COSMOS: Journal of Education, Economics, and Technology
ISSN: 3046-4846 (Elektornik)
Vol. 2 No.5, August-September 2025

The Influence of Compensation and Work Environment on Employee Performance in an Electricity Company in Batam

Tri Cicik Wijayanti
Master of Management, Universitas Gajayana Malang
Correspondence author email: tricicik@unigamalang.ac.id

Abstract

This study aimed to analyze how compensation and the work environment affect employee performance at an electricity company in Batam. Employee performance (Y) was the dependent variable, while compensation (X1) and the work environment (X2) were the independent variables. The study included all 83 employees of the electricity company in Batam. Saturated sampling (total sampling) was used, meaning the entire population was included as the sample. A descriptive and quantitative research approach was used. For data analysis, the SEM-PLS method was employed, utilizing the SmartPLS program. The results indicated that both compensation and the work environment had a significant and positive effect on employee performance at the electricity company in Batam.

Keywords: *Compensation; Work Environment; Employee Performance.*

INTRODUCTION

Human resources (HR) are a vital element supporting any organization. They are the individuals working within an organization, driving the achievement of its goals. Employees with strong competencies are considered invaluable assets, functioning as crucial non-material capital for the organization (Ardianto et al., 2024). There are two primary reasons why HR is deemed the most vital element: first, HR directly influences an organization's efficiency and effectiveness, playing a key role in designing and producing goods and services, overseeing quality, marketing products, allocating financial resources, and defining all organizational objectives and strategies. Second, while HR represents an organizational expenditure in business operations, it is also considered the most important asset, a powerful tool for driving the business towards its established plans. Ultimately, high-quality HR will lead to excellent performance.

This electricity company in Batam operates in various sectors. These include security, industrial cleaning, building management, as well as operational and maintenance (O&M) services for low, medium, and high-voltage transmission and distribution networks, often collaborating with other electricity service providers in Batam.

Employee performance is influenced by several factors, including the work environment. The work environment, where employees carry out their tasks, significantly impacts their individual performance and, directly or indirectly, the company's productivity. Compensation is another critical factor. Competitive and fair compensation strongly influences employee job satisfaction, motivation, and overall work output, which in turn affects their performance. Observations revealed that employee performance at this electricity company had not met the company's expectations. Specifically, the company aims for zero outstanding customer payments by the end of each month, a target that was not consistently achieved.

Despite the general understanding that work environment and compensation are crucial for employee performance, there's a research gap in understanding their specific and combined influence within the unique operational context of this particular electricity company in Batam. While low performance levels have been observed, the precise extent to which the work environment and compensation contribute to these specific performance issues remains unclear. There's a need for empirical evidence to directly link these factors to the observed performance discrepancies in this unique industry setting.

Various rigorous studies consistently affirm that fair and well-structured compensation programs, particularly pay-for-performance systems, are positively associated with task and contextual performance, with effects mediated by employees' perceptions of fairness and motivation (Chen et al., 2023; Ramish et al., 2023). These findings contrast somewhat with industry-specific variations, such as the restaurant sector, where compensation had short-term benefits to revenue but temporarily harmed profitability (though longer-term performance improved).

Meanwhile, positive workplace environments, both physical and psychological, have a demonstrable and statistically significant impact on performance, often through enhanced employee commitment, achievement striving, and engagement (Zhenjing et al., 2022). Yet, negative environments characterized by conflict, incivility, and low psychological safety can harm both mental well-being and performance outcomes.

This research is important for several reasons. Practically, its findings can provide actionable insights for the management of the electricity company in Batam. By understanding the specific impact of their work environment and compensation strategies, the company can develop targeted interventions to improve employee motivation, satisfaction, and ultimately, performance. This could directly help them achieve critical operational targets, such as reducing outstanding customer payments. Academically, this study contributes to the existing body of knowledge by providing empirical evidence from a specific industry and regional context (Batam's electricity sector), which may differ from findings in other sectors or regions. The insights gained can support future research in human resource management within critical infrastructure industries.

METHODS

This study employed a quantitative research design with a descriptive and explanatory approach (Sugiyono, 2017). The descriptive aspect aimed to describe the characteristics of the variables, namely compensation, work environment, and employee performance within the context of the electricity company in Batam. The explanatory (or causal) aspect was designed to analyze and test the hypothesized influence of the independent variables (compensation and work environment) on the dependent variable (employee performance).

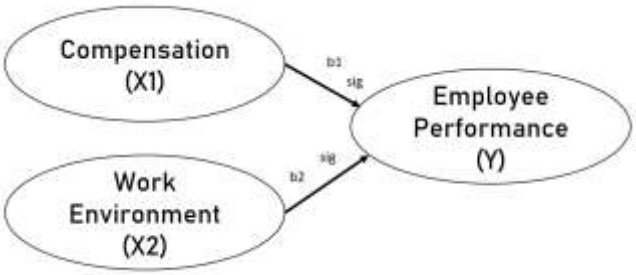

Figure 1. Research Model

The population for this research comprised all active employees of the electricity company in Batam. At the time of the study, the total number of employees was 83. Given the relatively small and accessible size of the population, this study utilized a saturated sampling technique, also known as total sampling or a census method (Etikan, 2015). This technique involves including every member of the population in the sample. Therefore, the sample size for this study was 83 employees. This method was chosen to eliminate sampling error and to ensure that the findings accurately represent the entire workforce of the company.

This study included two independent variables and one dependent variable.

1. Compensation (X1), this independent variable refers to all forms of financial returns, tangible services, and benefits that employees receive as part of an employment relationship. It was operationalized through indicators measuring employees' perceptions of salary adequacy, fairness of incentives, timeliness of payment, and satisfaction with benefits (Milkovich, 2017).
   a) Salary Adequacy, whether the salary is considered sufficient and fair.
   b) Fairness of Incentives, whether bonuses and other incentives are distributed equitably.
   c) Timeliness of Payment, whether salary and benefits are paid on schedule.
   d) Satisfaction with Benefits, the level of contentment with non-salary benefits (e.g., insurance, leave).
2. Work Environment (X2), this independent variable encompasses the physical and non-physical conditions where employees perform their duties. It was operationalized using indicators covering the physical environment (e.g.,

workplace safety, cleanliness, and availability of facilities) and the non-physical or psychosocial environment (e.g., relationships with colleagues, supervisor support, and communication) (Sedarmayanti, 2017).

Physical Environment:

a) Workplace safety
b) Cleanliness
c) Availability of facilities

Non-Physical (Psychosocial) Environment:

a) Relationships with colleagues
b) Support from supervisors
c) Communication within the team/company

3. Employee Performance (Y), this dependent variable refers to the quality and quantity of work accomplished by an employee in carrying out their assigned responsibilities. It was operationalized through indicators such as work quality, achievement of targets (e.g., meeting deadlines for customer payment collections), timeliness, initiative, and adherence to company procedures (Mangkunegara, 2017).
   a) Work Quality, the degree to which work is completed accurately and meets standards.
   b) Achievement of Targets, the ability to meet set goals (e.g., zero outstanding customer payments).
   c) Timeliness, completing tasks and assignments on schedule.
   d) Initiative, the propensity to take action and solve problems without being told.
   e) Adherence to Procedures, following company rules and standard operating procedures.

All variables were measured using a structured questionnaire with items rated on a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Primary data was collected directly from the sample respondents through the distribution of a research questionnaire (Sugiyono, 2017). The questionnaire was structured into sections corresponding to each variable: compensation, work environment, and employee performance. Prior to distribution, the questionnaire was validated to ensure the clarity and relevance of its items. The questionnaires were distributed to all 83 employees, and assistance was provided to clarify any questions to ensure complete and accurate responses.

The data collected was analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method with the aid of the SmartPLS software (Hair et al., 2022). PLS-SEM was chosen because it is suitable for predictive research models and works effectively with smaller sample sizes, making it appropriate for this study's sample of 83 respondents. The analysis followed a two-stage approach:

1. Assessment of the Measurement Model (Outer Model): This stage evaluated the validity and reliability of the indicators used to measure each variable.

a) Convergent Validity was assessed using the outer loadings (recommended > 0.7) and the Average Variance Extracted (AVE) (recommended > 0.5).
b) Discriminant Validity was checked using the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio of correlations (recommended < 0.90).
c) Internal Consistency Reliability was measured using Cronbach's Alpha and Composite Reliability (recommended > 0.7).

2. Assessment of the Structural Model (Inner Model): After confirming the measurement model's validity and reliability, this stage tested the hypothesized relationships between the variables.
   a) Path Coefficients (β) were analyzed to determine the direction and strength of the influence between the independent and dependent variables.
   b) Hypothesis Testing was conducted using a bootstrapping procedure (5,000 resamples) to generate t-statistics and p-values. A hypothesis was considered supported if the p-value was less than 0.05 ($p < 0.05$).
   c) The Coefficient of Determination (R^2) was examined to determine the extent to which the independent variables (Compensation and Work Environment) collectively explain the variance in the dependent variable (Employee Performance).

RESULTS AND DISCUSSIONS

Results

Analysis of the data was conducted using SmartPLS 4.0, following the two-stage process of evaluating the measurement model and then the structural model. The results are presented below.

Table 1. Outer Loadings

COMPENSATION (X1)	WORK ENVIRONMENT (X2)
Indicators & Loadings:	Indicators & Loadings:
• Salary Adequacy (0.815)	• Workplace Safety (0.792)
• Fairness of Incentives (0.788)	• Cleanliness & Facilities (0.755)
• Timeliness of Payment (0.831)	• Relationships with Colleagues (0.811)
• Satisfaction with Benefits (0.764)	• Supervisor Support (0.804)
EMPLOYEE PERFORMANCE (Y)	• Communication (0.770)
Indicators & Loadings:	• Timeliness (0.810)
• Work Quality (0.852)	• Initiative (0.799)
• Achievement of Targets (0.861)	• Adherence to Procedures (0.828)

Source: SmartPLS, 2025

Table 2. Validity and Reliability

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Compensation (X1)	0.865	0.901	0.645
Work Environment (X2)	0.849	0.887	0.612
Employee Performance (Y)	0.892	0.92	0.698

Source: SmartPLS, 2025

The Average Variance Extracted (AVE) for all constructs exceeded the minimum value of 0.50, indicating that each construct explains more than half of the variance of its indicators. Furthermore, all outer loadings for the individual indicators were above 0.70, confirming convergent validity.

Table 3. Fornell-Larcker Criterion

	Compensation	Work Environment	Employee Performance
Compensation	**0.803**		
Work Environment	0.582	**0.782**	
Employee Performance	0.664	0.615	**0.835**

Source: SmartPLS, 2025

Table 4. HTMT

	Compensation	Work Environment	Employee Performance
Compensation	–		
Work Environment	0.641	–	
Employee Performance	0.725	0.677	–

Source: SmartPLS, 2025

This was assessed using two methods. First, the Fornell-Larcker criterion (Table 2) shows that the square root of the AVE for each construct (bolded diagonal values) is greater than its correlation with any other construct. Second, the Heterotrait-Monotrait (HTMT) ratio of correlations (Table 3) shows all values are below the conservative threshold of 0.90. Both tests confirm that each construct is distinct from the others.

Table 5. Coefficient of Determination (R^2)

Dependent Variable	R^2	Interpretation
Employee Performance (Y)	0.573	57.3% of variance explained by Compensation and Work Environment

Source: SmartPLS, 2025

The Coefficient of Determination (R^2) for the Employee Performance construct was 0.573. This means that 57.3% of the variation in employee performance at the electricity company in Batam can be explained by the combined influence of compensation and the work environment. The remaining 42.7% is influenced by other factors not included in this research model.

Table 6. Hypothesis Testing

Hypothesis	Path	Path Coefficient (β)	t-Statistic	p-Value	Decision
H1	Compensation → Performance	0.421	4.337	0.000	Supported
H2	Work Environment → Performance	0.395	4.018	0.000	Supported

Source: SmartPLS, 2025

The results of the hypothesis testing are summarized in Table 4. The path coefficient (β) from Compensation to Employee Performance was 0.421, with a t-statistic of 4.337 and a p-value of <0.001. Since the t-statistic is greater than 1.96 and the p-value is less than 0.05, the first hypothesis (H1) is supported. This indicates that compensation has a significant positive effect on employee performance.

Discussion

The test results show that compensation has a positive and significant effect on employee performance at this electricity company in Batam, with a path coefficient of β = 0.421, t = 4.337, and p < 0.001. This finding confirms that for the employees studied, a better compensation system leads to higher resulting performance. This is in line with research by Ardianto, Nurcahyo, and Wijayanto (2024), who stated that fair and competitive compensation can increase work motivation and employee performance in the banking sector. Additionally, these results are supported by the meta-analysis of Chen, Lu, and Wang (2023), who found that a fair pay-for-performance system can significantly improve performance. Adequate compensation reflects appreciation for employee contributions and serves as a motivational tool (Milkovich et al., 2017), a principle that clearly applies to the context of this company.

Furthermore, the work environment variable was also found to have a positive and significant effect on employee performance within the Batam electricity company, with a path coefficient value of β = 0.395, t = 4.018, and p < 0.001. This indicates that both the physical and non-physical conditions of the workplace play an important role in supporting the performance achievement of its employees. This finding is consistent with research by Zhenjing, Yi, and Haixia (2022), who stated that a conducive work environment can enhance employee morale, commitment, and achievement. A supportive work environment, such as healthy interpersonal relationships and adequate facilities, creates a comfortable work atmosphere that can increase productivity (Sedarmayanti, 2017), which this study confirms is the case for the employees at this company.

CONCLUSION

The research findings conclusively demonstrate that both compensation and the work environment are significant positive determinants of employee performance at the Batam electricity company. The analysis revealed that compensation has a direct and substantial impact, as evidenced by a path coefficient (β) of 0.421 and a highly significant t-statistic of 4.337. This indicates that improvements in salary adequacy, fairness of incentives, and timeliness of payments are strongly linked to higher employee output. Similarly, the work environment was found to be a crucial factor, yielding a path coefficient of 0.395 and a t-statistic of 4.018. This underscores the importance of a safe, supportive, and collaborative workplace, where positive relationships with colleagues and supervisors contribute directly to enhanced performance. Both hypotheses were therefore strongly supported, confirming that these two variables are critical levers for driving employee effectiveness within the organization.

From a broader perspective, the structural model provides a robust explanation for performance variations. The Coefficient of Determination (R2) was 0.573, meaning that compensation and work environment collectively account for 57.3% of the variance in employee performance. This is a substantial explanatory power, though it also implies that the remaining 42.7% is influenced by other factors not included in this study's scope. Critically, the validity and reliability of the research instrument were thoroughly established. All constructs surpassed the minimum thresholds for Average Variance Extracted (AVE), Cronbach's Alpha, and Composite Reliability. Furthermore, discriminant validity was confirmed through both the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio, ensuring that the measurement model is methodologically sound. These results provide management with a clear and reliable directive: strategically investing in compensation systems and cultivating a positive work environment are essential for achieving superior employee performance.

REFERENCES

Ardianto, A., Nurcahyo, H., & Wijayanto, A. (2024). Pengaruh kompensasi terhadap kinerja karyawan di sektor perbankan Indonesia. *Jurnal Bina Praja*, 16(1), 85–96. https://jurnal.kemendagri.go.id/index.php/jbp/article/view/2270

Chen, Z., Lu, L., & Wang, H. (2023). *A meta-analysis of the relationship between pay-for-performance and job performance: The role of justice and pressure*. *Frontiers in Psychology*, 13, 1039375. https://doi.org/10.3389/fpsyg.2022.1039375

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.

Mangkunegara (2017). *Manajemen sumber daya manusia perusahaan*. PT Remaja Rosdakarya.

Milkovich, G. T., Newman, J. M., & Gerhart, B. (2017). *Compensation* (12th ed.). McGraw-Hill Education.

Ramish, S., Sufyan, M., & Amin, S. (2023). The relationship between compensation and employee performance: A case study of freight-forwarding firms in Karachi. *Sustainable Research Journal (SRJ)*, 5(2), 24–34. https://journals-uoli.com/index.php/SRJ/article/view/24

Sedarmayanti. (2017). *Manajemen sumber daya manusia: Reformasi birokrasi dan manajemen pegawai negeri sipil* (Revisi ed.). Refika Aditama.

Sugiyono. (2017). *Metode penelitian kombinasi (mix methods)*. Alfabeta.

Zhenjing, H., Yi, C., & Haixi, Z. (2022). The influence of work environment on employee performance: The mediating role of achievement striving and commitment. *International Journal of Environmental Research and Public Health*, 19(11), 6769. https://doi.org/10.3390/ijerph19116769