

The Influence of Information Technology Utilization, Human Resource Competence, and Work Environment on Employee Performance at the Regional House of Representatives Secretariat of Buleleng Regency

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Abstract

This study examines the effects of information technology utilization, human resource (HR) competence, and the work environment on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency. The study was prompted by fluctuations in employee attendance during 2025 despite the adoption of digital initiatives, including biometric attendance systems. A quantitative causal design was applied, involving 110 respondents selected from a population of 151 employees using disproportional random sampling. Data were collected through a structured questionnaire and analyzed using multiple linear regression with SPSS 25 after the required validity, reliability, and classical assumption tests were satisfied. The results show that information technology utilization ($t = 2.094$; $p = 0.025$), HR competence ($t = 3.292$; $p = 0.001$), and the work environment ($t = 8.926$; $p < 0.001$) each have a positive and significant effect on employee performance. The three predictors also have a significant simultaneous effect ($F = 96.610$; $p < 0.001$), with an Adjusted R^2 of 0.725, indicating that they jointly explain 72.5% of the variation in employee performance. The findings highlight the importance of integrating effective technology utilization with continuous competency development and a supportive work environment to strengthen employee performance and organizational effectiveness in public institutions.

Keywords:

Information Technology Utilization; Human Resource Competence; Work Environment; Employee Performance; Public Sector.

1. INTRODUCTION

Human resources are recognized as one of the most valuable organizational assets because organizational performance largely depends on employees' ability to accomplish assigned responsibilities effectively. Regardless of the availability of advanced technology, sophisticated work systems, or adequate organizational resources, organizational objectives cannot be achieved without competent employees who possess the necessary knowledge, skills, and professional attitudes. Consequently, improving employee performance has become a strategic priority for both private and public organizations. In government institutions, employee performance is particularly important because it directly influences the quality, effectiveness, and accountability of public services delivered to the community. According to Lestari et al. (2023), the development of human resources is a fundamental determinant of organizational success, as organizational sustainability depends on the effective management of its human capital.

The rapid advancement of information technology has substantially transformed organizational operations, including public sector institutions. Information technology has been increasingly utilized to improve administrative efficiency, accelerate information processing, enhance communication, and support

decision-making processes. The implementation of digital systems, including electronic attendance and performance management applications, is expected to improve employee productivity and organizational effectiveness. As explained by Telaumbanua et al. (2024), the utilization of information technology positively contributes to employee performance by simplifying work processes and increasing operational efficiency. Similarly, Purba and Tampubolon (2022) reported that the effective use of information technology improves both work quality and employee productivity. These findings indicate that digital transformation plays an important role in strengthening organizational performance.

However, the successful implementation of information technology depends not only on the availability of technological infrastructure but also on the competence of human resources operating the system. Human resource competence encompasses employees' knowledge, technical skills, work experience, and professional attitudes that enable them to perform their duties effectively. Employees with higher competence are generally more capable of adapting to technological developments and utilizing digital systems efficiently. Fitriani et al. (2024) demonstrated that human resource competence has a positive and significant influence on employee performance because competent employees are able to complete their responsibilities more effectively and efficiently. Likewise, Afandi et al. (2024) emphasized that contemporary human resource competence also includes digital capabilities, analytical thinking, adaptability, and continuous learning, all of which are essential for maintaining employee performance in the digital era.

In addition to technology utilization and employee competence, the work environment represents another important determinant of organizational performance. A supportive work environment, both physically and psychologically, contributes to employee motivation, job satisfaction, and productivity. Comfortable facilities, harmonious interpersonal relationships, and effective communication create working conditions that encourage employees to perform optimally. Nevertheless, previous empirical findings remain inconsistent. While several studies have reported that the work environment positively influences employee performance, Rohmat et al. (2023) found that the work environment does not directly affect employee performance but instead influences performance through organizational commitment. These inconsistent findings suggest that the relationship between the work environment and employee performance requires further empirical investigation, particularly within public sector organizations.

The Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency is responsible for providing administrative and technical support for legislative functions, budgeting, and regional oversight. To improve bureaucratic effectiveness and transparency, the institution has implemented several digital initiatives, including biometric attendance systems and electronic performance management. Despite these technological improvements, preliminary observations indicate that employee performance remains unstable. Attendance data throughout 2025 reveal considerable monthly fluctuations, with several months failing to achieve the institutional attendance target of 75%. Attendance rates ranged from 63% to 88.2% during the first semester and continued to fluctuate following the recruitment of additional civil servants and government employees under work agreements (PPPK). Furthermore, administrative records indicate that employee leave and official external assignments substantially contributed to attendance variation, while delays in task completion and inconsistent work performance continued to occur despite the availability of digital systems. These conditions suggest that technology implementation alone has not been sufficient to ensure consistent employee performance. The phenomenon observed at the Secretariat of the DPRD of Buleleng Regency also reveals a practical contradiction. Although information technology has been introduced to simplify administrative processes and strengthen employee discipline, organizational performance has not improved consistently. This condition indicates that employee performance may also depend on other organizational factors, particularly human resource competence and the quality of the work environment. Therefore, examining these factors simultaneously becomes essential to obtain a more comprehensive understanding of employee performance within public organizations.

Previous studies have extensively examined the relationships between information technology utilization, human resource competence, work environment, and employee performance. However, most investigations focused on these variables independently or in different organizational settings. Moreover, inconsistent findings regarding the influence of the work environment indicate that empirical evidence remains inconclusive. Within the context of the Secretariat of the DPRD of Buleleng Regency, research investigating these three determinants simultaneously remains limited. This gap provides the basis for conducting the present study.

Accordingly, this research aims to examine the partial and simultaneous effects of information technology utilization, human resource competence, and the work environment on employee performance at the Secretariat of the DPRD of Buleleng Regency. The findings are expected to enrich the literature on human resource management and information technology, particularly in the context of public sector organizations undergoing digital transformation. From a practical perspective, the results are expected to provide evidence-based recommendations for improving employee performance through more effective utilization of information technology, continuous competency development, and the creation of a supportive work environment. Such improvements may contribute to enhancing organizational effectiveness, accountability, and the quality of public services.

The remainder of this paper is organized as follows. The next section reviews the theoretical foundations and previous empirical studies relevant to the proposed research model and hypotheses. The third section explains the research methodology, including the research design, sampling procedures, data collection methods, and analytical techniques. The fourth section presents the empirical findings and discusses the results in relation to previous studies. Finally, the last section concludes the study by outlining its theoretical contributions, practical implications, research limitations, and recommendations for future research.

1.1. Information Technology Utilization and Employee Performance

Information technology has become an essential organizational resource for improving operational efficiency, accelerating information processing, and supporting decision-making processes. The utilization of information technology enables organizations to collect, process, store, and disseminate information more effectively, thereby facilitating employees in completing their duties efficiently (Marliana et al., 2023). In the public sector, the implementation of digital systems such as electronic attendance and performance management applications is expected to improve work effectiveness, transparency, and accountability. Effective utilization of information technology also contributes to improving employee productivity by reducing administrative complexity, minimizing errors, and increasing work accuracy. Employees who are able to utilize digital systems effectively tend to complete their responsibilities more efficiently and produce higher-quality work outcomes. Telaumbanua et al. (2024) found that information technology utilization has a positive and significant influence on employee performance because it accelerates work processes and enhances organizational efficiency. Similarly, Purba and Tampubolon (2022) concluded that effective technology utilization improves employee productivity and work quality. Rohmat et al. (2023) also reported that information technology positively contributes to employee performance within organizational settings. Based on the theoretical explanation and previous empirical findings, the following hypothesis is proposed:

H1: Information technology utilization has a positive and significant effect on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency.

1.2. Human Resource Competence and Employee Performance

Human resource competence refers to employees' knowledge, skills, work attitudes, and experience that enable them to perform organizational responsibilities effectively. Competent employees possess the capability to solve work-related problems, adapt to technological changes, and contribute to organizational objectives. According to Wibowo (2021), human resource competence consists of work knowledge, technical skills, professional attitudes, and work experience that collectively determine employee performance. The successful implementation of information technology is highly dependent on employees' competence. Employees with adequate competence are more capable of utilizing organizational resources efficiently and responding to dynamic work demands. Fitriani et al. (2024) demonstrated that human resource competence has a positive and significant effect on employee performance because competent employees perform their duties more effectively and efficiently. Furthermore, Afandi et al. (2024) emphasized that digital competence, adaptability, and continuous learning have become critical competencies required in modern organizations. Likewise, Suryani et al. (2021) reported that competent human resources significantly improve employee performance within public organizations. Therefore, the second hypothesis is formulated as follows:

H2: Human resource competence has a positive and significant effect on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency.

1.3. Work Environment and Employee Performance

The work environment represents all physical and non-physical conditions surrounding employees during the execution of their duties. A conducive work environment creates comfort, safety, effective communication, and harmonious interpersonal relationships that encourage employees to perform more productively (Sedarmayanti, 2021). Adequate facilities, supportive colleagues, and comfortable working conditions increase employee motivation and job satisfaction. Several empirical studies have demonstrated the positive contribution of the work environment to employee performance. Burhan et al. (2022) concluded that a supportive work environment significantly improves employee performance. Mahendra (2022) also found that a favorable work environment positively affects employee productivity. However, Rohmat et al. (2023) reported different findings, indicating that the work environment does not directly influence employee performance but instead operates through organizational commitment. These inconsistent findings suggest that the relationship between the work environment and employee performance remains an important issue requiring further investigation. Based on these theoretical and empirical considerations, the following hypothesis is proposed:

H3: The work environment has a positive and significant effect on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency.

1.4. Information Technology Utilization, Human Resource Competence, Work Environment, and Employee Performance

Employee performance is influenced by various organizational factors that interact simultaneously. Information technology provides employees with efficient work systems, competent human resources ensure effective task execution, and a supportive work environment enhances motivation and productivity. The integration of these three factors creates organizational conditions that facilitate the achievement of higher employee performance. According to Hasibuan (2021), employee performance reflects employees' ability to accomplish organizational responsibilities based on established standards, which is influenced by individual competence, organizational support, and the working environment. Previous empirical research conducted by Fitriatin and Yustini (2023) concluded that information technology utilization, human resource competence, and the work environment simultaneously have a positive and significant influence on employee performance. Therefore, organizations should improve these factors simultaneously to achieve sustainable organizational performance. Accordingly, the fourth hypothesis is formulated as follows:

H4: Information technology utilization, human resource competence, and the work environment simultaneously have a positive and significant effect on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency.

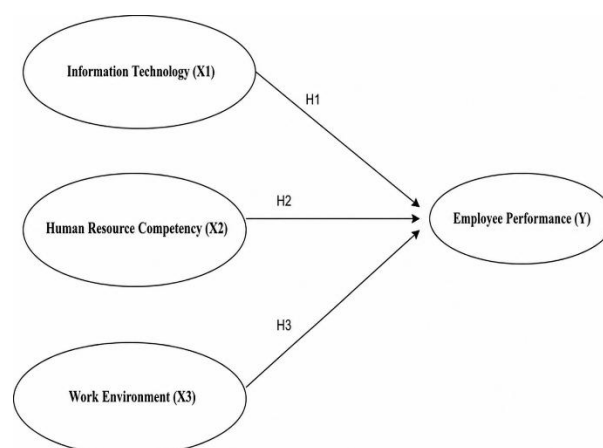


Figure 1. Research Conceptual Framework

2. RESEARCH METHOD

This study employed a quantitative approach with a causal research design to examine the effects of information technology utilization, human resource competence, and the work environment on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency. The research was conducted at the Secretariat of the DPRD of Buleleng Regency, Bali, Indonesia. The study population consisted of 151 State Civil Apparatus (ASN) employees, including 41 Civil Servants (PNS) and 110 Government Employees with Work Agreements (PPPK). Using the Slovin formula with a 5% margin of error, a sample of 110 respondents was obtained through disproportional random sampling, whereby all 41 Civil Servants were included using total sampling, while 69 PPPK employees were randomly selected. This research design was considered appropriate because it enabled the objective measurement of the relationships between the independent variables and employee performance through statistical analysis. Primary data were collected using a structured questionnaire based on a five-point Likert scale, while supporting data were obtained through institutional documentation, including employee records and attendance reports. The questionnaire was developed according to the operational indicators of each variable, namely information technology utilization (Marliana et al., 2023), human resource competence (Wibowo, 2021), work environment (Sedarmayanti, 2021), and employee performance (Hasibuan, 2021). Prior to hypothesis testing, the instrument was evaluated using validity and reliability tests. All questionnaire items met the required validity criterion ($r > 0.156$), while the overall reliability coefficient reached a Cronbach's Alpha value of 0.935, indicating excellent internal consistency. Participation in the study was voluntary, respondents were informed about the purpose of the research, and all collected data were treated confidentially and used exclusively for academic purposes. The collected data were coded, screened, and analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics were first employed to summarize the characteristics of the respondents and research variables. Before conducting hypothesis testing, classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, were performed to ensure the suitability of the regression model. Multiple linear regression analysis was subsequently applied to examine both the partial and simultaneous effects of the independent variables on employee performance using the t-test and F-test at a 5% significance level. The coefficient of determination (Adjusted R^2) was also calculated to assess the proportion

of variance in employee performance explained by the independent variables. Although the study provides empirical evidence regarding employee performance in a public sector institution, its findings are limited to a single organizational setting and a cross-sectional research design, which may restrict the generalizability of the results.

3. RESULTS AND DISCUSSION

3.1. Result

3.1.1. Respondent Characteristics

This study has several limitations that should be considered when interpreting the findings. First, the study was conducted within a single institutional setting, namely the Secretariat of the Buleleng Regency Regional House of Representatives, which may limit the generalizability of the findings to employees in other government institutions or regions with different organizational characteristics. Second, the data were collected through a self-administered online questionnaire, making the findings dependent on the respondents' perceptions and honesty in providing their answers. This approach may introduce potential response or common method bias, particularly because the independent and dependent variables were measured using the same instrument and at the same point in time. Although all 110 questionnaires were returned, resulting in a 100% response rate and eliminating non-response cases, the possibility of response bias cannot be completely ruled out. Finally, the cross-sectional nature of the study captures the relationships among information technology, human resource competency, work environment, and employee performance at a single point in time; therefore, the findings should not be interpreted as evidence of long-term causal relationships. Future studies could address these limitations by involving multiple government institutions or regions, using longitudinal designs, and incorporating data from multiple sources to strengthen the robustness and generalizability of the findings.

3.1.2. Instrument Testing

Before testing the research hypotheses, the validity and reliability of the research instrument were evaluated. The validity test showed that all questionnaire items had correlation coefficients exceeding the minimum criterion ($r > 0.156$), indicating that every indicator successfully measured its intended construct. Furthermore, the reliability test produced a Cronbach's Alpha value of 0.935, demonstrating excellent internal consistency. These results indicate that the questionnaire was both valid and reliable for subsequent statistical analysis.

Table 1. Validity Test Results of Research Instrument

Variable	Indicator	Pearson Correlation (r)	r-Table	Result
Information Technology Utilization (X1)	Information system availability	0.823	0.156	Valid
	Utilization of information technology in daily work	0.820	0.156	Valid
	Ease of application use	0.760	0.156	Valid
Human Resource Competence (X2)	Work knowledge	0.812	0.156	Valid
	Work skills	0.734	0.156	Valid
	Work attitude	0.833	0.156	Valid
	Work experience	0.574	0.156	Valid
Work Environment (X3)	Physical work environment	0.848	0.156	Valid
	Non-physical work environment	0.854	0.156	Valid
	Workplace comfort	0.786	0.156	Valid
Employee Performance (Y)	Work quantity	0.789	0.156	Valid
	Work quality	0.725	0.156	Valid
	Attendance	0.705	0.156	Valid
	Teamwork	0.732	0.156	Valid

Source: Processed primary data (2025).

Table 2. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.935	14

Source: Processed primary data (2025).

3.1.3. Classical Assumption Tests

Before performing multiple linear regression analysis, classical assumption tests were conducted to ensure that the regression model satisfied the underlying statistical assumptions. These tests consisted of the normality test, multicollinearity test, and heteroscedasticity test. Meeting these assumptions is essential to ensure that the estimated regression coefficients are unbiased, consistent, and reliable for hypothesis testing.

3.1.3.1. Normality Test

The normality test was conducted to determine whether the residuals of the regression model followed a normal distribution. This study employed three approaches to evaluate normality: the histogram, the Normal Probability Plot (P-P Plot), and the One-Sample Kolmogorov-Smirnov (K-S) test. A regression model is considered to satisfy the normality assumption when the residuals are normally distributed, as indicated by a histogram resembling a bell-shaped curve, data points closely following the diagonal line in the P-P Plot, and a Kolmogorov-Smirnov significance value greater than 0.05. The histogram demonstrates that the residual values are approximately symmetrically distributed around the center, with no substantial skewness, indicating a normal distribution. Similarly, the Normal Probability Plot shows that the residual points are distributed close to the diagonal line without noticeable deviations, confirming that the residuals follow the expected normal pattern.

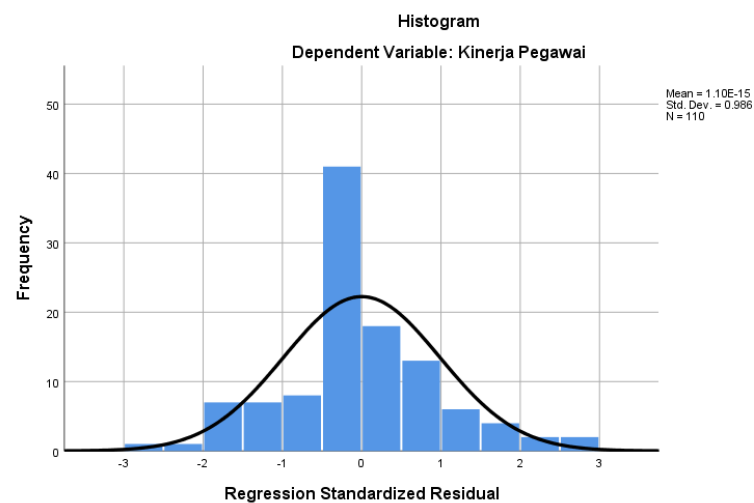


Figure 1. Histogram

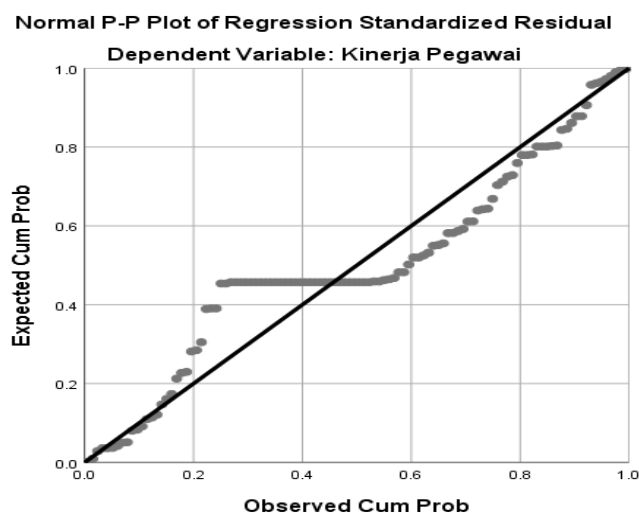


Figure 2. Normal Probability Plot

Table 3. One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		110
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.11660561
Most Extreme Differences	Absolute	.208
	Positive	.109
	Negative	-.208
Test Statistic		.208
Asymp. Sig. (2-tailed)		.092 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: Processed primary data (2025).

The Kolmogorov-Smirnov test produced an Asymp. Sig. (2-tailed) value of 0.092, which is greater than the significance level of 0.05. Therefore, the null hypothesis of normality cannot be rejected, indicating that the regression residuals are normally distributed. The graphical and statistical evidence consistently confirms that the normality assumption is satisfied.

3.1.3.2. Multicollinearity Test

The multicollinearity test was performed to examine whether strong correlations existed among the independent variables. Excessive multicollinearity may inflate the standard errors of the regression coefficients and reduce the stability of the regression model. This study assessed multicollinearity using Tolerance and Variance Inflation Factor (VIF) values. A regression model is considered free from multicollinearity when the tolerance value exceeds 0.10 and the VIF value is below 10. The results of the multicollinearity test are presented in table 4.

Table 4. Multicollinearity Test Results

Variable	Tolerance	VIF
Information Technology Utilization (X1)	0.417	2.397
Human Resource Competence (X2)	0.399	2.509
Work Environment (X3)	0.477	2.098
Dependent Variable: Employee Performance		

Source: Processed primary data (2025).

As shown in table 4, all independent variables have tolerance values greater than 0.10 and VIF values substantially below 10. These findings indicate that there is no significant correlation among the independent variables, confirming that multicollinearity is not present in the regression model. Consequently, each independent variable contributes independently to explaining variations in employee performance.

3.1.3.3. Heteroscedasticity Test

The heteroscedasticity test was conducted to determine whether the variance of the residuals remained constant across all observations. Homoscedasticity is an important assumption in multiple regression because unequal error variances may lead to inefficient parameter estimates. In this study, heteroscedasticity was assessed using the Glejser test and supported by visual examination of the scatterplot of standardized residuals. The results of the Glejser test are presented in Table 5.

Table 5. Glejser Test Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.045	.523		1.999	.058
Information Technology Utilization	-.006	.037	-.024	-.160	.873
Human Resource Competence	-.066	.039	-.260	-1.723	.088
Work Environment	.065	.058	.153	1.108	.271

a. Dependent Variable: Abs RES

Source: Processed primary data (2025).

The significance values of all independent variables exceed 0.05, namely 0.873 for Information Technology Utilization, 0.088 for Human Resource Competence, and 0.271 for Work Environment. These results indicate that none of the independent variables significantly explain the absolute residual values, suggesting the absence of heteroscedasticity. Furthermore, the scatterplot displays randomly dispersed residual points above and below the zero line without forming a distinct pattern, providing additional evidence that the assumption of homoscedasticity has been satisfied.

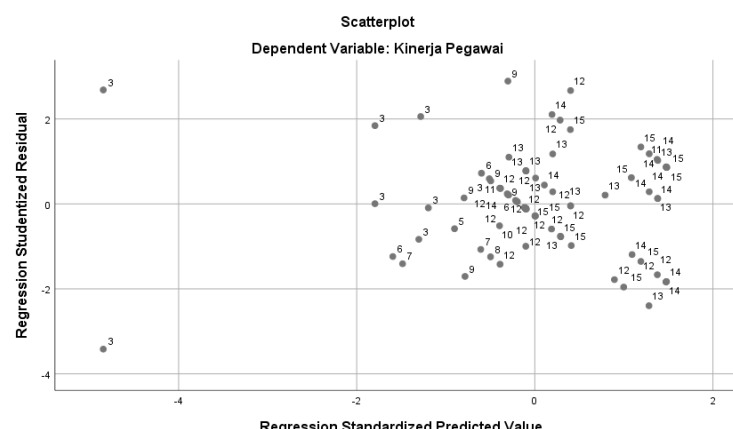


Figure 3. Scaterplott

Overall, the results of the normality, multicollinearity, and heteroscedasticity tests demonstrate that the multiple linear regression model satisfies all classical assumptions. Therefore, the model is considered statistically appropriate for estimating the relationships between information technology utilization, human resource competence, the work environment, and employee performance, and for testing the proposed research hypotheses.

3.1.4. Multiple Linear Regression Analysis

Multiple linear regression analysis was employed to examine the effects of information technology utilization, human resource competence, and the work environment on employee performance. The regression results indicate that all independent variables positively contribute to employee performance. The coefficient of determination (Adjusted R^2) was 0.725, indicating that 72.5% of the variation in employee performance can be explained by information technology utilization, human resource competence, and the work environment. The remaining 27.5% is attributable to other factors outside the scope of this study.

Table 6. R Square

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856 ^a	.732	.725	1.132

a. Predictors: (Constant), Information Technology Utilization, Human Resource Competence, Work Environment

Source: Processed primary data (2025).

3.1.5. Hypothesis Testing

The partial hypothesis test (t-test) revealed that information technology utilization significantly affects employee performance ($t = 2.094$, $p = 0.025$). This finding indicates that employees who effectively utilize information technology are more likely to achieve higher levels of work performance. Therefore, H1 is supported. Human resource competence also demonstrated a positive and significant influence on employee performance, with a t-value of 3.292 and a significance level of 0.001. This result confirms that employees possessing higher levels of knowledge, skills, work attitudes, and experience tend to perform their duties more effectively. Accordingly, H2 is supported. Among the three independent variables, the work environment exhibited the strongest influence on employee performance, as indicated by a t-value of 8.926 and a significance value below 0.001. This finding suggests that a supportive physical and non-physical work environment substantially enhances employee productivity and effectiveness. Consequently, H3 is supported.

Table 7. T-Test

Variable	t_{hitung}	t_{tabel}	Nilai sig	Sig.	Decision
Information Technology Utilization (X_1)	2.094	1.663	0.025	0.05	Supported
Human Resource Competence (X_2)	3.292	1.663	0.001	0.05	Supported
Work Environment (X_3)	8.926	1.663	0.000	0.05	Supported

Source: Processed primary data (2025).

The simultaneous hypothesis test (F-test) further demonstrated that information technology utilization, human resource competence, and the work environment collectively have a significant effect on employee performance ($F = 96.610$, $p < 0.001$). Therefore, H_4 is supported, confirming that the three independent variables jointly explain employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency.

Overall, the empirical findings demonstrate that all proposed hypotheses are supported. While information technology utilization and human resource competence significantly improve employee performance, the work environment emerges as the most influential determinant. These results indicate that employee performance in the Secretariat of the DPRD of Buleleng Regency is shaped by the combined influence of technological, human, and organizational environmental factors.

3.2. Discussion

3.2.1. The Effect of Information Technology Utilization on Employee Performance

The results of the partial hypothesis test (t-test) indicate that information technology utilization (X_1) has a positive and significant effect on employee performance (Y), as evidenced by a t-value of 2.094, which exceeds the critical t-value of 1.663, and a significance value of 0.025, which is lower than the 0.05 significance level. This finding supports the acceptance of the first hypothesis. The validity test also confirms that all three indicators of information technology utilization information system availability, utilization of information technology in daily work, and ease of application use are valid, as each item demonstrates a correlation coefficient substantially higher than the minimum acceptable value ($r = 0.156$). These results suggest that the implementation of information technology at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency enables employees to perform administrative tasks and manage organizational data more efficiently, thereby contributing to improved employee performance.

Information technology utilization contributes positively to employee performance by facilitating faster access to information and automating administrative processes, ultimately reducing the time required to complete organizational tasks. Although the unstandardized regression coefficient for information technology utilization ($B = 0.005$) indicates a relatively smaller contribution compared with the other independent variables, its influence remains statistically significant. Among the indicators, the availability of information systems recorded the highest validity coefficient ($r = 0.823$), demonstrating that accessible and reliable digital systems support employees in making timely and accurate work-related decisions. Likewise, the indicator measuring ease of application use ($r = 0.760$) reflects employees' ability to utilize digital applications effectively, thereby enhancing collaboration and facilitating organizational communication. The results of the classical assumption tests, including the normality test ($\text{Sig.} = 0.092 > 0.05$) and the multicollinearity test ($\text{VIF} = 2.397 < 10$), further confirm that the regression model satisfies the required statistical assumptions, ensuring that the estimated relationship between information technology utilization and employee performance is reliable.

The findings of this study are consistent with previous empirical evidence demonstrating that information technology utilization positively influences employee performance. Dewi et al. (2023) and Sulistya and Trisnadewi (2023) reported that the availability of information systems and the ease of technology utilization directly improve employee productivity, although their contribution is generally smaller than other organizational factors such as motivation and training. Similarly, Ayuni and Amanda (2024) found that information technology utilization enhances operational efficiency by accelerating task completion, facilitating teamwork, and improving documentation management. Other studies also emphasize that technology utilization alone is insufficient to maximize organizational performance without complementary managerial support. Nuryani and Nurhikmah (2025) concluded that motivation, continuous training, and a supportive work environment significantly strengthen employee performance, whereas Pratiwi and Kartikadewi (2024) highlighted the importance of organizational communication and appropriate compensation in supporting the effectiveness of technology implementation. These findings indicate that information technology should be viewed as a strategic organizational resource whose effectiveness depends on the integration of competent human resources and appropriate managerial practices. Furthermore, the simultaneous test confirms that information technology utilization contributes to the overall regression model together with human resource competence and the work environment, as indicated by an F-value of 96.610 ($p < 0.001$) and an Adjusted R^2 of 0.725. This implies that the three independent variables collectively explain 72.5% of the variation in employee performance. Although information technology utilization is not the most dominant predictor compared with the work environment, it remains an essential component of organizational digital transformation by supporting administrative efficiency, improving access to information, and strengthening

employee productivity. Therefore, the Secretariat of the DPRD of Buleleng Regency is encouraged to enhance employees' digital capabilities through continuous information technology training and capacity-building programs. Such initiatives are expected to optimize the utilization of digital systems and further improve both the quality and quantity of employee performance within the organization.

3.2.2. The Effect of Human Resource Competence on Employee Performance

The findings indicate that human resource competence (X2) has a positive and significant effect on employee performance (Y). The partial t-test produced a t-value of 3.292, which is greater than the critical value of 1.663, with a significance level of 0.001, well below the 0.05 threshold. Therefore, the second hypothesis is accepted. The validity test further confirms that all four indicators of human resource competence work knowledge, work skills, work attitude, and work experience are valid measurement indicators, with correlation coefficients of 0.812, 0.734, 0.833, and 0.574, respectively, all exceeding the minimum validity criterion ($r = 0.156$). In addition, the questionnaire demonstrated excellent internal consistency, as reflected by a Cronbach's Alpha coefficient of 0.935. These results indicate that the measurement instrument reliably captures employees' competence and provides a sound basis for subsequent statistical analysis.

The positive influence of human resource competence on employee performance suggests that employees who possess adequate knowledge, technical skills, professional attitudes, and relevant work experience are better equipped to perform their responsibilities effectively. The standardized beta coefficient of 0.262 indicates a moderate contribution of human resource competence within the regression model, while the unstandardized coefficient ($B = 0.178$) demonstrates its direct contribution to improving employee performance. In the organizational context of the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency, competent employees are more capable of adapting to complex administrative responsibilities, utilizing available organizational resources effectively, and responding to the increasing demands of public service delivery. Furthermore, the classical assumption tests confirmed that the regression model met the required statistical assumptions, as indicated by the absence of multicollinearity ($VIF = 2.509 < 10$), heteroscedasticity ($Sig. = 0.088 > 0.05$), and violations of normality, thereby supporting the robustness of the estimated relationship.

The present findings are consistent with previous empirical studies emphasizing the importance of human resource competence in improving organizational performance. Sivanissa et al. (2022) concluded that employees' knowledge, skills, and professional attitudes significantly enhance employee performance and emphasized the importance of continuous competency development to strengthen adaptability to technological and organizational changes. Similarly, Noman et al. (2025) reported that competent human resources integrated with effective internal control systems improve organizational effectiveness and accountability, highlighting the necessity of continuous training for public sector employees. Apriliana and Nawangsari (2021) further argued that competency-based training serves as a fundamental strategy for improving employees' technical capabilities and organizational adaptability, although structured competency development programs remain necessary to address existing competency gaps. Likewise, Aniswara et al. (2025) found that employee competence significantly contributes to organizational effectiveness within regional government institutions, while Febriandika (2023) identified work attitude and technical skills as the most influential dimensions of competence affecting employee performance. Collectively, these studies reinforce the present findings that competency development is an essential prerequisite for sustainable organizational performance.

The simultaneous regression analysis also demonstrates that human resource competence contributes to explaining employee performance together with information technology utilization and the work environment, as reflected by an Adjusted R^2 value of 0.725 and a significant F-statistic of 96.610 ($p < 0.001$). These findings indicate that employee competence should not be considered independently but rather as an integral component of a broader organizational strategy aimed at improving performance. Accordingly, the Secretariat of the DPRD of Buleleng Regency is encouraged to implement continuous competency development initiatives through structured education, professional training, and capacity-building programs. Strengthening employees' knowledge, technical capabilities, work attitudes, and practical experience will not only improve individual performance but also enhance the overall effectiveness and sustainability of organizational performance within the public sector.

3.2.3. The Effect of Work Environment on Employee Performance

The findings of this study demonstrate that the work environment (X3) has a positive and significant effect on employee performance (Y). The partial t-test produced a t-value of 8.926, which is substantially higher than the critical value of 1.663, with a significance level of 0.000, indicating statistical significance at the 5% level. Therefore, the third hypothesis is accepted. These findings suggest that improvements in the work environment are associated with higher levels of employee performance. A supportive work environment provides employees with physical comfort, psychological security, and organizational support, enabling them to perform their duties more effectively. Physical aspects, including workplace cleanliness, lighting, ventilation, and office layout, contribute to a comfortable working atmosphere, while non-physical aspects, such as harmonious relationships among colleagues and supportive leadership, enhance employee motivation,

commitment, and job satisfaction. Consequently, the work environment serves not merely as a supporting factor but as a strategic determinant of employee performance.

Among the three independent variables examined in this study, the work environment exhibited the strongest influence on employee performance, as reflected by the standardized beta coefficient of 0.650. This finding indicates that improvements in the work environment generate a greater impact on employee performance than either information technology utilization or human resource competence. Such results suggest that employees are more likely to achieve optimal performance when they work in an environment that promotes comfort, safety, effective communication, and positive interpersonal relationships. Within the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency, maintaining adequate workplace facilities, fostering collaborative relationships among employees, and creating a supportive organizational climate are essential strategies for improving productivity, discipline, and overall organizational effectiveness.

The present findings are consistent with previous empirical studies investigating the relationship between the work environment and employee performance. Pratiwi and Hartawan (2022) reported that a supportive work environment significantly enhances employee performance, indicating that better working conditions encourage employees to achieve higher levels of productivity. Similarly, Kr (2022) concluded that improvements in both the physical and non-physical work environment increase employees' concentration and work efficiency. Sahda et al. (2024) also confirmed that a conducive work environment exerts a dominant positive influence on employee performance, emphasizing the importance of adequate workplace facilities and harmonious working relationships. Furthermore, Maharani and Sanjaya (2023) found that the work environment, together with human resource competence and career development, positively influences employee performance, while Sapitri and Wirawan (2025) demonstrated that the work environment contributes 44.9% to employee productivity. Collectively, these studies reinforce the conclusion that a supportive organizational environment plays a crucial role in improving employee effectiveness and organizational performance.

The simultaneous regression analysis further confirms that the work environment contributes significantly to the overall model together with information technology utilization and human resource competence, explaining a substantial proportion of employee performance. The dominant influence of the work environment observed in this study indicates that organizational efforts to improve workplace conditions should become a strategic priority. Accordingly, the Secretariat of the DPRD of Buleleng Regency is encouraged to continuously improve workplace facilities, strengthen communication between supervisors and employees, and cultivate a positive organizational climate that promotes collaboration, responsibility, and mutual support. Such initiatives are expected to enhance employee productivity, improve service quality, and strengthen organizational performance within the public sector.

3.2.4. The Simultaneous Effect of Information Technology Utilization, Human Resource Competence, and Work Environment on Employee Performance

The results of the regression analysis indicate that information technology utilization, human resource competence, and the work environment simultaneously have a positive and significant effect on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency. The F-test produced an F-value of 96.610, which is substantially higher than the critical F-value of 2.00, with a significance value of 0.000, indicating that the regression model is statistically significant. Furthermore, the coefficient of determination (Adjusted R^2) of 0.725 demonstrates that 72.5% of the variation in employee performance can be explained collectively by the three independent variables, while the remaining 27.5% is attributable to other factors not included in the present study. These findings confirm that employee performance is not determined by a single organizational factor but rather by the combined influence of technological, human, and environmental dimensions. The partial regression results further reveal that each independent variable contributes significantly to employee performance, although with varying levels of influence. Information technology utilization positively affects employee performance ($t = 2.094$; $p = 0.025$) by facilitating administrative efficiency, improving information accessibility, and supporting employees in completing their tasks more accurately and efficiently. Human resource competence also demonstrates a significant positive influence ($t = 3.292$; $p = 0.001$), indicating that employees with higher levels of knowledge, technical skills, professional attitudes, and work experience are better able to perform their responsibilities. Among the three variables, the work environment exerts the strongest influence on employee performance ($t = 8.926$; $p < 0.001$), suggesting that both physical and non-physical workplace conditions play a decisive role in creating an atmosphere that encourages productivity, discipline, collaboration, and organizational commitment. These findings indicate that technological advancement alone is insufficient to optimize employee performance unless it is supported by competent human resources and a conducive working environment.

The findings of this study are consistent with previous empirical research. Telaumbanua et al. (2024) reported that information technology utilization significantly improves employee performance by increasing administrative efficiency and organizational productivity. Similarly, Fitriati and Yustini (2023) found that information technology utilization and human resource competence positively influence employee performance, while identifying the work environment as the most dominant determinant of organizational

performance. Furthermore, Fitriani (2025) emphasized that employee competence contributes more substantially to performance improvement than information technology alone, whereas Harpianna et al. (2023) and Kr (2022) highlighted the importance of a supportive work environment in improving employee effectiveness and productivity. Collectively, these studies support the present findings by demonstrating that technological resources, employee competence, and workplace conditions complement one another in enhancing organizational performance.

Overall, the present study confirms that information technology utilization, human resource competence, and the work environment constitute an integrated framework for improving employee performance within public sector organizations. The dominant influence of the work environment suggests that organizational performance can be strengthened not only through investments in digital infrastructure but also through continuous competency development and the creation of a supportive organizational climate. Accordingly, the Secretariat of the DPRD of Buleleng Regency should adopt an integrated human resource management strategy by strengthening digital transformation initiatives, implementing continuous competency development programs, and maintaining a healthy and conducive work environment. Such a comprehensive approach is expected to enhance employee productivity, improve public service quality, and strengthen organizational effectiveness in achieving institutional objectives.

4. CONCLUSION

This study aimed to examine the partial and simultaneous effects of information technology utilization, human resource competence, and the work environment on employee performance at the Secretariat of the Regional House of Representatives (DPRD) of Buleleng Regency. The findings demonstrate that all three independent variables positively and significantly influence employee performance. Specifically, information technology utilization contributes to improving administrative efficiency, facilitating access to information, and supporting employees in completing their duties more effectively. Human resource competence enhances employee performance through the development of knowledge, technical skills, professional attitudes, and work experience, enabling employees to perform their responsibilities more efficiently. Among the three variables, the work environment exerts the strongest influence, indicating that both physical and non-physical workplace conditions play a crucial role in fostering employee motivation, productivity, and organizational effectiveness. Furthermore, the simultaneous analysis confirms that these three variables collectively explain 72.5% of the variation in employee performance, highlighting the importance of adopting an integrated approach to organizational performance improvement.

The findings contribute to the existing literature in the fields of human resource management and information technology by providing empirical evidence that employee performance in public sector organizations is influenced by the interaction of technological, human, and environmental factors rather than by a single organizational determinant. From a practical perspective, the results suggest that public institutions should not only invest in digital technologies but also continuously strengthen employee competencies through structured education and training programs while maintaining a supportive work environment. Integrating these three dimensions is expected to enhance organizational productivity, improve the quality of public services, and support the successful implementation of digital transformation initiatives within government institutions.

Based on these findings, the Secretariat of the DPRD of Buleleng Regency is encouraged to strengthen information technology training, implement continuous competency development programs, and improve both the physical and psychosocial aspects of the work environment to sustain employee performance. Future studies are recommended to incorporate additional variables, such as work motivation, leadership, organizational commitment, job satisfaction, or organizational culture, to provide a more comprehensive explanation of employee performance. This study is limited to a single public sector institution and employs a cross-sectional research design; therefore, the generalizability of the findings to other organizational contexts should be interpreted with caution. Future research involving multiple institutions and longitudinal research designs would provide broader empirical evidence regarding the determinants of employee performance. Overall, this study confirms that the integration of information technology utilization, human resource competence, and a supportive work environment constitutes a strategic foundation for enhancing employee performance and organizational effectiveness in public sector institutions undergoing digital transformation.

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