

Reward, Organizational Structure, and Job Design as Antecedents of Employee Performance in Port Companies

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Abstract

This research was conducted at PT Pelabuhan Indonesia (Persero) Regional I. The purpose of this research was to determine and analyze the influence of rewards, organizational structure, and product design on employee performance at PT Pelabuhan Indonesia (Persero) Regional I. The subjects of this study were 52 employees of PT Pelabuhan Indonesia (Persero) Regional I. The sample was drawn using the Slovin formula and random sampling technique. The method used was quantitative with an associative type. Data collection was carried out using a questionnaire and a Likert scale for variable measurement. The data analysis tool for this research was multiple linear regression using Statistical Package for the Social Sciences (SPSS) 24.0 software. The results showed that rewards had a positive and significant effect on employee performance, organizational structure had a positive and significant effect on employee performance, and job design had a positive and significant effect on employee performance. The results of this study found that rewards, organizational structure, and job design simultaneously had a positive and significant effect on employee performance at PT Pelabuhan Indonesia (Persero) Regional I.

Keywords: Rewards, Organizational Structure, Job Design, and Performance.

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Introduction

Employee performance is a strategic factor that determines a company's effectiveness and competitiveness, particularly in carrying out operational activities and port service operations such as cargo loading and unloading, vessel services, container terminals, logistics, and passenger services. PT Pelabuhan Indonesia (Persero) Regional I Medan, as one of the State-Owned Enterprises (BUMN) operating in the port service sector, has the responsibility to support the smooth flow of national logistics, encourage regional economic growth, and is committed to providing professional, efficient, and internationally standardized port services while continuously carrying out transformation through service digitalization, infrastructure improvement, and human resource development. According to Silaen et al. (2021), employee performance is the result of work achieved by an individual in carrying out the tasks assigned to them in order to achieve work targets

Policies related to performance management are based on the Board of Directors Regulation of PT Pelabuhan Indonesia (Persero) Number HK.01/15/8/1/KPIU/UTMA/PLND-22 dated August 15, 2022, concerning Guidelines for Individual Performance Management within PT Pelabuhan Indonesia (Persero). Pelindo periodically reviews and evaluates the achievement of individual employee performance based on targets and realization of individual performance measures determined through cascading from corporate Key Performance Indicators (KPI) as well as employee behavioral values. Individual performance assessments are conducted for all (100%) company employees according to the performance measures that have been previously established. The results of these performance assessments serve as one of the bases for providing appreciation to employees for the performance achieved during the current year. The KPI values referred to include work results, timeliness, and responsibility.

According to Silaen et al. (2021), there are several factors that can influence employee performance, three of which are rewards, organizational structure, and job design. According to Fahmi (2019), rewards are forms of compensation given to employees for work achievements, both financial and non-financial. The provision of rewards, whether financial such as salaries, bonuses, and incentives, or non-financial such as recognition, promotion, and development opportunities, serves as a form of company appreciation for employee contributions. Rewards can increase work motivation because employees feel valued for the efforts and achievements they provide. This encourages them to work more optimally, increase responsibility, and strive to achieve or even exceed the established targets. Thus, there is a positive relationship between rewards and employee performance, where fair and appropriate rewards can significantly improve employee performance in achieving organizational goals.

As part of a State-Owned Enterprise that has undergone transformation after the merger, PT Pelindo Regional I implements a performance-based reward system. This system is one of the company's strategies to increase productivity, work motivation, and employee loyalty. In general, the rewards provided are divided into two main forms, namely financial rewards such as basic salary and fixed allowances according to job grade structure, performance allowances (Tukin) given based on individual and work unit performance assessments, productivity incentives for operational employees who achieve or exceed work targets, annual bonuses based on the achievement of the company's Key Performance Indicators (KPI), special project incentives for teams that complete strategic projects, and long service awards as a form of appreciation for employee loyalty. Meanwhile, non-financial rewards are also provided. In addition to material rewards, Pelindo also provides motivational recognition such as job promotions for employees with high performance, training and competency development through internal training programs, BUMN Corporate University, and professional certification, exemplary employee awards at unit and regional levels, opportunities for rotation and career development across various ports within the Pelindo Group, as well as company facilities such as health insurance, employee welfare programs, and modern work facilities.

Another factor that can influence employee performance is organizational structure. Organizational structure specifies the division of labor and shows how various functions or

activities within an organization are linked to a certain extent, and the results are reflected in the level of specialization of work activities (Triharjono et al., 2021). A clear and well-directed organizational structure helps create effective work coordination, facilitates communication flow, and minimizes role conflict or overlapping tasks. In addition, a good organizational structure provides clarity of hierarchy and working relationships between departments so that employees understand their duties and objectives. This condition encourages employees to work more focused, efficiently, and responsibly according to their respective roles. Therefore, a well-structured organizational arrangement has a positive relationship with employee performance because it can improve work effectiveness, accelerate decision-making processes, and support the achievement of organizational targets.

At PT Pelindo (Persero), including PT Pelabuhan Indonesia (Persero) Regional I, the organizational structure is formed hierarchically with a state-owned corporate bureaucracy system that emphasizes corporate governance, accountability, and operational effectiveness. The Pelindo organizational structure consists of several managerial levels starting from the Board of Directors, Executive Vice President (EVP), Senior Manager, Supervisor, to operational staff. Each work unit is divided based on functions such as port operations, finance, human resources and general affairs, engineering, vessel services, as well as logistics and container terminals.

Another factor that also affects employee performance is job design, which includes how work is structured and allocated within the organization. Job design is the process of determining the tasks to be performed, the methods used to carry out these tasks, and how the work is related to other jobs within the organization (Noor et al., 2023). Good job design can create clear task distribution, proportional workload, and appropriate levels of job variety and challenge according to employee capabilities. This can increase employees' sense of responsibility, involvement, and job satisfaction, thereby encouraging them to work more effectively and productively. In addition, job design that considers aspects of autonomy, feedback, and skill variety can also enhance employees' intrinsic motivation. Thus, well-structured job design that aligns with organizational needs and individual capabilities will contribute positively to improving employee performance.

At PT Pelabuhan Indonesia (Persero) Regional I, job design is implemented based on a functional organizational structure that divides tasks according to work fields such as port operations, vessel services, logistics, engineering, finance, and human resources. In general, job design at PT Pelabuhan Indonesia (Persero) Regional I is based on clear job descriptions and job specifications in accordance with company operational standards. Each position has a division of roles and authorities outlined in Standard Operating Procedures (SOPs), so that formal work processes can be followed in a structured manner.

Research Methodology

This study applies a quantitative approach using descriptive and associative methods. This means the researcher only looks at the problems in one company without comparing it with other companies. In this case, to determine the sample size from a population using the Slovin formula, so the number of samples obtained in this study was 52 employees of PT Pelabuhan Indonesia (Persero) Regional I, using a random sampling technique. The data analysis approach involved using multiple linear regression testing.

Instrument testing in research based on statistical analysis is known as validity testing and reliability testing. There are two aspects that must be considered by researchers in conducting research, namely validity and reliability standards (Soesana et al., 2023). Validity is defined as accuracy and precision, and can also be interpreted as legitimacy. In research, data validity serves as a reference in determining the accuracy of research variables. Validity testing is also referred to as a legitimacy test in research (Soesana et al., 2023).

The validity test used in this study was scale analysis by examining the item-total statistics table, particularly the Corrected Item–Total Correlation column. With the criterion that a

corrected item–total correlation value > 0.30, an item statement is considered valid. The following are the results of the validity test obtained in this study.

Table 1. Validity Test Results for Reward Variable

Statement Item	Corrected Item–Total Correlation	Critical r	Remark
P1	0.545	0.3	Valid
P2	0.636	0.3	Valid
P3	0.563	0.3	Valid
P4	0.433	0.3	Valid
P5	0.517	0.3	Valid
P6	0.514	0.3	Valid
P7	0.643	0.3	Valid
P8	0.509	0.3	Valid
P9	0.592	0.3	Valid
P10	0.406	0.3	Valid
P11	0.453	0.3	Valid
P12	0.634	0.3	Valid
P13	0.580	0.3	Valid
P14	0.421	0.3	Valid
P15	0.619	0.3	Valid
P16	0.654	0.3	Valid

Source: SPSS Data Processing Results, 2026

The reward variable consists of 16 statement items. All items have Corrected Item–Total Correlation values greater than 0.30; therefore, all statements are considered valid.

Table 2. Validity Test Results for Organizational Structure Variable

Statement Item	Corrected Item–Total Correlation	Critical r	Remark
P1	0.527	0.3	Valid
P2	0.439	0.3	Valid
P3	0.550	0.3	Valid
P4	0.417	0.3	Valid
P5	0.492	0.3	Valid
P6	0.434	0.3	Valid

Source: SPSS Data Processing Results, 2026

The organizational structure variable consists of 6 statement items, all of which have Corrected Item–Total Correlation values greater than 0.30. Thus, all items are valid.

Table 3. Validity Test Results for Job Design Variable

Statement Item	Corrected Item–Total Correlation	Critical r	Remark
P1	0.532	0.3	Valid
P2	0.390	0.3	Valid
P3	0.752	0.3	Valid
P4	0.467	0.3	Valid
P5	0.601	0.3	Valid
P6	0.474	0.3	Valid
P7	0.551	0.3	Valid
P8	0.685	0.3	Valid
P9	0.620	0.3	Valid

P10	0.404	0.3	Valid
P11	0.534	0.3	Valid
P12	0.455	0.3	Valid
P13	0.494	0.3	Valid
P14	0.587	0.3	Valid

Source: SPSS Data Processing Results, 2026

The job design variable consists of 14 statement items, all of which have Corrected Item–Total Correlation values greater than 0.30. Therefore, all items are valid.

Table 3. Validity Test Results for Job Design Variable

Statement Item	Corrected Item–Total Correlation	Critical r	Remark
P1	0.532	0.3	Valid
P2	0.390	0.3	Valid
P3	0.752	0.3	Valid
P4	0.467	0.3	Valid
P5	0.601	0.3	Valid
P6	0.474	0.3	Valid
P7	0.551	0.3	Valid
P8	0.685	0.3	Valid
P9	0.620	0.3	Valid
P10	0.404	0.3	Valid
P11	0.534	0.3	Valid
P12	0.455	0.3	Valid
P13	0.494	0.3	Valid
P14	0.587	0.3	Valid

Source: SPSS Data Processing Results, 2026

The job design variable consists of 14 statement items, all of which have Corrected Item–Total Correlation values greater than 0.30. Therefore, all items are valid.

Reliability Test

Reliability testing refers to the level of consistency of a measurement result. This test is conducted to ensure that the research instrument is trustworthy and produces data that are truly relevant to the research objectives. The higher the reliability of an instrument, the higher its consistency (Soesana et al., 2023). A variable is considered reliable if it has a Cronbach’s Alpha value greater than 0.60.

Table 5. Reliability Test Results

Variable	Cronbach’s Alpha	Critical Value	Remark
Reward (X1)	0.887	0.6	Reliable
Organizational Structure (X2)	0.735	0.6	Reliable
Job Design (X3)	0.873	0.6	Reliable
Performance (Y)	0.840	0.6	Reliable

Source: SPSS Data Processing Results, 2026

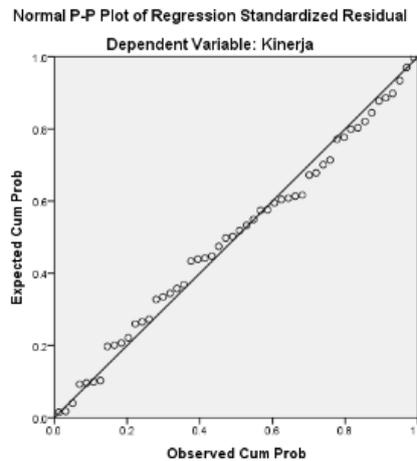
The results show that all variables have Cronbach’s Alpha values greater than 0.60, indicating that all statement items are reliable.

Classical Assumption Tests

Classical assumption tests are conducted to examine the quality of the research data, including normality, multicollinearity, and heteroscedasticity tests.

Normality Test

Normality testing aims to determine whether the independent and dependent variables are normally distributed. A good regression model should fulfill both graphical and statistical analyses (Sahir, 2021). Normality was tested using the probability plot (PP-Plot) and the One-Sample Kolmogorov–Smirnov (K–S) test.



Source: SPSS Data Processing Results, 2026

Figure 1 Probability Plot

The probability plot shows that the data points are closely distributed around the diagonal line and follow its direction, indicating that the regression model meets the normality assumption.

The statistical test used was the non-parametric Kolmogorov–Smirnov test with a significance level of 0.05. The criterion is Sig. > 0.05 (Ghozali, 2018).

Table 6. One-Sample Kolmogorov–Smirnov Test Results

Description	Value
N	52
Mean	0.0000000
Std. Deviation	2.74825901
Test Statistic	0.072
Asymp. Sig. (2-tailed)	0.200

Source: SPSS Data Processing Results, 2026

Since the Asymp. Sig. value of 0.200 is greater than 0.05, the data are normally distributed.

Multicollinearity Test

Multicollinearity testing is used to determine whether there is a high correlation among independent variables. Detection was conducted using Tolerance and Variance Inflation Factor (VIF) values (Sahir, 2021).

Table 7. Multicollinearity Test Results

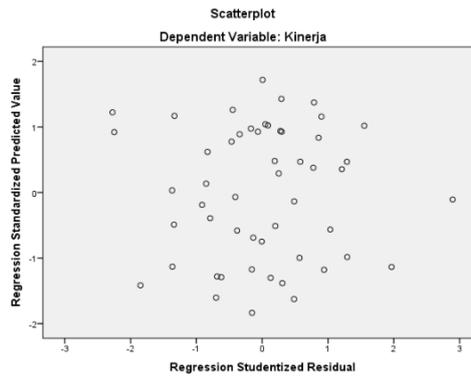
Variable	Tolerance	VIF
Reward	0.301	3.327
Organizational Structure	0.436	2.292
Job Design	0.293	3.413

Source: SPSS Data Processing Results, 2026

All tolerance values are greater than 0.10 and all VIF values are less than 10, indicating that there is no multicollinearity among the independent variables.

Heteroscedasticity Test

The heteroscedasticity test examines whether there is inequality of variance in the residuals. The test was conducted using a scatter plot.



Source: SPSS Data Processing Results, 2026

Figure 2. Scatter Plot

The scatter plot shows that the points are randomly distributed above and below zero on the Y-axis without a clear pattern. Therefore, the regression model does not exhibit heteroscedasticity.

Multiple Linear Regression Analysis

Multiple linear regression analysis involves more than two variables, consisting of two or more independent variables and one dependent variable (Sahir, 2021).

Table 8. Multiple Linear Regression Results

Variable	B	Std. Error
Constant	0.738	2.464
Reward	0.163	0.065
Organizational Structure	0.393	0.131
Job Design	0.360	0.088

Source: SPSS Data Processing Results, 2026

The regression equation is formulated as follows:

$$Y = 0.738 + 0.163X_1 + 0.393X_2 + 0.360X_3 + \varepsilon$$

This equation indicates that reward, organizational structure, and job design have positive effects on employee performance.

Hypothesis Testing Partial Test (t-test)

Table 9. Partial Test Results (t-test)

Variable	t-value	Sig.
Reward	2.500	0.016
Organizational Structure	3.000	0.004
Job Design	4.095	0.000

Source: SPSS Data Processing Results, 2026

All independent variables have t-values greater than the t-table value (1.67722) and significance values less than 0.05, indicating positive and significant effects on employee performance.

Simultaneous Test (F-test)

Table 10. Simultaneous Test Results (F-test)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	1877.628	3	625.876	77.991	0.000
Residual	385.199	48	8.025		
Total	2262.827	51			

Source: SPSS Data Processing Results, 2026

The F-test result shows that reward, organizational structure, and job design simultaneously have a positive and significant effect on employee performance.

Coefficient of Determination (R²)

Table 11. Coefficient of Determination Results

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.911	0.830	0.819	2.83284

Source: SPSS Data Processing Results, 2026

The R² value of 0.830 indicates that 83% of employee performance is influenced by reward, organizational structure, and job design, while the remaining percentage is influenced by other variables not examined in this study.

Discussion

Analysis of the Effect of Reward on Employee Performance at PT Pelabuhan Indonesia (Persero) Regional I

The results of the study indicate that, partially, rewards have a positive and significant effect on employee performance at PT Pelabuhan Indonesia (Persero) Regional I. Rewards represent a form of compensation provided to employees for their work achievements, either in financial or non-financial forms (Fahmi, 2019). The provision of rewards, whether financial such as salaries, bonuses, and incentives, or non-financial such as recognition, promotion, and development opportunities, serves as a form of organizational appreciation for employee contributions.

Rewards are able to increase work motivation because employees feel valued for the efforts and achievements they deliver. This condition encourages employees to work more optimally, enhance their sense of responsibility, and strive to achieve or even exceed predetermined targets. Thus, there is a positive relationship between rewards and employee performance, in which fair and appropriate rewards can significantly improve employee performance in achieving organizational objectives.

The findings of this study are consistent with previous research conducted by Rahmah and Avrianti (2024), Deltu and Arham (2024), Thomas (2021), as well as Nthiga and Ngui (2019), which conclude that rewards have a positive and significant effect on employee performance.

Analysis of the Effect of Organizational Structure on Employee Performance at PT Pelabuhan Indonesia (Persero) Regional I

The results of the study show that, partially, organizational structure has a positive and significant effect on employee performance at PT Pelabuhan Indonesia (Persero) Regional I. Organizational structure specifies the division of labor and illustrates how various functions or activities within an organization are interconnected to a certain extent, as reflected in the level of work specialization (Triharjono et al., 2021).

A clear and well-directed organizational structure helps create effective work coordination, facilitates communication flows, and minimizes role conflicts or overlapping

tasks. Moreover, a well-designed organizational structure provides clarity regarding hierarchy and interdepartmental working relationships, enabling employees to understand their duties and objectives. This condition encourages employees to work more focused, efficiently, and responsibly in accordance with their respective roles.

Therefore, a well-structured organizational framework has a positive relationship with employee performance, as it enhances work effectiveness, accelerates decision-making processes, and supports the achievement of organizational goals. The results of this study align with previous findings by Gordiya (2024), Lubis et al. (2024), Siagian and Sihombing (2022), and Heriyanto (2020), which state that organizational structure has a positive and significant effect on employee performance.

Analysis of the Effect of Job Design on Employee Performance at PT Pelabuhan Indonesia (Persero) Regional I

The results of the study indicate that, partially, job design has a positive and significant effect on employee performance at PT Pelabuhan Indonesia (Persero) Regional I. Job design is defined as the process of determining the tasks to be performed, the methods used to carry out these tasks, and how the work is related to other jobs within the organization (Noor et al., 2023).

Effective job design enables clear task allocation, proportional workloads, and appropriate levels of job variety and challenge in accordance with employee capabilities. This can enhance employees' sense of responsibility, involvement, and job satisfaction, thereby motivating them to work more effectively and productively. Furthermore, job design that incorporates elements of autonomy, feedback, and skill variety can increase employees' intrinsic motivation.

Thus, well-structured job design that aligns with organizational needs and individual capabilities contributes positively to the improvement of employee performance. The findings of this study are consistent with previous research by Paroli (2024), Ananda (2022), and Nthiga and Ngui (2019), which conclude that job design has a positive and significant effect on employee performance.

Conclusions

Based on the direct data processing conducted by the researcher during the study at PT Pelabuhan Indonesia (Persero) Regional I, it can be concluded that:

- a. Rewards have an effect on employee performance at PT Pelabuhan Indonesia (Persero) Regional I.
- b. Organizational structure has an effect on employee performance at PT Pelabuhan Indonesia (Persero) Regional I.
- c. Job design has an effect on employee performance at PT Pelabuhan Indonesia (Persero) Regional I.
- d. Rewards, organizational structure, and job design simultaneously have an effect on

References

- [1] Ananda, T. R. (2022). Pengaruh Desain Kerja Terhadap Kinerja Karyawan Pada PT Sucofindo Cabang Jambi Dengan Motivasi Intrinsik Sebagai Variabel Mediasi. *Jurnal Manajemen Terapan dan Keuangan (Mankeu)*, Vol. 11 No. 04
- [2] Batubara, S. S., & Rambe, M. J. (2025). Peran Disiplin Kerja dalam Meningkatkan Kinerja Pegawai pada Organisasi Publik. *MANEGGIO: Jurnal Ilmiah Magister Manajemen*, Vol. 8, No. 2, pp. 104-108
- [3] Deltu, S. N., & Arham, Q. L. (2024). Pengaruh Pemberian Reward Terhadap Kinerja Karyawan UMKM Dapur Tahu Padang. *Jurnal Ilmiah Akuntansi, Ekonomi Bisnis, Manajemen Akuntansi*. Vol. 7, No. 2
- [4] Fahlevi, R., et al. (2023). *Manajemen Kinerja*. Padang: Get Press Indonesia

- [5] Fahmi, I. (2019). *Manajemen Sumber Daya Manusia Teori dan Aplikasi*. Bandung: Alfabeta
- [6] Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25*. Semarang: Badan Penerbit Universitas Diponegoro
- [7] Gordiya, P. (2024). Impact Of Organizational Structure On Employee Performance In Context To Productivity Enhancement In Dairy Sector. *International Journal of Research Publication and Reviews*, Vol. 5, No. 5
- [8] Heriyanto., et al. (2020). Pengaruh Struktur Organisasi Terhadap Kinerja Pegawai Pada PT Medco E Dan P Indonesia Sumatera Selatan. *Jurnal Eksos*, Vol. 16, No. 2
- [9] Lubis, H. P., et al. (2024). Pengaruh Struktur Organisasi Terhadap Kinerja Di Area Peternakan Kawasan *Living Lab* Glugur Rimbun. *Jurnal Nuansa: Publikasi Ilmu Manajemen dan Ekonomi Syariah*, Vol. 2, No. 1
- [10] Nainggolan, H., et al. (2022). *Manajemen Sumber Daya Manusia: Teori dan Implementasi*. Purbalingga: Eureka Media Aksara
- [11] Noor, A., et al. (2023). *Human Resource Management (Manajemen Sumber Daya Manusia)*. Jambi: Sonpedia Publishing Indonesia
- [12] Nthiga, L. M., & Ngui, T. (2019). Effect of Rewards and Job Design on Employee Performance at the Kenya Bureau of Standards. *International Journal of Research and Innovation in Social Science (IJRISS)*, Vol. III, Issue. XI
- [13] Paroli. (2024). Optimalisasi Kinerja Karyawan: Dampak Desain Pekerjaan di PT Sumber Alam Mubarak. *JIMEA: Jurnal Ilmiah MEA (Manajemen, Ekonomi, dan Akuntansi)*. Vol. 8, No. 1
- [14] Rahmah & Avrianti, S. (2024). Pengaruh Reward Terhadap Kinerja Karyawan Pada PT Bank Rakyat Indonesia (Persero) Tbk. Kantor Cabang Tanjung Kabupaten Tabalong. *JAPB*, Vol. 7, No. 1
- [15] Rosita, S., et al. (2024). *Manajemen Sumber Daya Manusia*. Jambi: WIDA Publishing
- [16] Sahir, S. H. (2021). *Metodologi Penelitian*. Yogyakarta: KBM Indonesia
- [17] Setyanto, E., et al. (2024). *Manajemen Organisasi*. Banjar: Ruang Karya
- [18] Siagian, M. V., & Sihombing, D. S. (2022). Pengaruh Struktur Organisasi Terhadap Kinerja Karyawan Pada Kantor Direksi PT. Perkebunan Nusantara III Medan. *JUMANSI : Jurnal Ilmiah Manajemen dan Akuntansi Medan*, Vol. 4, No. 1
- [19] Silaen, N. R., et al. (2021). *Kinerja Karyawan*. Bandung: Widina Bhakti Persada
- [20] Soesana, A., et al. (2023). *Metodologi Penelitian Kuantitatif*. Medan: Yayasan Kita Menulis
- [21] Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, R & D*. Bandung: Alfabeta
- [22] Telaumbanua, E., et al. (2024). *Manajemen Kinerja: Mengurai Konsep Dan Menerapkan Teori*. Bandung: Media Sains Indonesia
- [23] Thomas, A. (2021). Pengaruh Pemberian Reward Terhadap Kinerja Pada Karyawan PT. Mega Auto Central Finance Cabang Kendari. *Sultra Journal of Economic and Business*, Vol. 2, No. 2
- [24] Triharjono, B. A., et al. (2021). *Teori Desain Organisasi*. Medan: Yayasan Kita Menulis
- [25] Wardhana, A. (2024). *Teori Organisasi di Era Digital*. Purbalingga: Eureka Media Aksara
- [26] Wakhyuni, E., et al. (2019). *Manajemen Kinerja Dalam Perspektif Perusahaan*. Medan: Andalan Bintang Ghonim (ABG)
- [27] Wilchan, R., et al. (2025). The Effect of Education Level, Training and Work Experience on Employee Performance at PT. Perkebunan Nusantara IV Regional II Medan. *Formosa Journal of Sustainable Research (FJSR)*, Vol. 4, No. 2