



# The Influence of Work Environment and Human Capital on Employee Performance

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## ABSTRACT

### Keywords:

Work Environment,  
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This study aims to examine the influence of the work environment and human capital on employee performance. The research employed a quantitative approach using a survey method. Data were collected through structured questionnaires that had been tested for validity and reliability. The sampling technique used was saturated sampling, involving 47 respondents. The data were analyzed using multiple linear regression to determine both simultaneous and partial effects of the independent variables on employee performance. The results indicate that the work environment and human capital simultaneously have a significant effect on employee performance. Partially, both the work environment and human capital individually show a significant positive effect on employee performance. The coefficient of determination reveals that 75.6% of the variation in employee performance is explained by the work environment and human capital, while the remaining 24.4% is influenced by other factors not examined in this study. The findings imply that organizations should prioritize creating a supportive work environment and strengthening human capital development to enhance employee performance. Strategic policies related to workplace conditions and employee competencies are essential to achieve optimal organizational outcomes.

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## INTRODUCTION

Rapid global changes driven by technological advancement, organizational transformation, and evolving work systems have intensified the demand for high employee performance across institutions. Employee performance is increasingly viewed as a strategic asset because it determines organizational productivity, service quality, and public accountability (Abdelwahed & Al Doghan, 2023; Nguyen & Nguyen, 2023). Evidence from

recent studies shows that organizations with effective organizational factors, healthy workplaces, and engaged employees are more capable of adapting to change and sustaining performance outcomes (Voordt & Jensen, 2023; Berglund et al., 2024). Conversely, inadequate workplace conditions and weak human resource management reduce productivity and increase inefficiency (Fauzi et al., 2025; Maulidy & Zaini, 2025). As organizations operate in highly competitive and dynamic environments, understanding the determinants of employee performance becomes essential not only for managerial success but also for societal benefit. Improving employee performance contributes to organizational sustainability, cost efficiency, and improved service delivery. Therefore, research examining performance determinants is increasingly relevant for broader organizational and social development (Azizi et al., 2025; Romzy et al., 2025).

Despite growing awareness of performance management, many organizations still experience persistent performance-related problems (Azizi et al., 2025; Romzy et al., 2025). These include low productivity, weak discipline, limited collaboration, and declining employee engagement. Research indicates that such problems often stem from ineffective employee relations, weak organizational support systems, and insufficient development of human capital (Abdullahi et al., 2023; Rivaldo & Nabella, 2023). In addition, digital transformation and flexible work arrangements, while offering opportunities, also introduce new performance challenges if not supported by appropriate work environments and competencies (Anakpo et al., 2023; Shwedeh et al., 2023). Many organizations fail to align work environment management with employee capability development, creating a gap between expected and actual performance. This gap weakens organizational effectiveness and limits long-term growth. Consequently, identifying key factors that influence employee performance remains a critical challenge in organizational and human resource management.

In practical organizational settings, performance issues frequently appear in the form of delayed task completion, inconsistent work quality, inefficient time utilization, and weak teamwork (Kusumawati et al., 2025). Studies suggest that such conditions are closely related to the quality of the work environment and the level of human capital within organizations (Shafi et al., 2023; Zanardi & Brusa, 2023). Physical factors such as workspace layout, lighting, and noise influence employee comfort and concentration, while psychosocial factors such as leadership support and workplace relationships affect motivation and commitment (Kazlauskaitė et al., 2023; Suleiman, 2023). At the same time, limited knowledge, inadequate skills, and uneven expertise restrict employees' ability to

perform optimally. These field phenomena indicate that employee performance is not solely an individual issue but the result of interactions between environmental conditions and human capital quality, highlighting the importance of integrated empirical investigation.

Previous research consistently confirms the significant influence of the work environment on employee wellbeing, productivity, and performance. Healthy and well-managed work environments are associated with higher satisfaction, reduced stress, and improved performance outcomes (Voordt & Jensen, 2023; Berglund et al., 2024). Systematic reviews further emphasize that both physical and psychosocial workplace factors play critical roles in shaping employee behavior and effectiveness (Kazlauskaitė et al., 2023). However, many studies examine specific aspects of the work environment in isolation or focus on particular sectors such as manufacturing or healthcare (Shafi et al., 2023; Zanardi & Brusa, 2023). As a result, limited attention is given to understanding the comprehensive impact of the work environment as an integrated system within organizational performance models (Afifah, 2025; Barokah, 2025). This gap highlights the need for studies that examine work environment factors holistically and in combination with other strategic resources.

Human capital has been widely recognized as a critical driver of organizational performance, innovation, and competitiveness (Khoiroh et al., 2025; Rahmatillah & Andayani, 2025). Research demonstrates that employees' knowledge, skills, abilities, and expertise enhance productivity and organizational value creation (Mukaro et al., 2023; Costa et al., 2023). Studies on intellectual capital further reveal that effective investment in human capital contributes significantly to performance outcomes and return on investment (Dadd & Hinton, 2023; Tjahjadi et al., 2024). Nevertheless, much of the existing literature emphasizes mediating mechanisms such as engagement, empowerment, or information systems rather than examining the direct effect of human capital alongside environmental factors (Abuhantash, 2023; Al Zeer et al., 2023). Consequently, empirical evidence integrating human capital and work environment variables within a single analytical framework remains limited, creating a clear research gap.

This study offers novelty by integrating work environment and human capital variables as simultaneous determinants of employee performance. Unlike prior research that examines these factors separately or relies heavily on mediating constructs, this study directly analyzes their combined and individual contributions. The research incorporates both physical and non-physical aspects of the work environment alongside core human capital components, including knowledge, skills, abilities, and expertise. This integrated approach provides a more comprehensive explanation of employee performance dynamics. By

addressing this gap, the study advances current performance management research and responds to organizational demands for evidence-based human resource strategies that balance workplace conditions with employee capability development.

Based on the identified gaps and observed organizational phenomena, this study seeks to examine the influence of the work environment and human capital on employee performance. The central argument proposes that a supportive work environment and strong human capital significantly and positively enhance employee performance, both simultaneously and individually. It is assumed that employees perform more effectively when workplace conditions promote comfort, cooperation, and psychological safety, while human capital equips them with the competence needed to meet job demands. The study contributes theoretically by enriching human resource management literature with integrated empirical evidence. Practically, it provides actionable insights for organizational leaders in designing policies that improve performance through balanced environmental and human capital development.

## **RESEARCH METHOD**

The unit of analysis in this study consists of employees working at the Communication and Informatics Office, including civil servants, government contract employees, and honorary staff. The study focuses on the organizational environment, human capital attributes, and employee performance as the primary objects of investigation. The case under examination is the implementation of daily work activities within the office, including reporting, teamwork, and task completion processes, while the institutional setting provides the context for evaluating the relationship between work environment, human capital, and performance outcomes. By analyzing this institutional and operational setting, the research captures both structural and human aspects that influence employee effectiveness.

This study employs a quantitative research design with an associative approach, aimed at identifying the influence of the work environment and human capital on employee performance. The population includes all 47 employees of the office, and saturated sampling is used so that every employee participates as a respondent. Data collection relies primarily on structured questionnaires that were validated and tested for reliability, enabling the measurement of perceptions, competencies, and environmental conditions. In addition, supporting information is obtained from organizational records and relevant documents to contextualize employee performance and complement the primary data.

Data analysis proceeds through several stages. First, descriptive statistics summarize the characteristics of the respondents and their responses. Second, classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, ensure the suitability of the data for regression analysis. Finally, multiple linear regression is conducted to assess both the simultaneous and partial effects of the independent variables on employee performance, with the regression model expressed as  $Y = a + b_1X_1 + b_2X_2 + e$ , where  $Y$  represents employee performance,  $X_1$  the work environment,  $X_2$  human capital,  $a$  the constant,  $b_1$  and  $b_2$  the regression coefficients, and  $e$  the standard error. Statistical analysis is performed using SPSS 25 to ensure accuracy, and the findings are interpreted to determine the magnitude and significance of the relationships studied.

## RESULT AND DISCUSSION

### Classical Assumption Test

#### Normality Test

The normality test aims to determine whether the sample data are normally distributed. In this study, normality was tested using the Kolmogorov-Smirnov Test in SPSS 25. The decision rule is based on the probability value (Asymp. Sig.): if the probability  $> 0.05$ , the residuals are normally distributed; if the probability  $< 0.05$ , the residuals are not normally distributed.

**Table 1. Normality Test Results**

<b>One-Sample Kolmogorov-Smirnov Test</b>		
		Unstandardized Residual
N		47
Normal Parameters <sup>a,b</sup>	Mean	0E-7
	Std. Deviation	2,33910651
	Most Extreme Differences	
	Absolute	,092
	Positive	,067
	Negative	-,092
Kolmogorov-Smirnov Z		,629
Asymp. Sig. (2-tailed)		,824

Based on Table 1, the significance value is  $0.824 > 0.05$ , indicating that the residuals are normally distributed. Therefore, the regression model meets the normality assumption and is suitable for further analysis.

### Multicollinearity Test

The multicollinearity test is conducted to determine whether there is a correlation among independent variables. A good regression model should not have multicollinearity. The decision criteria are:

**Tolerance** > 0.10 or **VIF** < 10 → no multicollinearity.

**Tolerance** < 0.10 or **VIF** > 10 → multicollinearity occurs.

**Table 2. Multicollinearity Test Results**

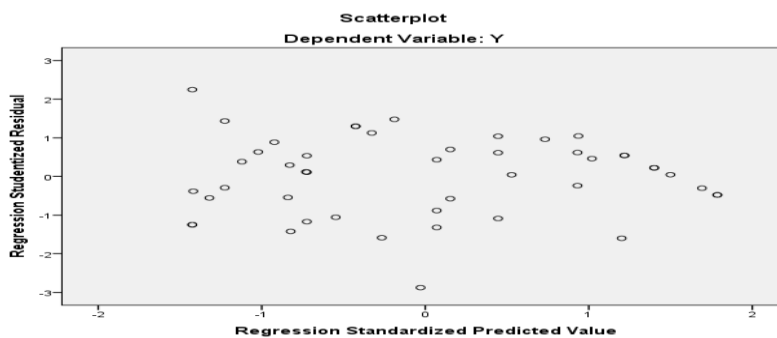
No	Variable	Tolerance	VIF	Description
1	Work Environment (X1)	0.613	1.631	No Multicollinearity
2	Human Capital (X2)	0.613	1.631	No Multicollinearity

Table 2 shows that tolerance values are above 0.10 and VIF values are below 10. Therefore, multicollinearity does not exist in the regression model, and the analysis can proceed.

### Heteroscedasticity Test

Heteroscedasticity testing aims to check whether the variance of residuals is equal across observations. It can be assessed using a scatterplot of predicted values (ZPRED) and residuals (SRESID).

- If the points form a specific pattern (wavy, narrowing then widening), heteroscedasticity exists.
- If the points are randomly dispersed around zero without a clear pattern, heteroscedasticity does not occur.



**Figure 1. Scatterplot for Heteroscedasticity Test**

The scatterplot shows that the points are randomly spread without any specific pattern. Therefore, there is no indication of heteroscedasticity in this study.

## Multiple Linear Regression Analysis

The multiple linear regression analysis is used to test the hypothesis regarding the influence of work environment and human capital on employee performance. The regression results are presented in Table 3.

**Table 3. Multiple Linear Regression Results**

Ringkasan Hasil Uji Analisis Regresi Linier Berganda								
Variabel Independen	Unstandardi zed Coefficients		Standardi zed Coefficients		T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
(Constant)	10,759	2,527			4,257	,000		
Lingkungan Kerja	,386	,103	,355		3,734	,001	,613	1,631
Human Capital	,409	,064	,603		6,338	,000	,613	1,631
R	= ,869				Sig F = ,000			
R Square	= ,756				α = 0,05			
Adjusted R Square	= ,745							

R = 0.869, R<sup>2</sup> = 0.756, Adjusted R<sup>2</sup> = 0.745, Sig. F = 0.000

The regression equation is formulated as:

$$Y = 10.759 + 0.386X_1 + 0.409X_2 + e$$

Interpretation of the regression coefficients:

- The constant 10.759 indicates that when X<sub>1</sub> (Work Environment) and X<sub>2</sub> (Human Capital) are zero, the employee performance is 10.759.
- The coefficient of X<sub>1</sub> = 0.386 implies that an increase of one unit in the work environment improves employee performance by 0.386 units.
- The coefficient of X<sub>2</sub> = 0.409 implies that an increase of one unit in human capital improves employee performance by 0.409 units.

## Hypothesis Testing

### Simultaneous Test (F-Test)

The F-test examines the simultaneous influence of independent variables on the dependent variable. The model is significant if  $F_{count} > F_{table}$  or  $Sig. F \leq 0.05$ . The results show that work environment and human capital together significantly influence employee performance.

### Partial Test (t-Test)

The t-test evaluates the significance of each independent variable individually. The decision rule:  $Sig. t \leq 0.05 \rightarrow$  the variable has a significant effect.

- Work Environment (X1):  $t = 3.734$ ,  $Sig. = 0.001 \rightarrow$  significant effect.
- Human Capital (X2):  $t = 6.338$ ,  $Sig. = 0.000 \rightarrow$  significant effect.

### Coefficient of Determination ( $R^2$ )

The coefficient of determination  $R^2 = 0.756$  indicates that 75.6% of the variation in employee performance is explained by work environment and human capital. The remaining 24.4% is influenced by other factors, such as motivation, ability, and unexamined variables.

Overall, the regression model meets all classical assumptions (normality, multicollinearity, heteroscedasticity), indicating that the model is valid and suitable for analysis.

## DISCUSSION

The results of the F-test confirm that the work environment and human capital simultaneously have a significant effect on employee performance, as indicated by a Sig. F value of 0.000, which is below the 0.05 significance threshold. This finding supports the argument that employee performance is not shaped by a single factor, but rather by the interaction between organizational conditions and individual competencies. Prior studies consistently emphasize that a supportive work environment—characterized by physical comfort, psychosocial safety, and organizational support—enhances employees' ability to perform effectively (Kazlauskaitė et al., 2023; Voordt & Jensen, 2023). At the same time, human capital in the form of knowledge, skills, experience, and professional capacity plays a crucial role in translating organizational resources into productive outcomes (Mukaro et al., 2023; Tjahjadi et al., 2024). The simultaneous

significance found in this study aligns with previous research suggesting that organizational performance improves when environmental and human capital factors are managed in an integrated manner (Costa et al., 2023; Dadd & Hinton, 2023).

The partial test results further demonstrate that both the work environment and human capital independently exert a significant influence on employee performance. The significant effect of the work environment corroborates earlier findings that workplace conditions, including physical layout, managerial support, and psychosocial climate, directly affect employee productivity and efficiency (Shafi et al., 2023; Berglund et al., 2024). A conducive work environment not only supports task completion but also enhances employee well-being and engagement, which are critical drivers of sustained performance (Abdelwahed & Doghan, 2023; de Oliveira et al., 2023). Likewise, the significant impact of human capital confirms that employees' competencies, training, and experience are central determinants of performance quality. This result is consistent with prior studies indicating that higher levels of human and intellectual capital enable employees to adapt, innovate, and perform tasks more effectively (Rivaldo & Nabella, 2023; Costa et al., 2023). These findings reinforce the view that improving employee outcomes requires both environmental improvements and continuous investment in human capital development.

The coefficient of determination ( $R^2$ ) value of 0.756 indicates that a substantial proportion of employee performance variance is explained by the work environment and human capital variables. This high explanatory power suggests that these two factors constitute core determinants of performance within organizational settings, as supported by earlier empirical and review-based studies (Mukaro et al., 2023; Kazlauskaitė et al., 2023). However, the remaining 24.4% variance attributed to other factors implies that employee performance is also influenced by additional individual and organizational variables such as motivation, ability, engagement, and leadership practices, which have been highlighted in prior literature (Nguyen & Nguyen, 2023; Al Zeer et al., 2023). Therefore, while this study confirms the dominant role of work environment and human capital, it also underscores the need for future research to incorporate broader performance-related factors to achieve a more comprehensive understanding of employee performance dynamics.

## CONCLUSION

The main findings of this study indicate that both the work environment and human capital significantly influence employee performance. The research demonstrates that improvements in workplace conditions—such as physical comfort, organizational support, and team cohesion—combined with the

development of employees' knowledge, skills, and abilities, substantially enhance productivity, task accuracy, and overall work efficiency. The study offers practical insights for managers and policymakers, highlighting the importance of creating supportive environments and investing in human capital to achieve optimal employee performance. The key lesson learned is that employee performance is not solely determined by individual effort but is shaped by the interaction between organizational context and human capabilities.

From a scientific perspective, this research contributes to the literature by empirically validating the simultaneous and partial effects of work environment and human capital on performance within a public service institution, addressing a gap in context-specific evidence. However, the study has limitations, including a relatively small sample size confined to a single office and the exclusion of other potentially influential factors such as motivation, leadership style, or digital literacy. Future research could expand the scope to multiple institutions, include additional predictors, and employ longitudinal designs to capture performance dynamics over time, providing more generalizable and robust insights into workforce development and organizational effectiveness.

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