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## Influence of Workload, Information Technology Usage, and Work Environment on Employee Performance at Cileunyi District Office, Bandung Regency

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**Abstract:** Human resources constitute a critical element in organizational functioning, as one of the primary determinants of an organization's success is the managerial capacity to coordinate all employees, enabling them to contribute effectively to every operational process in pursuit of established goals. Fundamentally, the advancement or even regression of an organization is determined by the quality of its human capital. This study aims to analyze the influence of workload, information technology usage, and work environment on employee performance at the Cileunyi District Office. A quantitative approach employing descriptive and verificative methods was utilized. Data were collected via questionnaires distributed to all 43 employees and analyzed using multiple linear regression with SPSS version 30. Field findings indicate that employee performance at Cileunyi District remains suboptimal, attributable to a workload imbalance relative to staff numbers, uneven employee proficiency and comprehension in utilizing information technology, and a work environment that is no longer adequate. The derived regression equation,  $Y = 11.058 + 0.903X_1 + 1.050X_2 + 0.317X_3 + e$ , demonstrates that all three variables exert a positive influence on employee performance, albeit with varying degrees of impact. Specifically, information technology usage and workload show substantially higher coefficients, whereas the work environment exhibits a comparatively lower coefficient. A correlation coefficient (R) of 0.863 indicates a very strong relationship between workload, information technology usage, work environment, and employee performance. Furthermore, the coefficient of determination ( $R^2$ ) reveals that the combined contribution of these three variables accounts for 74.5% of the variance in employee performance, while the remaining 25.5% is influenced by other factors not examined in this study.

**Keyword:** Workload, Information Technology, Work Environment, Employee Performance, District Office

### INTRODUCTION

An organization's performance and progress are fundamentally driven by the quality of its individual employees, making Human Resources (HR) a key success indicator. This is

particularly critical in public sector organizations such as sub-district government offices, where having competent HR is an absolute prerequisite for ensuring the quality of public service provision.

Within public sector organizations, employee performance constitutes a core indicator of institutional efficacy, reflecting the collective output, productivity, and competency levels of personnel in fulfilling their designated roles and contributing to organizational goals. Performance encompasses not only the achievement of results but also the competence and behavior of individuals in carrying out their duties (Armstrong & Baron, 2021). In the context of public sector organizations like sub-districts, employee performance is the primary determinant of the quality of community services. However, performance achievement data for employees at Cileunyi District in 2025 indicates a failure to meet targets for some employees, with 2.4% of employees scoring below the standard and 2.9% in the nearly achieved category. These results show that staff members are not performing at their highest possible level. Based on research findings (Harto & Siddiq, 2025), Optimal performance serves as a crucial metric for evaluating institutional effectiveness, especially in public sector organizations where high-quality community service is essential. Furthermore, performance reflects an individual's achievement from the standpoint of effectiveness, efficiency, and standardized quality. thus serving as a basis for organizational evaluation for improvement and development (Wewengkang, 2021 in Yogi Ivan Wicaksono & Lie Liana, 2024).

The Workload at Cileunyi District shows a significant imbalance, where 65.99% of employees have workloads above the target, while the proportion of the number of employees (24 Civil Servants) does not meet the ideal number (minimum 30 people). This imbalance is exacerbated by additional duties outside the core tasks, potentially reducing work focus and accuracy (Sunyoto, 2012 in Siburian et al., 2021). Excessive workload that does not match individual capacity can cause pressure, tension, and stress, which ultimately has the potential to reduce the quality of performance. However, on the other hand, a well-managed workload within reasonable limits can actually be a motivating challenge for employees to increase their productivity and work efficiency (Idayanti et al., 2020 in Siburian et al., 2021).

Information technology also functions as a determining factor in work efficiency. The adaptability of employees to electronic administration systems still varies, especially with the employee composition at Cileunyi District being dominated by Generation X (50% of total employees). This variation in technological understanding and experience implies that there are still oversights in administrative reporting, which directly affects individual performance assessments. Confirms the earlier findings of (Fitriani et al., 2025) that the effectiveness of information technology implementation heavily depends on user competency. They conclude that although IT significantly influences performance, employee competence has a more dominant influence. This means that without adequate technical skills and digital literacy, IT investments will not yield optimal impact. This finding is reinforced by (Vandela & Sugiarto, 2021) who suggest the need for continuous training so that employees can utilize IT to the maximum.

The work environment is everything around employees while working, both directly and indirectly, which can influence the employees themselves and their work. A good work environment will encourage a person to work better and have a positive attitude, such as having high loyalty to the company, pride in work, so the work environment serves as a contributing factor in enhancing both productivity and employee performance (Budiasa, 2021:44). The condition of the Cileunyi District Office Work Environment faces several obstacles, such as location in a congestion-prone area, workrooms that are no longer representative with limited facilities, absence of a smoking area, and inadequate toilets. If the atmosphere in the work environment provides comfort and tranquility, it will positively affect a healthier work situation and impact performance. According to the results, the work environment is inherent to the work activities of employees around them, in tangible or intangible forms, that influences employees

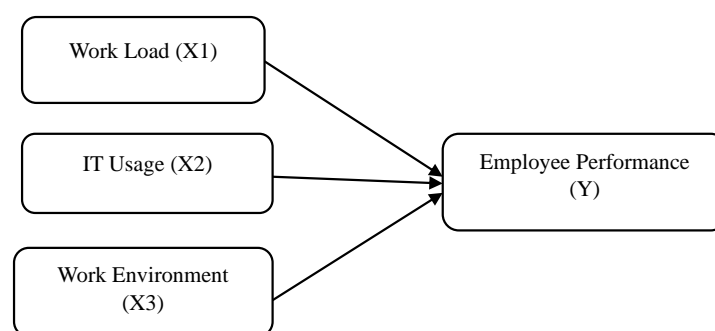
when carrying out their responsibilities or daily tasks (Anisa Nurhidayanti & Rama Chandra Jaya, 2024).

Based on the background described, it can be concluded that employee performance at the Cileunyi District Office is not yet optimal, as indicated by performance data up to September 2025 which shows some employees scoring below the standard. This condition is strongly suspected to be influenced by three key factors. First, an imbalanced workload where the majority of employees handle tasks above the target, potentially creating pressure that could reduce work quality if not managed properly. Second, the suboptimal use of information technology, indicated by varying levels of employee adaptability, especially among Generation X, which impacts the accuracy of administrative reporting. Third, an unsupportive physical work environment, such as a congestion-prone location and inadequate facilities, is suspected to hinder the creation of a conducive work atmosphere. Therefore, this research is conducted to analyze the extent to which these three variables workload, information technology usage, and work environment influence employee performance, in order to provide strategic recommendations for improving the quality of human resources in sub-district level government institutions.

### METHOD

This study is grounded in a quantitative methodology that integrates descriptive and verificative research designs. The descriptive component is primarily utilized to systematically delineate the fundamental constructs under investigation, which include workload, information technology usage, work environment, and employee performance. The verificative method serves to empirically examine hypothesized cause-and-effect connections among the studied variables (Sugiyono, 2019).

This research implemented a cross-sectional framework, gathering all data simultaneously from the complete employee of the Cileunyi District Office as the analytical unit. The research population was the complete roster of 43 staff members at the Cileunyi District Office, comprising 24 civil servants (ASN) and 19 non-civil servants. A census sampling method was utilized, surveying the entire population. A total of 50 questionnaire questions were provided that were completed, returned, and validated for analysis. The data collection instrument was a questionnaire with fixed responses (closed), based on a five-point Likert scale, where each item corresponds to the theoretical construct being studied.



Source: Primary Data, processed by the author (2025)

**Figure 1. Research Model**

Statistical analysis was performed utilizing SPSS software version 30, following a systematic analytical procedure. The process initiated with instrument validation through reliability and validity assessments to verify measurement consistency and accuracy. Subsequent diagnostic examination evaluated fundamental regression assumptions, incorporating tests for normal distribution of residuals, variance inflation factors for multicollinearity detection, and scatterplot analysis for homoscedasticity verification.

Hypothesis examination was conducted through multiple linear regression modeling, with analytical emphasis placed on the determination coefficient ( $R^2$ ) for variance explanation assessment, F-statistic for comprehensive model significance testing, and t-statistics for evaluating partial regression coefficients of independent variables.

## RESULTS AND DISCUSSION

### Respondent Characteristics

Respondent characteristics are essential as these factors can influence how individuals assess the independent and dependent variables studied. Individual perceptions regarding workload, Information Technology usage, the work environment, and performance are often conditioned by demographic factors such as age, gender, and educational background. These viewpoints are constructed through a combination of personal experience, acquired knowledge, and individual competencies within the institutional setting. Consequently, respondent demographics provide more than just contextual information; they offer a vital interpretive framework for analyzing employee attitudes toward the central variables of this study.

**Tabel 2. Respondent Characteristics**

Characteristic	Category	Count	%
Gender	Male	31	72
	Female	12	28
Age	19 – 26	2	5
	27 – 34	5	12
	35 – 42	7	16
	43 – 50	15	35
	51 – 58	14	33
Education	High School	18	42
	Diploma (D3)	3	7
	Bachelor (S1)	15	35
	Master (S2)	7	16

Source: Primary Data, processed by the author (2025)

An examination of Table 1 reveals that 43 employees, 31 individuals or 72% are male, and 12 individuals or 28% are female. This proves that employees at the Cileunyi District office are predominantly male, with a percentage of 72%. Regarding employee age, it can be observed that 2 individuals or 5% are aged 19-26 years, 5 individuals or 12% are aged 27-34 years, 7 individuals or 16% are aged 35-42 years, 15 individuals or 35% are aged 43-50 years, and 14 individuals or 33% are aged 51-58 years. This indicates that employees at the Cileunyi District office are mostly aged 43-50 years. Regarding educational attainment, employees consist of 18 High School graduates (42%), 3 Diploma holders (7%), 15 Bachelor's degree holders (35%), and 7 Master's degree holders (16%). This demonstrates that employees at the Cileunyi District office are still dominated by those with a High School education, encompassing both civil service personnel and non-civil service employees.

### Verificative Testing

#### Validity Test

The validity of the research instrument was empirically assessed to establish its accuracy in measuring the intended constructs. The method involved correlating the score of each question with the total score for its variable. The calculated correlation coefficient ( $r$ -count) was then compared to the  $r$ -table value. For this study with 43 respondents ( $df = n-2$ ) and The

benchmark correlation coefficient, derived from statistical tables for a 0.05 alpha level, was identified as 0.301. Question items with an r-count greater than 0.301 were deemed valid.

**Table 2. Validity Test Result**

Variable	Number of Items	r-value Range	r-table	Validity Status
Workload (X1)	11	0,334-0,623	0,301	Validity
IT Usage(X2)	9	0,307-0,785	0,301	Validity
Work Environment (X3)	13	0,322-0,702	0,301	Validity
Employee Performance (Y)	17	0,381-0,766	0,301	Validity

Source: Questionnaire Processing Results with SPSS 30 (2025)

The validity test outcomes presented in Table 2 demonstrate that all correlation coefficients (r-count) surpass the established r-table threshold. Consequently, all survey items are statistically valid and appropriate for further analytical procedures.

**Reliability Test**

The reliability assessment evaluates the research instrument's consistency, ensuring it yields reproducible results across multiple administrations to the same sample population. The specific reliability metrics for each research variable are summarized in Table 3

**Table 3. Reliability Test Results**

Variable	Reliability Value	r-table	Conclusion
Employee Performance (Y)	0,895	0,600	Reliable
Workload (X1)	0,645	0,600	Reliable
IT Usage(X2)	0,790	0,600	Reliable
Work Environment (X3)	0,730	0,600	Reliable

Source: Questionnaire Processing Results with SPSS 30 (2025)

As presented in Table 3, the reliability analysis demonstrates that all variables in this study possess a reliability coefficient (r-count) exceeding the established r-table threshold of 0.600. This confirms the internal consistency and reliability of the measurement instrument for each construct.

**Normality Test**

In regression modeling, normality tests determine whether the independent variables, dependent variable, or both exhibit normal distribution. This research specifically examines whether the residual values are normally distributed, as non-normality would invalidate the statistical test results. The results of the normality test between the independent variables Workload (X1), Information Technology Usage (X2), and Work Environment (X3) on the dependent variable Employee Performance (Y) are as follows:

**Table 4. Normality Test**

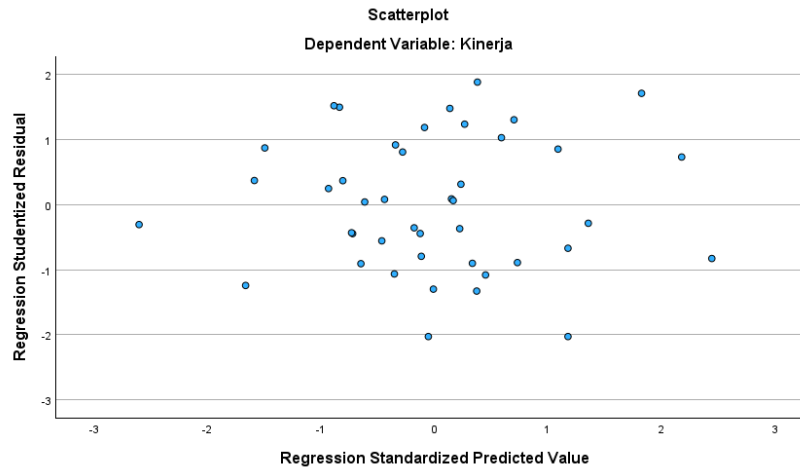
No	Regression Model	Significance Value (p)	Validity Criteria	Normality Status
1	Employee Performance with Predictors: Workload, IT Use, Work Environment	0,200	Fulfilled	Normally Distributed

Source: Questionnaire Processing Results with SPSS 30 (2025)

The fulfillment of the normality assumption is confirmed by the Kolmogorov-Smirnov test, which shows a non-significant result ( $p = 0.200 > 0.05$ ). This indicates that the regression analysis is valid as the residuals are normally distributed.

### Heteroscedasticity Test

The purpose of heteroscedasticity assessment is to detect any inequality in variance of residuals across observations in the regression model. The test method involved examining a scatter plot of the predicted dependent variable, which displayed no systematic pattern as the data points were distributed in a random scatter pattern around the zero baseline of the ordinate.



Source: Questionnaire Processing Results with SPSS 30 (2025)

**Figure 2. Heteroscedasticity Coefficient Test Results**

Heteroscedasticity assessment results in Figure 2 show a random scatter of points above and below zero, confirming the absence of heteroscedasticity in the regression model.

### Multicollinearity Test

To detect multicollinearity among predictor variables was evaluated by analyzing tolerance values and the Variance Inflation Factor (VIF). The diagnostic thresholds for interpretation maintained that tolerance statistics should exceed 0.10 while corresponding VIF measurements must remain under 10.00 to indicate the absence of problematic collinearity. would indicate no multicollinearity. As presented in Table 5, all variables met these criteria.

**Table 5. Multicollinearity Test Results**

No	Dependent Variable	Predictor	Tolerance	VIF	Conclusion
1	Employee Performance (Y)	Workload (X1)	0,822	1.217	No Multicollinearity
		IT Usage(X2)	0,927	1.079	No Multicollinearity
		Work Environment (X3)	0,881	1.135	No Multicollinearity

Source: Questionnaire Processing Results with SPSS 30 (2025)

The analysis of multicollinearity, presented in Table 5, reveals that both diagnostic measures confirm the independence of the explanatory variables. All tolerance values are significantly all tolerance measurements exceeded 0.10, and each VIF result fell comfortably within acceptable limits below 10.00, leading to the conclusion that multicollinearity is not a concern in this model.

### Linearity Test

The linearity test assesses the appropriateness of a linear specification in the regression model by examining the influence of explanatory factors on the measured response. This diagnostic test determines whether the empirical model should maintain a linear form or require higher-order transformations. Following standard statistical practice, the Deviation from Linearity measure is used with a 0.05 significance threshold - values exceeding this threshold

confirm linearity, while values below it indicate significant deviation from linearity, as shown in the subsequent table.

**Table 6. Linearity Test Results**

No	Dependent Variable	Predictor	Deviation from Linearity	Conclusion
1	Employee Performance (Y)	Workload (X1)	0,933	Linear Relationship exists
		IT Usage(X2)	0,372	Linear Relationship exists
		Work Environment (X3)	0,708	Linear Relationship exists

Source: Questionnaire Processing Results with SPSS 30 (2025)

Based on the linearity assessment in Table 6, which shows all significance values exceed the 0.05 level, it is determined that the predictors maintain linear relationships with the outcome variable.

**Multiple Regression Analysis**

Multiple regression analysis serves to predict variations in a dependent variable through the simultaneous manipulation of multiple independent variables. This research utilizes a multiple linear regression model with three predictor variables: Workload (X1), Information Technology Usage (X2), and Work Environment (X3), to examine their effect on Employee Performance (Y). The analysis enables hypothesis testing and determines the extent of impact that predictor variables have on the outcome variable. The results obtained from the regression procedure are detailed in the following part

**Table 7. Multiple Regression Analysis Results**

No	Model	Unstandardized Coefficients B
1	Const	11.058
	Workload (X1)	.903
	IT Usage(X2)	1.050
	Work Environment (X3)	.317

Source: Questionnaire Processing Results with SPSS 30 (2025)

Based on the data, the regression model is defined as  $Y = 11.058 + 0.903X_1 + 1.050X_2 + 0.317X_3 + e$ . This equation predicts Employee Performance (Y) using Workload (X1), IT Usage (X2), and Work Environment (X3). Here, 11.058 is the constant, the other numbers are the variables' coefficients, and 'e' is the error term.

The multiple regression analysis from SPSS v30 yielded the following coefficients: Workload (X1) = 0.903, Information Technology Usage (X2) = 1.050, and Work Environment (X3) = 0.317. Interpretation of the results:

Workload (X1): The positive coefficient (0.903) indicates a significant positive connection to employee performance. This indicates that a one-unit increased workload corresponds to a 0.903-unit increased performance. This may imply that employees feel motivated and gain valuable experience when faced with challenging tasks, thereby enhancing their productivity. It is crucial to note, however, that this positive effect exists within the reasonable limits of their job responsibilities.

Information Technology Usage (X2): With the highest positive coefficient (1.050), IT Usage shows a strong and significant positive effect on performance. A one-unit increased IT adoption to a 1.050-unit increased performance. This underscores the benefits of IT in the modern bureaucracy, where automation, faster systems, and real-time data access enhance productivity, work quality, and ultimately, organizational performance.

Work Environment (X3): A coefficient of 0.317 indicates a significant positive relationship with employee performance. This means that for every one-unit increase in the work environment metric, performance is predicted to increased by 0.317 units. This indicates that a less conducive work environment and inadequate facilities and infrastructure can negatively affect performance, or conversely, that performance issues may be exacerbated by these suboptimal conditions.

**Partial Correlation Coefficient Analysis**

The goal of correlation analysis is to obtain a numerical value, known as a correlation coefficient. This value indicates how strongly and in what direction (positive or negative) two variables are linearly related, where one is the predictor and the other is the outcome. The strength of this relationship whether it is strong or weak is interpreted based on established benchmarks, as provided below.

**Table 8. Interpretation of Correlation Coefficients**

Coefficient Interval	Level of Relationship
0,00 – 0,199	Very Weak
0,20 – 0,399	Weak
0,40 – 0,599	Moderate
0,60 – 0,799	Strong
0,80 – 1,000	Very Strong

Source: (Sugiyono, 2019:286)

The correlation test findings are summarized in the table below

**Table 9. Partial Correlation Coefficient Analysis Results**

No	Control Variabel	Variabel	t	Sig.
1	None	Workload (X1) IT Usage(X2)	0,261	0,091
2	None	IT Usage(X2) Work Environment (X3)	0,021	0,893
3	None	Workload (X1) Work Environment (X3)	0,338	0,027
4	Employee Performance (Y)	Workload (X1) IT Usage(X2)	-0,270	0,084
5	Employee Performance (Y)	IT Usage(X2)) Work Environment (X3)	0,099	0,534
6	Employee Performance (Y)	Workload (X1) Work Environment (X3)	0,436	0,004

Source: Questionnaire Processing Results with SPSS 30 (2025)

The findings of the correlation analysis are tabulated in Table 9, outlining correlation coefficients and their directional relationships between independent variables and control variable.

The correlation between Workload and the Use of Information Technology without a control variable has a value of 0.261, which falls within the 0.2 – 0.399 interval, indicating a weak correlation between Workload and the Use of Information Technology. Additionally, the significance value exceeds the standard threshold for correlation assessment. This means that the relationship between these independent variables is not significant. When Employee Performance is introduced as a control variable, the relationship between Workload (X1) and the Use of Information Technology (X2) changes from 0.261 to -0.270. This reveals that higher or lower levels of Employee Performance can be observed when a lower workload tends to be associated with higher use of Information Technology, or vice versa. In other words, an employee with proficient skills in using information technology can mitigate a high workload, reducing its intensity, and conversely. This has implications for achieving optimal employee

performance, serving as both a challenge and a motivation to enhance performance further, as well as acting as an inclusive learning medium.

The correlation between Information Technology Usage and Work Environment demonstrates a coefficient of 0.021, within the 0.00-1.00 range, indicating a very weak correlation. Both with and without controlling for Performance, the relationship between Technology Usage (X2) and Work Environment (X3) remains insignificant and exceptionally weak (0.02 and 0.09). This finding is analytically significant as it implies these two variables operate in relatively separate domains. Work environment quality (both physical and non-physical aspects) does not directly facilitate or hinder technology adoption. Similarly, the level of technology usage does not inherently create better or worse work conditions. Consequently, improvement efforts in these two areas can be implemented independently without concerns about direct interference between them.

The correlation between Workload and Work Environment has a value of 0.338, which falls within the interval of 0.040–0.599. This indicates a moderate positive correlation between the Work Environment and Performance. When the Performance variable is introduced as a control, it strengthens the positive relationship between Workload (X1) and Work Environment (X3), increasing the coefficient from 0.338 to 0.436. This indicates that when the influence of individual performance is controlled for, a clearer and stronger positive correlation emerges between the work environment and workload. This suggests that an environment conducive to high performance may inherently be associated with a higher workload, and vice-versa. In practical terms, a supportive work environment characterized by factors such as collegial assistance among employees can mitigate the perception of a demanding workload. Adequate work facilities further enable employees to manage their assigned duties effectively. Consequently, such an environment fosters workplace comfort and facilitates the management of increasing job demands, which in turn has a direct positive implication for employee productivity and performance.

### Simultaneous Correlation Coefficient Analysis

**Table 10. Simultaneous Correlation Coefficient Analysis Results**

No	Dependent Variable and Predictors	R	R Square
1	Employee Performance with Predictors: Workload, IT Usage, Work Environment	0,863	0,745
2	Employee Performance with Predictors: Workload	0,536	0,287
3	Employee Performance with Predictors: IT Usage	0,762	0,580
4	Employee Performance with Predictors: Work Environment	0,056	0,03

Source: Questionnaire Processing Results with SPSS 30 (2025)

The analysis of the simultaneous correlation coefficient, presented in Table 10, reveals a value of 0.863 for the relationship between the combined independent variables (Workload, IT Usage, Work Environment) and Employee Performance. This value, falling within the 0.800-1.000 interval, denotes a very strong and significant positive correlation. This finding implies that Employee Performance fluctuates directly with the collective state of these variables; performance improves with their simultaneous enhancement and diminishes with their collective reduction.

### Coefficient of Determination Analysis

The coefficient of determination ( $R^2$ ) quantifies the percentage of variation in the dependent variable that can be explained by the independent variables in the regression model. (Sugiyono, 2019:360), which is derived from the subsequent formula :

$$Kd = r^2 \times 100\%$$

(Source: Sugiyono, 2019:358)

Where:

Kd = The extent of the variable's change

$r^2$  = Squared correlation coefficient

The computed coefficient of determination quantifies the individual impact of each predictor on the outcome variable. The subsequent formula demonstrates the calculation of these partial effects:

$Kd (X1) = r^2 \times 100\% = (0,287)^2 \times 100\% = 28,7\%$ , meaning 28,7% of the influence on Performance is caused by Workload.

$Kd (X2) = r^2 \times 100\% = (0,580)^2 \times 100\% = 58.00\%$ , meaning 58.00 % of the influence on Performance is caused by Information Technology Usage.

$Kd (X3) = r^2 \times 100\% = (0. 0,03)^2 \times 100\% = 3.00\%$ , meaning 3.00 % of the influence on Performance is caused by the Work Environment.

As shown in Table 10, the R-square coefficient of determination of 0.745 indicates that 74.5% of the variation in employee performance can be jointly explained by workload, information technology use, and the work environment. Meanwhile, the remaining 25.5% of the variance is influenced by other factors not examined in this study.

The analysis of simultaneous correlation and determinant coefficients yields the following conclusions:

The high simultaneous correlation value ( $R = 0.863$ ) indicates that the combination of Workload, Information Technology Usage, and Work Environment exerts a very strong collective influence on Employee Performance. This signifies that these three variables do not operate in isolation but rather interact and reinforce one another. For instance, effective use of information technology can alleviate perceived workload, while a positive work environment enhances employee comfort and resilience in managing diverse tasks and responsibilities.

When analyzed partially, the variable of Information Technology Usage demonstrates the strongest correlation ( $R = 0.762$ ) and makes the largest individual contribution ( $R$  Square = 0.580 or 58%) to Employee Performance. This positions Technology Usage as the most critical influential factor among the variables studied. Enhancements in the efficiency, accessibility, and reliability of information technology systems have a direct and significant impact on improving performance. Consequently, employees with strong capabilities, understanding, and adaptability in using information technology are better equipped to achieve optimal performance and minimize errors and omissions that directly affect their work outcomes.

The Workload variable, by itself, shows a moderately weak relationship with performance ( $R = 0.536$ ), explaining only 28.7% of the variation in performance. This is a significant finding, as it implies that increases or decreases in workload alone, without the support of other factors like Technology Usage and a conducive Work Environment, do not automatically translate to changes in performance. Workload may be neutral or even detrimental if poorly managed, but becomes a positive factor when combined with other variables. Therefore, managerial workload distribution should align tasks with employee roles and responsibilities. Any additional duties should be assigned considering individual capacity

and can be distributed among other staff as a means of learning and broadening bureaucratic expertise. Furthermore, the use of information technology significantly influences the workload borne by employees, greatly assisting in the swift and accurate execution of tasks.

The relationship between the Work Environment and Employee Performance is weak, leading to the conclusion that the work environment, on its own, has almost negligible direct influence on performance improvement or decline. As noted, the physical conditions of the Cileunyi District office are somewhat less representative, with several rooms and work facilities being inadequate. Despite this, the district apparatus is still required to demonstrate good performance as a reflection of a public service organization in the region.

**Hypothesis Testing**

**Partial Hypothesis Testing (t-test)**

The t-test serves to examine both the statistical significance of differences between two data groups and the magnitude of influence between independent and dependent variables. The study establishes the following hypotheses for each variable relationship:

Workload (X1) and Employee Performance (Y):

H<sub>0</sub>: β<sub>1</sub> = 0 (Workload demonstrates no substantial effect on performance)

H<sub>a</sub>: β<sub>1</sub> ≠ 0 (Workload exhibits a significant effect on performance)

Information Technology Usage (X2) and Employee Performance (Y):

H<sub>0</sub>: β<sub>2</sub> = 0 (IT usage shows no meaningful impact on performance)

H<sub>a</sub>: β<sub>2</sub> ≠ 0 (IT usage significantly influences performance)

Work Environment (X3) and Employee Performance (Y):

H<sub>0</sub>: β<sub>3</sub> = 0 (Work environment reveals no notable effect on performance)

H<sub>a</sub>: β<sub>3</sub> ≠ 0 (Work environment substantially affects performance)

The results of this hypothesis testing via the t-test are presented in the subsequent table:

**Table 11. Partial Hypothesis Testing Results (t-test)**

No	Independent Variable	Dependent Variable	t	Sig.	Conclusion
1	Workload (X1)	Employee Performance (Y)	4.927	0,001	H <sub>0</sub> rejected, H <sub>a</sub> accepted
2	IT Usage(X2)	Employee Performance (Y)	7.754	0,001	H <sub>0</sub> rejected, H <sub>a</sub> accepted
3	Work Environment (X3)	Employee Performance (Y)	2.534	0,015	H <sub>0</sub> rejected, H <sub>a</sub> accepted

Source: Questionnaire Processing Results with SPSS 30 (2025)

The partial t-test results from Table 11, assessed at a 5% significance level (with a critical t-value of approximately 1.687), are as follows:

With a significance level (α) of 5% and degrees of freedom (df) = 43 - 3 = 40, the critical t-value obtained is 1.683. The results indicate that Workload has a t-statistic greater than the critical t-value (4.927 > 1.687) and a significance value of 0.001 < 0.05. Therefore, H<sub>0</sub> is rejected and H<sub>a</sub> is accepted, meaning there is a partial effect of Workload on Employee Performance. This finding underscores the importance of effective workload management for enhancing workplace performance. This implies that workload distribution should align with employees' designated roles and responsibilities. Furthermore, assigning additional tasks can serve as a medium for learning and gaining experience across various governmental functions, provided it is adjusted according to individual capacity to prevent workload imbalance among certain employees.

With a significance level (α) of 5% and degrees of freedom (df) = 43 - 3 = 40, the critical t-value obtained is 1.683. The results indicate that Information Technology Usage has a t-

statistic greater than the critical t-value ( $7.754 > 1.687$ ) and a significance value of  $0.001 < 0.05$ . Therefore,  $H_0$  is rejected and  $H_a$  is accepted, meaning there is a partial effect of Information Technology Usage on Employee Performance. This finding confirms that employees' capability and understanding in utilizing information technology are crucial for executing duties and responsibilities in the contemporary bureaucratic era. Given that all data processing, report compilation, and public administration services have become digital-based, district apparatus must be able to adapt and actively respond to all technological developments to maintain and enhance employee performance.

With a significance level ( $\alpha$ ) of 5% and degrees of freedom ( $df$ ) =  $43 - 3 = 40$ , the critical t-value obtained is 1.683. The results indicate that Work Environment has a t-statistic greater than the critical t-value ( $2.534 > 1.687$ ) and a significance value of  $0.015 < 0.05$ . Therefore,  $H_0$  is rejected and  $H_a$  is accepted, meaning there is a partial effect of Work Environment on Employee Performance. However, the influence of the work environment is relatively weak compared to the other two variables, such as Information Technology (t-statistic = 7.754) and Workload (t-statistic = 4.927). This finding suggests that within this organizational context, the work environment functions as a supporting factor for performance, where its improvement does not necessarily yield a significant performance enhancement compared to technology and workload variables. Based on the Civil Service Law No. 20 of 2023, civil servants are required to be prepared to be placed anywhere. This fosters a culture of adaptability and resilience, so that performance is judged more by the ability to complete tasks in various conditions, rather than by a specific work environment. On the other hand, developments in information technology and workload are now major factors influencing performance, as both determine the speed, accuracy, and volume of work output. Meanwhile, an inadequate work environment can indeed decrease performance, but if it is adequate, its effect is neutral meaning that a good work environment does not necessarily significantly improve performance, only prevents decline. Therefore, organizations must invest proportionally in improving the work environment while maintaining a focus on optimizing information technology and more strategic workload management.

**Simultaneous Hypothesis Testing (F-test)**

The F-statistic serves to assess the collective impact of all predictor variables within the regression model. It assesses whether the combined effect of the predictors is statistically significant.

The test is structured around the following hypotheses:

$H_0: \beta_1 = \beta_2 = \beta_3 = 0$  | Workload, Information Technology Usage, and Work Environment, together, have no significant effect on Employee Performance.

$H_a: \text{least one } \beta_i \neq 0$  | The predictor variables collectively demonstrate a statistically significant impact on Employee Performance.

**Table 12. Simultaneous Hypothesis Testing Results (F-test)**

No	Dependent Variable and Predictors	F	Sig	Conclusion
1	Employee Performance with Predictors: Workload, IT Usage, Work Environment	37.900	0,001	$H_0$ rejected, $H_a$ accepted

Source: Questionnaire Processing Results with SPSS 30 (2025)

Based on the analysis results in Table 12, which presents the F-test results, the significance value is 0.001. This value is below the alpha level of 0.05, so the null hypothesis ( $H_0$ ) is rejected. Therefore, it is statistically confirmed that Workload, Information Technology Usage, and Work Environment together have a significant influence on Employee Performance. However, beyond this statistical significance, several considerations must be

noted. Although the three variables are collectively significant, their individual contributions are not uniform. Information Technology emerges as the primary driver (t-statistic = 7.754), followed by Workload (t-statistic = 4.927), while the Work Environment exerts a considerably weaker influence (t-statistic = 2.534).

Consequently, it can be concluded that the managerial priority for enhancing employee performance lies in strengthening information technology usage among all employees. This can be achieved through internal district-led training, mentoring, and coaching from proficient colleagues, or by enrolling staff in competency development programs offered by the Bandung Regency regional government or external providers. This strategy aims to, at a minimum, stabilize performance to prevent further decline and is expected to lead to improved performance outcomes.

Subsequently, the role of workload management remains crucial. Despite the imbalance between task volume and personnel numbers, effectively managing this workload presents a managerial challenge to unlock each employee's potential across various local government contexts while sustaining and enhancing their performance. Finally, the work environment, serving as a supporting factor, is also vital. This includes ensuring the availability of adequate facilities and infrastructure, and leveraging existing resources to improve and augment the physical resources of the Cileunyi District office.

## CONCLUSION

Based on the findings, it can be concluded that employee performance in Cileunyi District is significantly influenced by three independent variables with varying degrees of impact. Information Technology Usage emerges as the most determinant factor, demonstrating the highest partial correlation coefficient ( $r=0.762$ ) and contributing the largest share (58.0%) to the variation in employee performance. This finding confirms that within the context of contemporary government bureaucracy, technology adoption has become paramount for enhancing the productivity and accountability of civil servant performance.

The Workload variable shows a significant positive relationship (t-statistic=4.927), despite the empirical reality that 65.99% of employees experience workloads exceeding the ideal standard. Its partial contribution of 28.7% indicates that within this organizational context, workload functions as a challenge, suggesting that job demands can yield positive effects when perceived as opportunities for competency development.

The Work Environment variable demonstrates a statistically significant influence but a limited contribution of 3.0% to performance. This finding is consistent with the objective conditions of the Cileunyi District's work environment, which faces various constraints related to insufficient and inadequate facilities and infrastructure, positioning the work environment as a supporting factor in achieving optimal performance. Consequently, interventions to improve the work environment should be prioritized for aspects that directly support work process efficiency.

Simultaneous analysis reveals that the three variables collectively explain 74.5% of the variation in employee performance ( $R^2=0.745$ ), with a very strong multiple correlation coefficient ( $R=0.863$ ). This indicates a synergistic effect from the interaction among the variables, creating an impact that exceeds the sum of their individual influences. This finding supports the contingency perspective in performance management, which emphasizes the importance of a systemic and integrated approach to human resource development.

Based on these findings, it can be concluded that the performance of employees in Cileunyi District is significantly influenced by the synergy of these three variables. To maintain and optimize employee performance, several recommendations can be implemented by the leadership of Cileunyi District. The leadership should promptly design and implement sustainable and inclusive information technology training programs. Given the dominant influence of information technology on employee performance (58%), training must

be tailored to employees' digital literacy levels, especially for Generation X, which dominates the employee structure. Training can be conducted in the form of coaching by more competent employees, periodic workshops, or collaboration with external parties from Bandung Regency. Furthermore, it is crucial to regularly evaluate the technology systems in use, ensuring that the applications genuinely facilitate work, reduce administrative burdens, and enhance the accuracy and speed of services.

Additionally, there is a need for a more proportional redistribution and reorganization of workload and the gradual improvement of the work environment. Although the influence of the work environment is relatively minor, comfortable and adequate facilities remain vital for supporting productivity. Operational steps that can be taken include optimizing existing workspaces, providing a separate smoking area, improving sanitation facilities, and adding adequate work facilities. Meanwhile, to address workload disparities, leadership can remap tasks based on workload, complexity, and employee competencies. A job rotation system can be implemented to provide task variety and simultaneously develop employee insight. Moreover, it is recommended to propose an increase in civil servant formations to balance the employee-to-workload ratio.

This study is limited by its quantitative design, which restricts the exploration of bureaucratic system dynamics, and by the distribution of questionnaires to all employees, who inherently possess diverse understandings and backgrounds. The analysis focuses specifically on Workload, Information Technology Usage, Work Environment, and Employee Performance. Other potentially influential variables such as compensation, work motivation, and leadership style are not addressed in this research and warrant consideration in future studies. A more in-depth qualitative approach is recommended to enhance understanding of the contextual factors that improve performance at the sub-district level.

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