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Impact of Remuneration and Work Climate in Enhancing the Work Spirit of Educational Staff: A Study of the State University of Medan, Indonesia

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Abstract: This quantitative study investigates the combined effects of remuneration and work climate on employee motivation and productivity in higher-education institutions in developing countries. By employing a mixed-methods approach, this study reveals that fair and competitive remuneration directly enhances job satisfaction and motivation, while a supportive work climate fosters employee engagement and commitment. The findings suggest that a synergistic relationship exists between remuneration and the work climate, leading to improved employee outcomes. This study contributes to the literature on human resource management in academia and provides actionable recommendations for university policymakers seeking to create a more conducive work environment.

Keywords: Remuneration, Work Climate, Enhancing Employee Motivation, Higher Education Institutions, Educational staff, Quantitative analysis.



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薪酬和工作氛围对棉兰国立大学教职员工作精神的影响

本研究重点探讨薪酬与工作氛围之间的互动关系，以及它们如何提升棉兰国立大学教育人员的工作精神。与以往单独研究这些变量的研究不同，本研究采用定量研究方法，揭示两者的结合如何促进高等教育机构员工的积极性和生产力。研究表明，公平且具有竞争力的薪酬能直接提高工作满意度和积极性，而支持性的工作氛围则有助于增强员工的参与感和承诺感。本研究为学术界的人力资源管理战略提供了新的见解，并对大学政策的制定产生了重要影响，以创造更有利的工作环境。

关键词：薪酬、工作氛围、工作精神、教育人员、定量分析。

1. Introduction

The success of education institutions relies heavily on the operational and administrative efficiency of their staff. Educational staff, including administrative personnel, technicians, and supporting positions, play a crucial role in ensuring the smooth operation of academic and non-academic processes at universities [1-3]. Understanding the factors that affect workers' work spirit is essential, with remuneration and work climate being the two significant factors. Remuneration, as financial compensation for employees' efforts and contributions, has a substantial impact on employee motivation and work spirit. Fair and adequate remuneration that aligns with employee performance and expectations can increase employees' sense of appreciation and satisfaction, leading to better workplace performance [4-5].

Conversely, dissatisfaction with remuneration can reduce the work spirit and affect productivity and service quality [6-7]. Additionally, a conducive work climate, characterized by good interpersonal relationships, open communication, and opportunities for career development and recognition, can create a sense of comfort and high involvement, motivating employees to give their best [8-9].

This study aims to analyze the impact of remuneration receipt and work climate on the work spirit of the educational staff at Medan State University.

This study employed a mixed-methods approach, combining both qualitative and quantitative data collection and analysis methods.

The study will collect data from a sample of administrative staff at UNIMED using surveys, interviews, and focus group discussions to gather information on remuneration, work climate, and work spirit.

2. Methods

In this study, we used a quantitative research method based on the philosophy of positivism, used to research on or certain samples, data collection using research instruments, and quantitative/statistical data analysis, with the aim of testing the established hypothesis.

A. Population

Population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and conclusions drawn [10-18]. The population in this study was civil servants (PNS) working at Medan State University.

B. Sample

The sample is a component of the population's number and characteristics. Saturated sampling was used in this study, which, according is a sampling determination technique when all members of the population are used as samples. Therefore, the sample size in this study was an existing population of 75 individuals. Data analysis was performed using the *Partial Least Squares Structural Equation Modeling* (PLS-SEM) method in two stages: measurement model assessment analysis, which describes the relationship between latent variables and indicators. Structural Model *Assessment analysis*, which describes the overall relationship between variables [19].

Schematic Representation

Research Steps:

1. Identification of key variables: Remuneration and work climate as factors influencing work spirit.
2. Data were collected through questionnaires distributed to 150 educational staff members, using stratified random sampling.
3. Data analysis using multiple regression techniques to measure variable influence.
4. Evaluation of the research model through validity and reliability tests.
5. Discussion of results by comparing study findings with previous research.
6. Conclusions and policy recommendations based on findings.

Comparison of Study Results:

The findings revealed that remuneration had a greater influence on work spirit than work climate. The fair compensation contributes significantly to job satisfaction [20].

However, this study contrasts with Rachmawaty and Pandoyo, who argue that remuneration does not always enhance work motivation unless it is accompanied by an objective performance evaluation system [14].

3. Results and Discussion

Based on the questionnaire instrument data and the questionnaire instrument trial, the Remuneration variable with 15 statement items, Work Climate with 15 statements, and Work Spirit with 15 statements were declared valid and reliable because the calculated r value is $> r_{table}$ and the *Cronbach's alpha* value was > 0.7 . Thus, the questionnaire can be distributed to the respondents who have been determined according to the characteristics that have been determined.

Based on data obtained from the questionnaire recapitulation, the main SEM-PLS model was formed with 45 statement items. The measurement model is illustrated in Fig. 1.

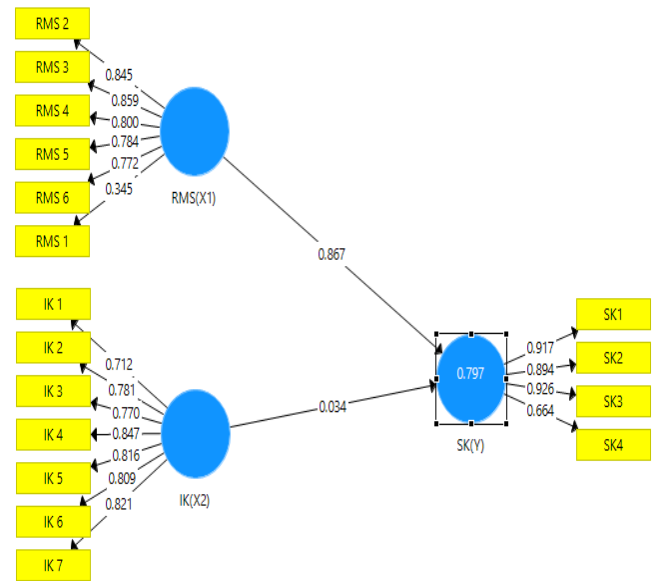


Figure 1. SEM-PLS model

Then, the PLS-Algorithm process is carried out to obtain the *Cronbach alpha*, *composite reliability*, and AVE values. To obtain these values, several stages are required, such as the *outer loading* to analyze the *convergence validity*, as shown in Table 1.

The *Outer Loading* value of each statement (< 0.7 is eliminated). The results of the eliminated statements are listed in Table 1. Each variable was greater than 0.7; thus, the model met the *convergent validity criteria*. The next stage was the evaluation of *discriminant validity* based on cross-loading.

Table 1. Composite Reliability Values

Variables	Composite Reliability
Remuneration (X 1)	0.883
Work Climate (X 2)	0.923
Work Spirit (Y)	0.916

The table shows that the *composite reliability* value for all constructs exceeded 0.70. Thus, it can be concluded that all constructs have good reliability according to the minimum required value limit.

Cronbach's alpha test

The outer model was measured, in addition to assessing convergent and discriminant validity. This can also be done by examining the reliability of the construct or latent variable measured by examining the *Cronbach's alpha* value of the indicator block that measures the construct. The construct was considered reliable if *Cronbach's alpha* value was greater than 0.60.

Table 2. Cronbach's alpha value

Composite Reliability	Cronbach's Alpha
Remuneratio n (X ₁)	0.840
Work Climate (X ₂)	0.903
Work Spirit (Y)	0.875

Cronbach's alpha values > 0.6 and even if all are > 0.7 , then it can be said that all of these constructs are reliable. For example, if Cronbach's alpha of the remuneration variable is $0.840 > 0.7$, then remuneration is reliable. Similarly, with other variables, where the value is > 0.7 , all the variables are reliable.

Convergent Validity

Convergent validity is determined by examining the item reliability (validity indicator), indicated by the loading factor value. The loading factor indicates the correlation between the score of a question item and the score of the indicator construct that measures the construct. A loading factor greater than 0.7 is considered valid. The convergent validity is shown in the following table.

Table 2. Convergent Validity Values

Convergent Validity	Mark
Remuneration (X ₁)	0.570
Work Climate (X ₂)	0.631
Work Spirit (Y)	0.735

Based on the table above, validity convergence explains that a variable should be highly correlated with it. The criteria that must be met are AVE and *commonality values* above 0.5 . The results show that the value of all indicators in the latent variable block can be highly correlated with the latent variable because it meets the value criterion AVE.

Average Variance Extracted (AVE)

Another method to assess *discriminative validity* is to compare the square root of the *average variance extracted* (AVE) value of each construct with the correlation between the construct and other constructs in the model. If the square root value of the AVE of each construct is greater than the correlation value between the construct and other

constructs in the model, it is said to have a good *discriminate validity* value. The AVE test results are shown in the following table.

Table 4. Average Variance Extracted (AVE) Value

Construct	Average Variance Extracted (AVE)	Root of Average Variance Extracted (AVE)
Remuneration (X ₁)	0.570	0.755
Work Climate (X ₂)	0.631	0.795
Work Spirit (Y)	0.735	0.857

The Average Variance Extracted (AVE) value in the table above for all variables is > 0.50 , so it can be said that each indicator that has been measured can reflect its variable. each validly.

Fornell-Larcker Criterion

The Fornell-Larcker Criterion value based on the results of the *Partial Least Square* PLS SEM is as follows:

Table 5. Fornell-Larcker Criterion

	Remuneration (X ₁)	Work Climate (X ₂)	Work Spirit (Y)
Remuneration (X ₁)	0.795		
Work Climate (X ₂)	0.746	0.755	
Work Spirit (Y)	0.681	0.892	0.857

Based on the table above, all the roots of the AVE (*Fornell-Larcker Criterion*) of each construct are greater than their correlation with other variables. For example, for remuneration (X₁), the AVE value is 0.570 , and the AVE Root is 0.755 .

Partial least squares assumption

The assumption that must be met in the outer model analysis is that there is no multicollinearity problem. In other words, there is an intercorrelation or strong correlation between the indicators. The limit is a correlation value > 0.9 , which is typically marked by a *variance inflation factor* (VIF) value at an indicator level of > 5 . The results of the VIF analysis at the indicator level are as follows:

Variance Inflating Factor (VIF) Values

Variables	VIF Value
RMS 1	1,077
RMS 2	2,776
RMS 3	2.935
RMS 4	3.369
RMS 5	2.488
RMS 6	2,703
IK 1	2.322
IK 2	2,661
IK 3	2,368
IK 4	2,691
IK 5	2.205
IK 6	2,337
IK 7	2,720
SK 1	3,890
SK 2	2,762
SK 3	4.032
SK 4	1,438

The Outer Variance Inflating Factor (VIF) table above shows that all indicators have a VIF value <5, so none of the indicators experience multicollinearity problems.

After the model met the criteria of the outer model, the next step was to test the structural model (inner model). The inner model is evaluated by looking at the percentage of explained variance, namely, by looking at the R Square value. The R Square value obtained for the Work Spirit construct was 0.797. This value indicates that the remuneration variable (X1) is only able to explain the variance of Work Climate (X2) toward Work Spirit (Y) at approximately 79.7%.

Table 7. R-Square Value

	R Square	R Squared Adjustment
Work Spirit (Y)	0.797	0.791

After evaluating the outer and inner models, the next stage was hypothesis testing. Hypothesis testing was based on the processing of research data using the Smart PLS software. Using the bootstrap resampling method, the t-statistic value is obtained, which is then compared with the t-table value. If the t-statistic value is greater than the t-table value, the proposed research hypothesis is accepted, and vice versa. The confidence level was 95%; thus, the inaccuracy limit was $(\alpha) = 5\% = 0.05$, with a t-table value of 1.29.

Table 8. Hypothesis Test Results (Path Coefficients)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
Remuneration (X ₁) → Work Spirit (Y)	0.867	0.811	0.132	6.564	0.000
Work Climate (X ₂) → Work Spirit (Y)	0.034	0.102	0.155	0.217	0.828

The hypothesis was accepted if sig (P.Values) < 0.05, and the T-statistics > 1.96. These results provide significant information. Remuneration (X₁) has an effect on Work Spirit (Y) because the P.Values are below 0.05, namely 0.000, and the t-statistics are above 1.26, namely 6.564; Work Climate (X₂) has no effect on Work Spirit (Y) because the P.Values are above 0.05, namely 0.828, and the t-statistics are above 1.26, namely 0.217.

Remuneration for Work Spirit

Remuneration, which includes salary, allowances, bonuses, and other forms of compensation, has a significant influence on employee morale. Morale, or work motivation, refers to the level of employee drive and commitment to performing duties and responsibilities in the workplace. Remuneration that meets employees' needs and expectations can increase job satisfaction. Employees who feel appreciated and receive fair compensation tend to be satisfied with their job. Job satisfaction will have a positive impact on morale because they feel appreciated for their contributions. There are negative impacts related to the remuneration system. One of them is that not everyone performs their duties sincerely but is more oriented toward obtaining benefits. This can lead to injustice and dissatisfaction among coworkers. There is also a tendency where people will only show their performance if there is supervision from superiors; if there is no supervision, they tend to be lazy.

Work climate impacts work morale

A work climate that recognizes employee achievement increases employees' enthusiasm. Awards or praise for hard work and achievement will make employees feel appreciated. This sense of appreciation motivates them to continue working in high spirits [21]. Without appreciation, employees may feel unnoticed, which may reduce their motivation. Furthermore, supporting

professional development can motivate employees to work harder. When employees feel that they have the opportunity to learn and develop, they are motivated to contribute to the company. A work climate that offers training, mentoring, and a clear career path will increase work enthusiasm because employees feel appreciated and have clear prospects for the future. In this case, employee work enthusiasm is influenced by the work climate, which includes harmonious relationships between superiors and subordinates, work atmosphere, and good communication between coworkers. A good work climate is created by leaders' efforts to create a comfortable environment. The better the work climate, the higher is the employee enthusiasm and performance. Conversely, a poor work climate can reduce employees' enthusiasm and performance. Supportive work climate is important for job success and achievement.

The work climate has a significant influence on employee morale. Supportive environments, healthy relationships, good leadership, and opportunities for development are important elements that can increase motivation and enthusiasm for work. Conversely, a work climate full of tension, ambiguity, or indifference toward employee welfare can reduce work enthusiasm and productivity.

Therefore, companies must create and maintain a positive and supportive work climate so that employees remain motivated and productive.

5. Conclusion

- a. **Key findings of this study:** The results indicate that remuneration and work climate significantly influence the work spirit of educational staff, with remuneration having the strongest impact.
- b. **Comparison with other studies:** This study supports the finding that fair compensation enhances work motivation and emphasizes the importance of a positive work climate in fostering a productive work environment.
- c. **Study implications:** The findings suggest that university policies should prioritize balancing remuneration and work climate development to enhance staff performance.
- d. **Recommendations and future research:** Universities should implement a more objective performance-based incentive

system and strengthen the organizational culture that supports collaboration and open communication. Future research could explore other factors such as leadership and psychological well-being as influencing variables.

Declarations

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Author Contributions

Aman Simaremare: Conceptualization, data collection, and data analysis.

Trisnawati Hutagalung: Literature review and research methodology.

Husna Parluhutan Tambunan: Statistical analysis and interpretation of results.

Hantono: Conclusion draft and policy recommendations.

Data Availability Statement

The data presented in this study are available upon request from the corresponding author.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this manuscript. In addition, ethical issues, including plagiarism, informed consent, misconduct, data fabrication and falsification, double publication and submission,

and redundancies, were completely observed by the authors.

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