



THE ROLE OF MOTIVATION AS AN INTERVENING VARIABLE IN THE RELATIONSHIP BETWEEN ORGANIZATIONAL CULTURE AND JOB SATISFACTION TOWARDS THE PERFORMANCE

Hasim Thaci S. Pane

Lembaga Riset dan Pengembangan Sumatera Utara

hashimthaci0312@gmail.com

Published : 31 August' 2025

Abstract

This research aims to determine the role of work motivation as a link between organizational culture and job satisfaction levels, and how it affects employee performance at PT. Cerestar Flour Mills. This research process involves measurement activities during the data collection stage. The research data was obtained from two primary sources. The first source is original data, namely information collected directly from respondents. The method used in this study is quantitative with the application of Partial Least Square Structural Equation Modeling (PLS-SEM) analysis. A total of 76 respondents were selected using a purposive sampling technique. The results show that organizational culture has a significant role and has a positive influence on work morale ($p = 0.000$). Conversely, job satisfaction does not show a direct influence on employee performance ($p = 0.886$). Organizational culture also has a positive contribution to employee performance through an indirect increase in work motivation ($p = 0.051$).

Keyword: *Motivation; Organization Culture, Job Satisfaction, Performance.*

INTRODUCTION

Employee motivation, often defined as the internal drive that drives individuals to achieve goals, can be explained through Herzberg's Two Factor Theory. This theory identifies motivational factors (achievement, responsibility, recognition, harmonious work relationships) that create satisfaction, and environmental factors (working conditions, company policies, relationships with superiors and coworkers) that prevent dissatisfaction. Both factors are relevant in understanding work motivation. This study will examine how a positive organizational culture increases employee motivation and job satisfaction (Sanata & Yogyakarta, 2016). Motivation plays a significant role as an intervening variable between organizational culture and job satisfaction, with a strong and adaptive organizational culture (Denison, 1990) positively correlated with employee performance and motivation. Therefore, this study explores the optimization of PT. Cerestar Flour Mills' organizational culture to increase motivation and job satisfaction.

PT. Cerestar Flour Mills, a palm oil plantation company in Sei Musam Plantation Village, Bahorok District, Langkat Regency, North Sumatra, will analyze employee trends, employee turnover rates, and production percentages for the 2022-2024 period. This analysis uses annual production data, turnover data, and employee numbers to identify trends and changes.

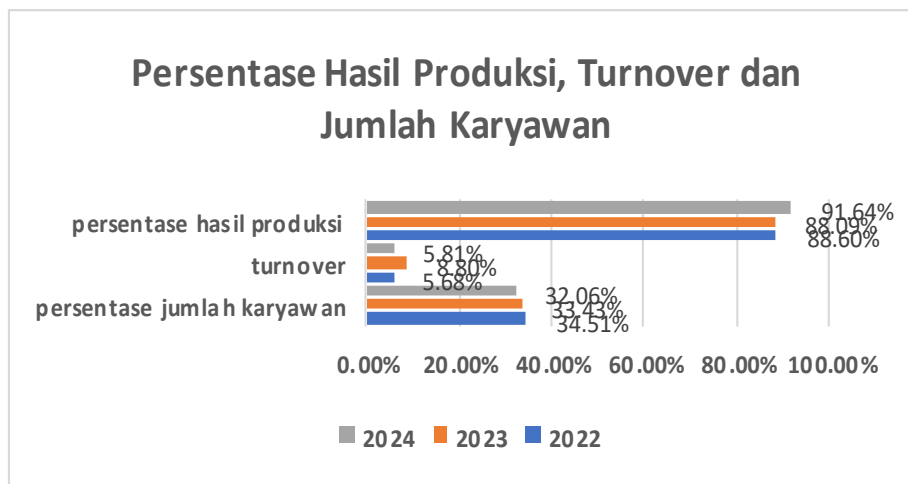


Figure 1. Graph of Production Results Percentage, Turnover and Number of Employees

(Source : Cerestar Flour Mills Co. 2022-2024)

The graph above illustrates the trend in employee percentage, employee turnover rate, and production output percentage during the 2022-2024 period. The data shows an overall decrease in employee numbers. In 2022, the number of employees reached 352, then decreased to 341 in 2023, and 327 in 2024. This represents a decrease in employee numbers of 25 (7.1%) from 2022 to 2024. This downward trend is consistent with the trend shown in the graph (a decrease from approximately 34.5% to 32%). The graph shows that employee turnover in 2022 was 20, 30 in 2023, and 19 in 2024. The highest turnover rate occurred in 2023, which may require further investigation to identify the cause. Despite the overall decline in employee numbers, the number of employees leaving was relatively stable, indicating that even though the company experienced a reduction in employee numbers, efforts to retain employees may be quite effective. The data shows an

increase in the percentage of production results, even though the company actually experienced a decline, but the company is trying to adjust the production target to the trend of declining production so that the percentage of production in 2024 looks higher than the previous year, as seen from the actual total production in 2022 reaching 36,746,665 kg with a target of 41,478,000, then decreasing to 32,333,205 kg with a target of 36,708,000 in 2023, and 28,037,090 kg with a target of 30,592,000 in 2024. PT Musam Utjing is unique because it is different from other industries located in operational conditions based on rural locations. PT Musam Utjing faces specific challenges such as limited skilled labor in remote areas, weather, and being tied to an inflexible planting-harvesting cycle. This makes the motivational and cultural aspects of the organization even more crucial.

In the context of companies in Indonesia, particularly in the plantation sector such as PT. Cerestar Flour Mills, studies on the role of work motivation as an intervening variable are still very limited. In fact, this sector has unique work characteristics and different human resource challenges compared to other service or manufacturing industries, including high turnover rates and fluctuating employee numbers from year to year by empirically testing how a positive organizational culture can increase work motivation, and how this work motivation then drives increased job satisfaction and contributes to improved company performance. This study also provides a specific context at PT. Cerestar Flour Mills, which is facing challenges in retaining employee numbers and increasing productivity. Thus, this research presents a new, underexplored perspective: examining the role of work motivation as an intervening variable between organizational culture and job satisfaction within the framework of improving company performance in the plantation sector. This gap provides strong justification for this research and serves as a tangible contribution to the development of human resource management science in Indonesia. The plantation industry, such as palm oil, is characterized by demanding, field-based work that demands high levels of physical endurance and discipline. Therefore, work motivation is key to maintaining employee enthusiasm, perseverance, and loyalty to the company. Without strong motivation, employees easily become bored, unproductive, and have a high risk of leaving their jobs. This directly impacts the productivity and stability of the workforce in the plantation industry, which relies heavily on human performance in daily operations.

METHOD

This research applies a quantitative method. According to Sugiyono (2022), a quantitative method is a type of method based on the positivist paradigm, which is applied to research specific samples or populations. The information collection method is carried out using standardized tools, and the information analysis is carried out quantitatively with the aim of describing and testing previously formulated hypotheses. This research process involves measurement activities during the data collection stage. The type of research used is associative, namely examining the relationship between two or more variables (Listiani, 2023). In this situation, the drive to work is reviewed as a connecting factor that links corporate culture and job satisfaction, which affects performance at PT. Cerestar Flour Mills. The research was conducted at PT. Cerestar Flour Mills, located on Jl. Perkebunan Sei Musam, Bohorok District, Langkat Regency, North Sumatra.

Sugiyono (2014) states that in quantitative research, a population is defined as a generalizable area that encompasses the characteristics of a particular object or subject

determined by the researcher to be examined and conclusions drawn. Meanwhile, a sample is a subset of the population that represents the entire population. A representative sample allows for generalizable conclusions to be drawn, while a non-representative sample, even if large, cannot be used for generalization. Therefore, using samples is an effective alternative when the population is large but the researcher faces limitations in time, energy, or funding (Suriani et al., 2023). The population is all 327 employees of PT. Cerestar Flour Mills, consisting of 283 men and 44 women. Due to resource limitations, the sample size was 76 respondents. Respondents were employees aged between 25 and 50 years with a minimum of one year of service. The sample size was calculated using the Slovin formula, as follows.

$$n = \frac{327}{1 + [327(0,1)^2]} = 76$$

Information:

n = Sample Size

N = Population Size

e = Error Rate (10%)

The calculation results above yielded a sample size of 76 respondents. The sample size was determined based on Chin's theory, which states that the minimum sample size in PLS-SEM ranges from 30 to 100 respondents (Zuhdi et al., 2019). The sampling technique applied in this study was non-probability sampling through purposive sampling. Sugiyono (2018) explains that non-probability sampling is a method in which each individual in the population does not have an equal chance of being selected. Purposive sampling, on the other hand, is a technique for selecting samples that uses specific considerations or criteria related to the research objectives (Sirait and Afrindo, 2021).

The research data was obtained from two primary sources. The first source is original data, namely information collected directly from respondents, namely employees of PT. Cerestar Flour Mills. Primary data collection techniques were carried out using questionnaires, interviews, observations, or other relevant methods. This data serves as the main basis for analyzing and testing the research hypotheses. The second source is secondary data, namely data already available from other parties, such as company reports, scientific publications, books, and information from the internet. Secondary data is used to complement and enrich the analysis results, as well as provide a broader perspective on the research findings. The combination of primary and additional data is expected to produce more comprehensive and reliable findings. To obtain accurate quantitative data, the research instrument was developed according to previously established guidelines. The research measurement used a Likert scale with an ordinal scale, which is useful for determining the level of assessment from the lowest to the highest category, without considering the distance between values. This scale is used to assess the views, attitudes, and perceptions of individuals or groups regarding a social phenomenon that has been determined by the researcher and becomes a variable in the study (Sugiyono, 2018).

Table 1. Instrument Description

Variables	Dimensions	Indicator	Scale
Organizational culture (X1)	1. Innovation and risk taking	- new ideas and creative approaches to solving problems - measured risk taking - awards given by organizations to employee innovation and creativity	Likert 1-2
	2. Attention to detail	- The organization's attention to accuracy and precision in work - How strict is the organization in implementing work standards and procedures? - the pressure exerted by an organization to achieve perfect results	Likert 3-4
	3. Results orientation	- The organization's emphasis on achieving measurable targets and results - awards given by organizations for high performance achievements - measure and evaluate individual and team performance	Likert 5
	4. Orientation to humans	- The organization's attention to employee welfare and satisfaction - Provide opportunities for career development and employee training - Encourage teamwork and collaboration among employees	Likert 6-7
	5. Team orientation	- Use teamwork to complete work - How effective is the organization in facilitating teamwork? - Awards given by organizations to successful teamwork	Likert 8
	6. Aggressiveness	- How competitive is the organization in the industry - the pressure exerted by the organization to achieve success - encourage employees to strive and achieve	Likert 9
Job satisfaction (X2)	1. Work	- Type of work done - Challenges that occur in work - Clarity of job description	Likert 10-11
	2. Wages	- Amount of payment received - Pay justice - Matching pay to needs	Likert 12-13
	3. Supervisor	- The way superiors give orders and directions - Support from superiors - Clarity of communication with superiors	Likert 14-15
	4. Work colleague	- Interaction with coworkers - Support from colleagues - Harmonious relationships with coworkers	Likert 16-17
Work motivation (Z)	1. Physiological Needs	- Decent salary - Bonus - Meal allowance - Transportation money - Home facilities	Likert 18-19
	2. Security Needs	- Social Security - Pension fund - Health benefits - Health Insurance - Labor equipment	Likert 20-21
	3. Social Needs	- Harmonious working relationships - Feeling accepted in a group - The need to appreciate and be appreciated	Likert 22-23

	4. Need for Appreciation	- Recognition and appreciation for work abilities and achievements - Appreciation from superiors and colleagues	Likert 24-25
	5. Self-Actualization Needs	- Interesting and challenging work - Opportunity to use skills, abilities and abilities	Likert 26-27
Company performance (Y)	Financial Perspective	- Financial profitability - Company revenue growth	Likert 28-29
	Customer Perspective	- Customer satisfaction - Customer loyalty - Market share	Likert 30-31
	Internal Business Process Perspective	- Company operational efficiency - Quality of company products/services - Company product/service innovation	Likert 32-33
	Growth and Learning Perspective	- Employee satisfaction - Employee development - Adaptability to company changes	Likert 34-35

Information processing in this study was conducted using the Partial Least Squares (PLS) technique supported by the SmartPLS application. This approach is a form of SEM (Structural Equation Modeling) that is suitable for assessing the relationship between complex variables, especially when the sample size is relatively small (Haryono, 2016). The data analysis process includes two main stages: evaluation of the measurement model (outer model) and evaluation of the structural model (inner model). In the process of evaluating the outer model, tests are conducted to check the validity and consistency of the constructs.

- Validity is measured through the standardized loading factor value, where the indicator is considered valid if the value is ≥ 0.7 .
- Reliability is evaluated based on Cronbach's Alpha and AVE (Average Variance Extracted). A construct is considered reliable if its Cronbach's Alpha is ≥ 0.7 and its AVE is at least 0.5.

Furthermore, the reliability test is also strengthened through discriminant validity. This test is conducted by assessing cross-loading, namely comparing the relationship of an indicator with its own construct and with a different construct. If the indicator's relationship is stronger with its own construct than with other constructs, it is concluded that the construct is more effective in predicting the existing indicator (Haryono, 2016). After the measurement model is declared valid and reliable, the inner model evaluation stage continues. This stage includes hypothesis testing and moderation analysis. The initial step in hypothesis testing is to assess the significance of the relationship between constructs, which is determined by the path coefficient value. The direction of the relationship must be in accordance with the theoretical hypothesis. Significance values are obtained from the bootstrapping process in SmartPLS, with reference to the t-statistic and p-value. The relationship between variables is declared significant if the t-value ≥ 1.96 or p-value ≤ 0.05 . This test is conducted to determine whether hypotheses H1 and H2 are accepted or rejected. The next step is to assess the R^2 value, which indicates the extent of the independent variable's contribution to explaining the dependent variable. To evaluate hypothesis H3, a moderation analysis was conducted by assessing the significance of the relationship between the independent variable and the dependent variable, the moderator variable and the dependent variable, and the interaction between the independent and moderator variables. The results of this analysis will reveal whether work motivation can

function as a moderating variable in the relationship between the independent and dependent variables (Ardiansyach et al., 2022).

RESULTS

Evaluation of Measurement Model (Outer Model)

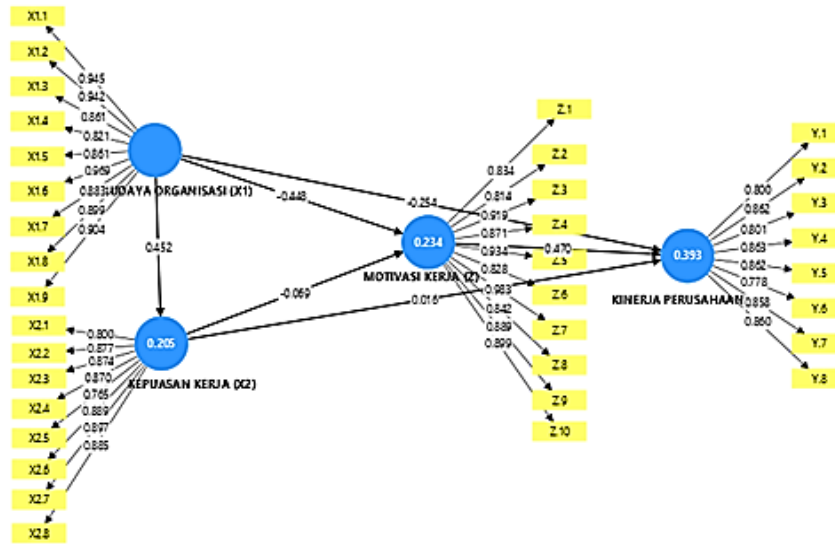


Figure 3. Research Model in SmartPLS

Convergent validity is a crucial element in assessing the quality of a measurement model, as it describes the extent to which the indicators used truly reflect the intended construct. In the PLS-SEM method, convergent validity is evaluated using two key parameters: the outer loading value and the Average Variance Extracted (AVE). An indicator is said to have a significant contribution to the construct if the outer loading value reaches at least 0.70, indicating a strong relationship between the indicator and the construct. Meanwhile, the ideal AVE value is ≥ 0.50 , which means the construct is able to explain more than half of the variability of the indicators that form it.

Table 2. Outer Loading

Indicator	Outer Loading	Conclusion
X1.1	0.945	Valid
X1.2	0.942	Valid
X1.3	0.861	Valid
X1.4	0.821	Valid
X1.5	0.861	Valid
X1.6	0.969	Valid
X1.7	0.883	Valid
X1.8	0.899	Valid
X1.9	0.904	Valid
X2.1	0.800	Valid
X2.2	0.877	Valid
X2.3	0.874	Valid
X2.4	0.870	Valid
X2.5	0.765	Valid

X2.6	0.889	Valid
X2.7	0.897	Valid
X2.8	0.885	Valid
Y.1	0.800	Valid
Y.2	0.862	Valid
Y.3	0.801	Valid
Y.4	0.863	Valid
Y.5	0.862	Valid
Y.6	0.778	Valid
Y.7	0.858	Valid
Y.8	0.860	Valid
Z.1	0.834	Valid
Z.2	0.814	Valid
Z.3	0.919	Valid
Z.4	0.871	Valid
Z.5	0.934	Valid
Z.6	0.828	Valid
Z.7	0.983	Valid
Z.8	0.842	Valid
Z.9	0.889	Valid
Z.10	0.899	Valid

Source: SmartPLS Data analysis (2025)

All outer loading values were greater than 0.70, indicating that each indicator makes a significant contribution to the construct being measured. This finding aligns with the guidelines proposed by Hair et al. (2020), which state that the ideal outer loading value is at least 0.70. Therefore, it can be concluded that the three elements in this study have successfully met the convergent validity criteria to the fullest, as all indicators showed high and significant correlations with their respective constructs.

Reliability

The next step is to conduct reliability testing. Based on the results of calculations using SmartPLS, Cronbach's Alpha and AVE values were obtained, as shown in Table 3. All variables in this research were declared reliable, as Cronbach's Alpha exceeded 0.70 and the AVE value was greater than 0.50. Reliability testing continued with an evaluation of discriminant validity, which was carried out by examining the cross-loading values and comparing the square root of AVE with the correlation between constructs.

Table 3. Reliability Testing on the Final Research Model

Variables	Cronbach's Alpha	AVE	Information
Organizational culture	0.970	0.809	Reliable
Job satisfaction	0.949	0.736	Reliable
Motivation	0.938	0.699	Reliable
Company performance	0.968	0.779	Reliable

Source: Processed data from SmartPLS output (2025)

Based on the results of the cross-loading analysis, all indicators showed higher correlation coefficients with their original constructs compared to the correlations with other constructs. By comparing the square root of the AVE and the correlation values between constructs, it can be concluded that the discriminant validity criterion has been

met. Each construct has a square root of the AVE value greater than its highest correlation with other constructs, as shown in Table 4.

Table 4. Summary of Comparison of AVE Root and Correlation Highest among Constructs

Construct	√AVE	Maximum Correlation Value between Constructs	Interpretation
X1	0.889	0.452	Discriminant validity has been met
X2	0.858	0.452	Discriminant validity has been met
Z	0.836	0.588	Discriminant validity has been met
Y	0.883	0.588	Discriminant validity has been met

Source: Processed data from SmartPLS output (2025)

Structural Model Evaluation (Inner Model)

Hypothesis testing is performed using path coefficients and R² calculations. The relationship between constructs is considered significant if the t-statistic obtained from the bootstrapping process in SmartPLS meets the criteria. The magnitude of the relationship between constructs, including interaction or moderation effects, is measured based on the path coefficient value (Haryono, 2016). A relationship is considered significant if the t-statistic is ≥ 1.96 or the p-value is ≤ 0.05. Table 5 presents a summary of the results of the t-statistic and p-value calculations from SmartPLS output related to hypothesis testing.

Table 5. Summary of t-statistic and p-value

	T statistic (O/STDEV)	P values	Information
Organizational culture (X1)->work motivation (Z)	5,589	0.000	Significant influence
The Influence of Organizational Culture (X1)->Job Satisfaction (X2)	4,072	0.000	Significant influence
The Influence of Work Motivation (Z) -> Company Performance (Y)	3,371	0.001	Significantly influential
The Influence of Organizational Culture (X1) -> Company Performance (Y)	1,977	0.051	Indirect influence
Influence of Job Satisfaction (X2) -> Work Motivation (Z)	0.550	0.584	Indirect influence
The Influence of Job Satisfaction (X2) -> Company Performance (Y)	0.144	0.886	Indirect influence

Source: SmartPLS Output Results.

Discussion

There is a significant impact of Organizational Culture (X₁) on work motivation (Z) and Job Satisfaction (X₂), as evidenced by a very small p-value (0.000). This indicates that a strong organizational culture can increase employee motivation and job satisfaction. On

the other hand, Work Motivation (Z) also has a significant impact on Company Performance (Y), with a p-value of 0.001. This finding reinforces that high work motivation is closely related to improved company performance. However, the direct relationship between Organizational Culture (X1) and Company Performance (Y) does not show any statistical significance (p-value 0.051), meaning that the impact of organizational culture on performance is indirect and influenced by other variables. Furthermore, Job Satisfaction (X2) does not show a significant influence on Work Motivation (Z) or Company Performance (Y), with a p-value greater than 0.05. This indicates that in this model, job satisfaction does not play a direct role in motivation or performance. Overall, these results indicate that Organizational Culture makes a positive contribution to Company Performance through Work Motivation as an intermediary variable, while Job Satisfaction does not function as a mediator or moderator in this relationship.

CONCLUSION

Based on research on the function of work motivation as an intermediary variable between organizational culture and job satisfaction in performance at PT Musam Utjing, it was concluded that organizational culture has a significant influence on increasing employee motivation and satisfaction. Work motivation has been shown to have a significant positive impact on company performance. However, the relationship between organizational culture and company performance does not occur directly, but rather through work motivation as a bridge. Meanwhile, job satisfaction does not show a significant influence on either work motivation or company performance, so it does not function as a mediator in this model. These findings indicate that efforts to improve company performance should be focused on aspects that can encourage employee work motivation, as they have been shown to have a positive impact on performance. Conversely, strategies to increase job satisfaction need to be re-examined for their effectiveness, considering that they do not show a significant contribution to performance improvement. The PLS-SEM analysis model applied in this study has also been proven to meet the criteria of validity and reliability.

REFERENCES

- Amalia Yunia Rahmawati. (2020). Analysis of Balanced Scorecard and Analytical Hierarchy Process on the Performance of KOPMA UIN Suska Riau. July, 1–23.
- Ardiansyach, HT, Widjajanti, K., & Rusdianti, E. (2022). The effect of implementing standard operating procedures and GeoKKP on employee performance with work motivation as a moderating variable. *Journal of Economic and Business Research*, 15(2), 76. <https://doi.org/10.26623/jreb.v15i2.4163>
- Aryanti, IE (2020). The Role of Leadership in Implementing Organizational Culture: Denison's Analysis at the Representative Office of the National Population and Family Planning Agency (BKKBN) of East Java Province. 1–2. <http://repository.unair.ac.id/id/eprint/94712>
- Budi Santoso, A., & Yuliantika, R. (2022). The Influence of Job Satisfaction and Compensation on Intention to Stay (A Case Study of Gojek Drivers in Bandung City). *JIMEA | MEA Scientific Journal (Management, Economics, and Accounting)*, 6(3), 1407–1422.

- Christian, D., & Kurniawan, M. (2021). The Influence of Work Discipline and Work Motivation on Employee Performance at PT Yala Kharisma Shipping, Palembang Branch. *National Journal of Marketing & Human Resource Management*, 2(2), 113–125. <https://doi.org/10.47747/jnmpsdm.v2i2.283>
- Dalimunthe, MH, Fachrina², R., & Suhairi, S. (2021). The Impact of Communication and Organizational Culture on Employee Performance. *El-Mujtama: Journal of Community Service*, 2(1), 54–63. <https://doi.org/10.47467/elmujtama.v2i1.494>
- Dharma Budi, Z. (2023). Volume . 19 Issue 3 (2023) Pages 740-749 *INOVASI : Jurnal Ekonomi , Keuangan dan Manajemen* ISSN : 0216-7786 (Print) 2528-1097 (Online) The effect of job satisfaction and quality of human resource performance on the company. 3(3), 740–749.
- Ferli, I., & Heikal, J. (2024). Analysis of factors influencing work motivation on employee performance at Bank Jambi, case study: KCP Jakarta Prioritas. *Journal of Entrepreneurship, Management, and Industry (JEMI)* Vol, 06(04), 221–228.
- Hustia, A., Kholilah, K., Permana, A., Anjani, AW, & Rahmawati, D. (2023). Factors Influencing Job Satisfaction in the New Normal Era. *Motivation*, 8(1), 28. <https://doi.org/10.32502/mti.v8i1.5950>
- Ivana Dyah Arsanti, & Etty Murwaningsari. (2024). Factors Affecting Company Performance. *Trisakti Journal of Economics*, 4(2), 155–164. <https://doi.org/10.25105/jet.v4i2.20262>
- Listiani. (2023). The Influence of Company Reputation, Online Customer Reviews, and Online Customer Ratings on Consumer Trust Levels. *Research Methods*, 1, 24–32. <http://repository.stei.ac.id/10805/4/BAB3.pdf>
- Mahrus Ali, M., Ali, H., & Author, C. (2023). Factors Shaping Organizational Culture: Leadership, Values, and Motivation. *Journal of Applied Management Science (JIMT)*, 5(2), 70–79. <https://creativecommons.org/licenses/by/4.0/>
- Nasution², J. (2022). The Influence of Work Discipline and Motivation on Employee Performance at Medan Goods Quality Testing and Certification Unit. *Research Innovation Journal*, 2(12), 3831–3836.
- Sanata, U., & Yogyakarta, D. (2016). Analysis Of Herzberg's Theory On Employee Job Satisfaction At Sanata Dharma University Yogyakarta Stefanus Rumangkit Informatics and Business Institute (IBI) Darmajaya Lampung. VIII, 175–185.
- Sirait, LP, & Afrindo. (2021). *Research Methods*. STEI Repository. Indonesian College of Economics (STEI) Jakarta, 45.
- Siregar, OI, & Atika. (2021). The Role of Work Ethics and Motivation on Employee Performance at PT. Sun Life Financial Medan Branch. *Journal of Public Administration Research*, 01(03), 194–205.
- Sugiyono. (2018). *Questionnaires and Questionnaires*. 15(2), 1–23.
- Suriani, N., Risnita, & Jailani, MS (2023). The Concept of Population and Sampling, and Participant Selection from the Perspective of Educational Scientific Research. *IHSAN Journal: Journal of Islamic Education*, 1(2), 24–36. <https://doi.org/10.61104/ihsan.v1i2.55>

- Usemahu, AUH (2023). Company Performance Measurement Using the Balanced Scorecard Approach at PT PELNI (Persero) Makassar Branch = Company Performance
http://repository.unhas.ac.id/id/eprint/31337/%0Ahttp://repository.unhas.ac.id/id/eprint/31337/2/D071191038_skripsi_15-11-2023 CHAPTER 1-2.pdf
- Uswatun Chassanah. (2022). The Influence of Organizational Culture on Employee Performance at PT. Mitra Seribu Saudara, West Jakarta. *Wawasan: Journal of Management, Economics, and Entrepreneurship*, 1(1), 40–48.
<https://doi.org/10.58192/wawasan.v1i1.192>
- Zuhdi, Suharjo B, & Sumarno H. (2019). Comparison of Structural Coefficient Parameter Estimation of Models Using SEM.