and KK(3) exhibit very strong loading values of 0.909, 0.887, and 0.876, respectively. This confirms that these indicators are reliable and consistently represent the work commitment construct. However, one indicator, KK(4), has a loading value of  $-0.106$ , which is far below the 0.70 threshold and even shows a negative direction. This condition indicates that KK(4) does not adequately explain the work commitment construct and is inconsistent with the theoretical direction of the construct. Therefore, this indicator should be eliminated from the model to improve the overall quality of the measurement of the work commitment variable.

The outer loadings figure above indicates that more than 75% of the variance of the indicators in each variable can be explained by their respective latent constructs. Overall, the AVE values that meet the recommended standards demonstrate that the measurement model has been well designed and that the indicators used are relevant and appropriate for representing the theoretical constructs being measured.

## a. Construct Validity dan Realibility

Table 1. Nilai Cronbach's Alpha dan Composite Reliability

Variabel	Cronbach's Alpha	Composite Reliability (rho_A)	Composite Reliability (rho_C)
Work Commitment	0.873	0.873	0.922
Organizational Culture	0.929	0.933	0.946
Work Environment	0.930	0.931	0.947
Employee Performance	0.925	0.927	0.944

## b. Structural Model Analysis

Based on the output of the structural model (inner model) testing in SmartPLS, the R-square values for each endogenous variable indicate a very strong explanatory power of the model. The Employee Performance construct achieved an R-square value of 0.810, with an adjusted R-square of 0.804. This indicates that 81% of the variance in Employee Performance can be explained by Work Commitment, Organizational Culture, and Work Environment as predictors in the model. This value falls into the substantial category, in accordance with the criteria proposed by Hair et al. (2021), who state that R-square values above 0.75 reflect a very high level of explanatory power.

Meanwhile, the R-square value for the Work Environment construct is 0.746, indicating that 74.6% of the variance in the Work Environment can be explained by Work Commitment and Organizational Culture. This value is also classified as substantial, suggesting that these two variables play a strong role in shaping the conditions of the work environment.

Table 2. Path Coefficients

No	Relationship Between Variables	Original Sample (O)	Sample Mean (M)	STDEV	T-Statistics	P-Values
1	Organizational Culture → Employee Performance	0.343	0.347	0.073	4.701	0.000
2	Organizational Culture → Work Environment	0.479	0.482	0.065	7.347	0.000
3	Work Commitment → Employee Performance	0.327	0.320	0.080	4.092	0.000
4	Work Commitment → Work Environment	0.481	0.476	0.067	7.183	0.000
5	Work Environment → Employee Performance	0.326	0.328	0.106	3.068	0.002

The results of the path coefficient analysis indicate that Work Commitment, Organizational Culture, and Work Environment each have a positive and significant effect on Employee Performance at PT PLN Indonesia Power UBP Barito. Work Commitment has a significant effect with a coefficient of 0.327, indicating that higher levels of employee commitment lead to better performance outcomes, in line with Meyer and Allen's (1991) theory regarding the role of affective, normative, and continuance commitment in enhancing performance. Organizational Culture demonstrates the strongest influence on employee performance, with a coefficient of 0.343, confirming that the internalization of positive values, norms, and work practices can significantly improve employee effectiveness and productivity, as proposed by Denison (1990). In addition, the Work Environment also has a significant effect on Employee Performance, with a coefficient of 0.326, indicating that safe, comfortable, and supportive working conditions both physically and psychologically contribute directly to improved performance, consistent with the perspective of Robbins and Judge (2019). Overall, these findings emphasize that employee performance is the result of a synergy between psychological factors, organizational values, and supportive work environment conditions.

Table 3. Indirect Effects

No	Intervariable Relationships	Original Sample (O)	STDEV	T-Statistics	P-Values
1	Organizational Culture → Employee Performance (through Work Environment)	0.156	0.054	2.881	0.004
2	Work Commitment → Employee Performance (through Work Environment)	0.157	0.059	2.676	0.008

The results of the indirect effects analysis indicate that the Work Environment plays a significant role as a partial mediator in the relationships between Work Commitment and Organizational Culture on Employee Performance at PT PLN Indonesia Power UBP Barito. The indirect effect of Organizational Culture on Employee Performance through the Work Environment is statistically significant, with a coefficient of 0.156, a T-statistic of 2.881, and a p-value of 0.004, indicating that a strong organizational culture is able to foster a positive and conducive work environment, which in turn enhances employee performance. Similarly, the indirect effect of Work Commitment on Employee Performance through the Work Environment is also significant, with a coefficient of 0.157, a T-statistic of 2.676, and a p-value of 0.008, confirming that employees with high levels of commitment tend to create a harmonious and supportive working atmosphere that facilitates optimal performance. Since the direct effects of both Work Commitment and Organizational Culture on Employee Performance remain significant, the mediation effect is classified as partial. These findings underscore that employee performance is not only directly influenced by psychological factors and organizational values but is also strengthened through the strategic role of the work environment as an important connecting mechanism.

## DISCUSSION

This discussion aims to interpret the results of hypothesis testing and to relate them to relevant theories and findings from previous studies. Based on data processing using SmartPLS

version 4.0, all hypotheses proposed in this study are proven to have positive and significant effects. These findings indicate that the research model developed is empirically capable of explaining the relationships among variables and is consistent with the theoretical framework employed. The variables of work commitment, organizational culture, and work environment are shown to play important roles, both directly and indirectly, in influencing employee performance at PT PLN Indonesia Power UBP Barito.

The results indicate that work commitment has a positive and significant effect on employee performance. This suggests that the higher the level of commitment possessed by employees, the better the performance they produce. Employees with strong affective, normative, and continuance commitment tend to demonstrate perseverance, compliance with work procedures, and consistency in completing power generation operational tasks. This condition is reflected in employees' discipline in adhering to operational schedules, compliance with occupational health and safety (OHS) standard operating procedures, and dedication to completing tasks on time. Although a small proportion of employees perceive a high workload and limited emotional support from supervisors, overall high work commitment is still able to maintain the reliability of power generation units and operational effectiveness.

These findings are in line with the study by Wijaya and Prasetyo (2022), which states that work commitment has a significant effect on improving employee performance in state-owned enterprises, particularly in work environments that demand high consistency and accuracy. Research by Sunatar et al. (2024) also confirms that employees with high levels of commitment are able to maintain work quality and timeliness despite operating under technical work pressure. Furthermore, Zhenjing et al. (2022) emphasize that work commitment serves as a key driver of productive behavior by fostering a sense of responsibility and employees' willingness to remain focused in dealing with job complexity. In this study, the strongest indicators of work commitment are employees' sense of responsibility under difficult conditions and their pride in being part of the organization, while initiative to increase contribution without being instructed remains relatively low and represents an important managerial concern.

In addition to work commitment, organizational culture is also proven to have a positive and significant effect on employee performance. A strong organizational culture, reflected in the alignment of work values, discipline, result orientation, and effective communication patterns, is able to encourage sustainable performance improvement. At PT PLN Indonesia Power UBP Barito, most employees have understood and implemented the company's cultural values, thereby facilitating coordination, minimizing the risk of errors, and supporting the achievement of power generation targets. Nevertheless, there remains a perception that the implementation of work

culture has not been fully uniform, particularly with regard to cross-departmental communication and the speed of decision-making.

These results are consistent with the findings of Aggarwal et al. (2024), who state that a strong organizational culture is capable of creating productive work behavior and has a direct impact on performance improvement. Wahab and Soliha (2025) also find that organizational culture plays a role in shaping the mindset and actions of employees in the public sector, thereby enhancing task execution effectiveness. The findings of Setiawan et al. (2025) further confirm that organizational culture influences performance through shared value understanding and employees' commitment to fulfilling organizational responsibilities. In this study, the organizational culture indicators with the highest scores are result orientation and adherence to corporate values, while openness in expressing feedback still needs to be improved to foster innovation.

The work environment in this study is also shown to have a positive and significant effect on employee performance. A supportive work environment, both physically and non-physically, is able to enhance employee comfort, focus, and productivity. The implementation of OHS procedures, availability of personal protective equipment, relatively clean work areas, and harmonious working relationships provide employees with a sense of safety when carrying out high-risk operational tasks. However, there are still several issues related to the need for improved lighting and workspace layout so that coordination and operational efficiency can be further optimized.

These findings are consistent with the study by Susanti and Hidayat (2021), which states that a comfortable work environment can improve performance by reducing physical and psychological barriers. Permata et al. (2025) also emphasize that the work environment plays an important role in increasing productivity in public organizations that require accuracy and timeliness. Wijaya and Prasetyo (2022) add that a conducive work environment encourages active participation, discipline, and compliance with work standards. In this study, the highest-rated indicators of the work environment are safety and comfort, while workspace support for communication and coordination still requires improvement.

Furthermore, the analysis results indicate that the work environment acts as a partial mediator in the relationship between work commitment and employee performance. Although work commitment has a direct effect on performance, this effect becomes stronger when supported by a safe, comfortable, and adequate work environment. Employees with high commitment tend to demonstrate optimal performance when work facilities, supervisory support, and the overall work atmosphere are conducive. Conversely, an unfavorable work environment can reduce productivity even when employees possess high levels of commitment.



These findings are consistent with the study by Zhenjing et al. (2022), which states that the effect of work commitment on performance becomes more significant when supported by a favorable work environment. Sunatar et al. (2024) also confirm that the work environment functions as a linking mechanism between commitment and performance in public sector organizations. Permata et al. (2025) strengthen this argument by stating that the work environment enables psychological commitment to be translated into actual performance.

In addition, the work environment is also proven to partially mediate the relationship between organizational culture and employee performance. A strong organizational culture will have an optimal impact when it is translated into conducive, well-organized work environment practices that are aligned with organizational values. At UBP Barito, the alignment between work culture and the work environment is reflected in compliance with SOPs, inter-unit coordination, and management's commitment to occupational safety. However, challenges remain in ensuring the even implementation of culture, particularly in aspects of communication and decision-making.

These results are in line with the studies of Permata et al. (2025) and Sunatar et al. (2024), which state that the work environment strengthens the influence of organizational culture on employee performance in the public sector. Although Setiawan et al. (2025) found that the mediating role of organizational culture may vary across different contexts, their study still emphasizes that organizational culture will have a significant impact when it is manifested in a supportive work environment. Therefore, this study confirms that employee performance at PT PLN Indonesia Power UBP Barito is not only influenced by individual factors and organizational values but is also reinforced through the work environment as a strategic linking mechanism in supporting high-risk power generation operations.

## CONCLUSION

Based on the results of data analysis and discussion conducted using SmartPLS version 4.0, it can be concluded that the research model involving Work Commitment, Organizational Culture, Work Environment, and Employee Performance is empirically supported and theoretically sound, with all proposed hypotheses (H1–H5) accepted. The findings demonstrate that Work Commitment and Organizational Culture have a positive and significant direct effect on Employee Performance, indicating that employees with strong responsibility, loyalty, emotional attachment, shared values, collaboration, and result orientation tend to achieve higher performance levels. The Work Environment also has a significant direct influence on Employee Performance, confirming that safe, comfortable, and supportive physical and psychosocial conditions enhance employees' motivation, interpersonal relationships, and effectiveness at work. Moreover, the Work Environment functions as a significant partial mediator in the relationships between Work

Commitment and Employee Performance as well as between Organizational Culture and Employee Performance, suggesting that the positive effects of individual commitment and organizational values are strengthened when translated into a conducive working environment. These results are consistent with prior studies and established theories, including those of Putra and Wibowo, Schein, Denison, Sedarmayanti, and recent empirical findings, which emphasize that commitment and culture yield optimal performance outcomes when supported by favorable working conditions. Overall, this study confirms that Work Commitment, Organizational Culture, and Work Environment are key determinants of Employee Performance at PT PLN Indonesia Power UBP Barito, and organizational effectiveness can be enhanced through integrated managerial efforts to strengthen employee commitment, consistently internalize organizational values, and create a productive, safe, and supportive work environment, particularly within the context of a technical and high-risk industry such as power generation.

## ACKNOWLEDGEMENT

Future researchers are recommended to incorporate additional variables such as Motivation, Transformational Leadership, or Job Satisfaction in order to broaden the understanding of factors influencing employee performance. Furthermore, the scope of the study may be extended to other work units within the PLN Group to obtain findings with greater generalizability.

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