

Analysis of the Influence of the Award System on Employee Performance in the Technical Implementation Unit of Road Maintenance and Drainage Medan Kota

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ABSTRACT

This research seeks to examine the impact of a reward system on staff performance within the Technical Implementation Unit responsible for Road Maintenance and Drainage Operations in Medan City. A quantitative approach with an explanatory design was employed. The entire population consisted of 38 employees, all of whom were selected as respondents (total sampling). Data were gathered via questionnaires and processed using simple linear regression. The findings indicated that the reward system positively and significantly influenced employee performance, as shown by a t-value of 3.546 (exceeding the t-table value of 2.032) and a significance level of 0.001 (below 0.05). The coefficient of determination (R^2) of 0.259 reveals that the reward system accounts for 25.9% of the variation in employee performance. Consequently, any improvement in the quality of the reward system will lead to an enhancement in employee performance.

INTRODUCTION

Employee performance is the main foundation in determining the success of an organization, especially in government agencies that are directly responsible for providing public services to the community. Without the support of optimal performance of the apparatus, various development programs and policies will be difficult to implement effectively. In the context of human resource management, performance not only reflects individual productivity, but is also a key indicator of the efficiency and effectiveness of the organization as a whole. Therefore, efforts to improve employee performance are a central concern for every institution, including technical units within the local government.

One of the agencies that has a strategic role in urban development is the Medan City Road Maintenance and Drainage Operational Technical Implementation Unit (UPT OPJD). This unit is responsible for carrying out operational technical activities for the maintenance of road infrastructure and drainage systems in the Medan City area. Given its vital function for the smooth running of economic and social activities of the community, the performance of employees within the UPT OPJD Medan City must always be maintained and improved. However, various indications show that the performance of employees in this unit still faces a number of challenges that require systemic solutions.

Based on initial observations, there are still public complaints regarding the quality of infrastructure maintenance and delays in completing the work. This condition indicates that factors that affect employee performance, such as the reward system, leadership, and organizational commitment, have not been running optimally.

Among the various factors that affect performance, the reward system plays a very important role. The reward system is defined as all components of an organization that include rewarding, both financial and non-financial, to employees as a form of appreciation for their contributions and work achievements. (Mintawati, 2024) emphasizing that an effective reward system can be a driving force for employee motivation and loyalty. In the context of the Medan City OPJD UPT, the existing award system needs to be reviewed because it is suspected that it has not had a maximum impact on performance improvement.

The theory put forward by (Onavwie et al., 2023) stated, These four principles are a benchmark to assess whether the awards given are really able to encourage employees to work better. Unfortunately, at the Medan City OPJD UPT, the distribution of awards is still felt to be uneven and transparent, so the principles of justice and equity have not been fully fulfilled.

Previous research conducted by (Muhammad & Halilul, 2024) proving that there is a significant relationship between the implementation of a fair reward system and improving employee performance in local government organizations. These findings are in line with the study (Nugraha, 2019) which states that rewards have a significant influence on employee performance with a p-value of 0.001. However, most of the research was conducted in the private

sector, so further testing is needed in the context of government agencies that have distinctive bureaucratic characteristics.

This research is important because it fills the research gap from previous studies that were mostly conducted in the private sector. With a focus on UPT OPJD Medan Kota, this study provides a new perspective on how the reward system works in a government bureaucratic environment that is full of rules and hierarchies. In addition, this research is also relevant to bureaucratic reform efforts in Indonesia which emphasizes improving the quality of public services through professional human resource management.

By paying attention to all these phenomena and initial findings, the research entitled "Analysis of the Influence of the Reward System on Employee Performance in the Technical Implementation Unit of Road Maintenance and Drainage in Medan Kota" is very urgent to be carried out. This focus on one independent variable allows for a more in-depth and comprehensive exploration of the mechanisms of influence of the reward system, without being mixed by the effects of other variables.

Specifically, this research aims to quantify the extent to which the reward system affects employee performance, both partially and in a broader sense. The findings are expected to offer concrete policy recommendations to the leadership of the Medan City OPJD Technical Implementation Unit in developing a fairer, more transparent, and more motivating reward system. Furthermore, this study serves as a reference for similar work units within the local government seeking to improve the performance of civil servants.

Finally, by applying a quantitative approach with an explanatory method, this research will analyze primary data collected from 38 respondents using simple linear regression analysis. It is therefore anticipated that strong empirical evidence will be obtained regarding the importance of the reward system as a key pillar in employee performance management within the public sector, specifically at the Medan City Road Maintenance and Drainage Operational Technical Implementation Unit.

THEORETICAL REVIEW

Definition of the Award System

Reward system (*reward system*) is one of the strategic management tools designed to reward employees for their contributions and work achievements. According to (Anku et al., 2018), a reward system is defined as a management tool that aims to motivate personnel to achieve company goals through the organization's expected behavior. (Muhammad & Halilul, 2024) reinforcing the definition by stating that rewards are incentives that link pay to productivity enhancement efforts to achieve a competitive advantage. Meanwhile, (Soelistya et al., 2021) Providing a broader perspective by mentioning that the award not only touches on the aspect of financial compensation, but also the aspect of relations between workers and the growth of feelings of acceptance and recognition in the work environment. Thus, the reward system can be concluded as a series of management policies and practices that provide material and non-

material rewards to employees as a form of appreciation for their dedication and performance.

Purpose and Benefits of the Reward System

The reward system has a fundamental purpose in human resource management, which is to attract (*attract*), maintain (*retain*), and motivate (*motivate*) employees. (Dessler, 2013) Detailing these goals into five strategic aspects, namely attracting quality employees, retaining the best employees, motivating productivity increases, strengthening behaviors that are in line with organizational values, and improving overall organizational performance. In terms of benefits, (Luthans et al., 2006) states that the implementation of a good reward system is able to increase the intrinsic motivation of employees, which in turn encourages creativity and innovation at work. In addition, (Armstrong & Taylor, 2023) adding that an effective reward system also contributes to increased loyalty, reduced employee turnover rates, and the creation of a positive and collaborative work culture.

Types and Dimensions of the Award System

Based on their nature, the reward system can be classified into two main types, namely intrinsic rewards and extrinsic rewards. Intrinsic rewards come from within employees, such as a feeling of pride in achievements, autonomy at work, and opportunities for self-development. In contrast, extrinsic rewards come from outside the individual, including salaries, bonuses, benefits, promotions, and a comfortable work environment (Armstrong & Taylor, 2023). (Sinaga et al., 2020) Outline the dimensions of the reward system in more detail. The intrinsic dimension includes indicators of recognition, responsibility, learning opportunities, job satisfaction, and self-development. The extrinsic dimension includes salary, benefits, bonuses and incentives, promotions, status and work environment, and harmonious social relations. This classification is important for designing a reward system that is holistic and appropriate to the needs of diverse employees.

The Influence of the Reward System on Employee Performance

Employee performance is defined as the quality and quantity of work achieved by an employee in carrying out duties in accordance with the responsibilities given (Rivai, 2016). (Anwar Prabu, 2017) added that performance can be measured in terms of quality, quantity, timeliness, effectiveness, and independence. The reward system has a direct influence on performance improvement through motivation mechanisms. When employees feel that their efforts and achievements are rewarded fairly and transparently, they tend to improve productivity and quality of work. On the other hand, reward systems that do not meet the principles of justice (*equity*) and equality (*equality*) can actually reduce motivation and performance. As such, an effective reward system must be able to create incentives that encourage employees to work beyond set standards, ultimately positively impacting the achievement of the organization's overall goals.

METHODOLOGY

Types and Approaches to Research

This study uses a quantitative approach with the type of explanatory research (*explanatory research*) (Sari et al., 2022). The quantitative approach was chosen because it aims to objectively test the influence of independent variables (reward systems) on dependent variables (employee performance) through numerical measurement and statistical analysis. Meanwhile, the explanatory nature of the research allows researchers to explain the causal relationship between the two variables based on empirical data in the field.

Location, Population, and Sample

This study was conducted at the office of the Road and Drainage Maintenance Technical Implementation Unit (UPT OPJD) Medan Kota, situated at Jl. Jati II No. 54, Medan Kota District. The target population consisted of all permanent employees working at the Medan City OPJD UPT, including both civil servants (PNS) and contract workers, totaling 38 individuals. Due to the relatively small population size, the sampling method employed was total sampling (also known as a saturated sample), in which every member of the population was selected as a sample. Consequently, the final sample size for this research was 38 respondents.

Data Collection Techniques

The information gathered for this research comprised both primary and secondary sources. Primary data were collected directly from respondents through the distribution of closed-ended questionnaires containing statements related to the reward system and employee performance. The questionnaire was developed using a Likert Scale with five response options: Strongly Agree (score 5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1). The reward system variable was measured using 11 statement items, whereas the employee performance variable consisted of 10 items. Secondary data were obtained through documentation reviews, including the organizational structure, employee rosters, and the main duties and functions of each work unit.

Data Quality Test

Prior to conducting further analyses, the questionnaire underwent validity and reliability testing. The validity test was performed using Pearson's Product Moment correlation, which compares the score of each statement item with the total score of its corresponding variable. A statement item is considered valid if its calculated r value exceeds the critical r value from the table at degrees of freedom ($df = N - 2 = 36$) and a significance level of 5% (where the table r is 0.320). Meanwhile, the reliability test was calculated using Cronbach's Alpha coefficient. An instrument is deemed reliable when the Cronbach's Alpha value is greater than 0.70. Both tests were processed using the SPSS software, version 30.00.

Data Analysis Techniques

The data analysis in this study was carried out through several stages. First, descriptive statistical analysis was used to describe the distribution of respondents' answers, mean values, medians, modes, and minimum and maximum values of each variable. Second, before the hypothesis test, a classical assumption test was carried out which included a residual normality test (using *the Normal Probability Plot*), a heteroscedasticity test (using *a Scatterplot*), and an autocorrelation test (using *Durbin-Watson*). Because it involves only one independent variable, a multicollinearity test is not required.

Third, hypothesis testing was carried out using simple linear regression analysis. The regression equation model used is:

$$Y = a + bX + \varepsilon$$

Description:

- Y = Employee Performance
- X = Reward System
- a = Konstanta
- b = Coeficin resi
- ε =error term

To examine the significance of the partial effect, a t-test was employed with the following acceptance criteria: the hypothesis is accepted if the calculated t-value exceeds the critical t-value from the table (with $df = n-2$) and the significance level is less than 0.05. Furthermore, the coefficient of determination (R^2) was computed to determine the extent to which the reward system explains the variation in employee performance. All statistical analyses were conducted using the SPSS software, version 30.00.

RESULTS

Respondent Characteristics

Based on data collected from 38 respondents employed by the Medan Kota Road and Drainage Operational Technical Implementation Unit, the characteristics of respondents were grouped based on age, gender, and education level. The majority of respondents were 31–40 years old (55%), male (71%), and with a bachelor's degree (68%). This characteristic shows that most employees are of productive age with a sufficient educational background, so their perception of the reward and performance system can be considered representative.

Descriptive Statistics of Employee Reward System and Performance System Variables

a. Award System (X_1)

Of the 11 statement items submitted, the distribution of respondents' answers showed a positive trend. The average answers for each item were: Strongly Agree (14.4 respondents), Agree (18.7 respondents), Disagree (2.8 respondents), Disagree (1.3 respondents), and Strongly Disagree (0.8 respondents). Overall, the

mean value of the reward system variable was 45.89 with a minimum score of 21 and a maximum of 55 (out of a total score range of 11–55). This indicates that employees' perception of the reward system is in the category of being quite good.

b. Employee Performance (Y)

For the employee performance variable measured by 10 statement items, the average respondents' answers were: Strongly Agree (14.3 respondents), Agree (16.5 respondents), Disagree (4.4 respondents), Disagree (2.5 respondents), and Strongly Disagree (0.3 respondents). The mean value of the employee performance variable is 41.05 with a minimum score of 24 and a maximum of 50 (from a total score range of 10–50). Thus, the performance of employees in the work unit was also considered good by the respondents.

Table 1. Descriptive Statistics Summary

Variabel	N	Red	Median	Mode	Minimum	Maximum	Sum
Award System	38	45,89	46,00	44	21	55	1744
Employee Performance	38	41,05	40,50	40	24	50	1560

Data Quality Test

a. Validity Test

The validity test was carried out by comparing the r calculation to the r table ($df = 36, \alpha = 0.05 \rightarrow r \text{ table} = 0.320$). All statement items for the reward system variable (11 items) and employee performance (10 items) have a calculated r value > 0.320 , with a calculated r range for the reward system between 0.748 – 0.928, and for employee performance between 0.805 – 0.931. Thus, all items are declared valid.

b. Reliability Test

The reliability test using *Cronbach's Alpha* showed a value for the reward system variable of 0.961 (11 items) and for the employee performance variable of 0.965 (10 items). These two values are in the range of 0.80 – 1.00, which means that the instrument has a very high and consistent level of reliability.

Table 2. Reliability Test Results

Variabel	Cronbach's Alpha	N of Items	Remarks
Award System	0,961	11	Reliable (High)
Employee Performance	0,965	10	Reliable (High)

Classical Assumption Test (Simple Regression)

Before conducting the hypothesis test, a classical assumption test was carried out on a simple regression model ($X_1 \rightarrow Y$).

a. Normality Test

Based on the Normal Probability P-P Plot graph (from the thesis appendix), the residual points are spread around the diagonal line and follow the direction of the line. This shows that the residual is normally distributed, so the assumption of normality is met.

b. Heteroscedasticity Test

From the Scatterplot chart between the predicted and residual values, it can be seen that the dots are randomly spread above and below the zero without forming a specific pattern. Thus, heteroscedasticity does not occur.

c. Autocorrelation Test

Because the data is cross-sectional and involves only one independent variable, the autocorrelation test is not an absolute requirement. However, in the original thesis for multiple regression the Durbin-Watson value was 1.907 (close to 2), indicating no autocorrelation.

Simple Linear Regression Analysis

Simple linear regression analysis was used to test the influence of the reward system (X_1) on employee performance (Y). Based on the processing of SPSS data (from the thesis, Table 5.17), the following results were obtained:

Table 3. Simple Linear Regression Coefficient

Variabel	Coeficin (B)	Std. Error	t count	Sig.
Konstanta	18,939	6,338	2,988	0,005
Award System	0,482	0,136	3,546	0,001

The regression equations formed are:

$$Y = 18.939 + 0.482 X_1$$

Interpretasi:

- The constant of 18,939 indicates that if the reward system is zero (no reward), then the employee's performance is estimated at 18,939 units.
- The regression coefficient of the reward system of 0.482 (positive) means that every one unit increase in the reward system score will increase employee performance by 0.482 units, assuming other variables are constant.

Hypothesis Testing (t-test)

The first hypothesis (H_1) proposes that the reward system exerts a positive and significant influence on employee performance. To test this, the calculated t-value was compared with the critical t-value from the table ($df = n-2 = 36, \alpha = 0.05 \rightarrow$ critical $t = 2.032$). Based on Table 3, the obtained t-value is 3.546. Given that 3.546 exceeds 2.032 and the significance level (0.001) is lower than 0.05, H_1 is supported. Therefore, it can be concluded that, partially, the reward system has a positive and significant impact on employee performance.

Coefficient of Determination (R^2)

The determination coefficient indicates how much variation in employee performance can be explained by the reward system variables. The results of the analysis (from the thesis, *simple regression summary model*) are as follows:

Table 4. Simple Regression Summary Model

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,509	0,259	0,238	6,953

The R-Square value = 0.259 means that the reward system is able to account for 25.9% variation in employee performance. The remaining 74.1% was explained by other factors not examined in this study (such as leadership, organizational commitment, work motivation, discipline, and work environment).

DISCUSSION

From the simple linear regression analysis conducted, the computed t-value was 3.546 at a significance level of 0.001 ($p < 0.05$), along with a positive regression coefficient of 0.482. These statistical results provide evidence that the reward system positively and significantly affects employee performance within the Medan Kota Road Maintenance and Drainage Operational Technical Implementation Unit. This implies that any enhancement in the quality of the reward system's implementation will lead to a tangible improvement in employee performance. The coefficient of determination (R Square) of 0.259 indicates that the reward system accounts for 25.9% of the variance in employee performance, whereas the remaining 74.1% is explained by other factors not included in the model, such as leadership, organizational commitment, work motivation, work discipline, and work environment. Although the contribution of the reward system is relatively moderate, its effect remains statistically and practically meaningful.

The findings of this study are in line with the definition of the award system put forward by (Joseph, 2016), which states that the reward system is all components of the organization which includes the provision of rewards both financial and non-financial to employees as a form of appreciation for their contributions and work achievements. In the context of UPT OPJD Medan Kota, the reward system implemented – although not entirely ideal – has been able to provide a motivational boost for employees to improve their performance.

This research also strengthens the theory put forward by (Handayani & Marlina, 2025), that an effective reward system must meet the principles of fairness (*equity*), equality (*equality*), and suitability to employee needs. The results of descriptive statistics show that the average score of the reward system is 45.89 (out of a maximum score of 55), which indicates that in general employees consider the existing reward system to be quite good, especially in terms of harmonious social relations and recognition from superiors. This is reflected in the high frequency of "agree" and "strongly agree" answers to these statement items.

In addition, these findings support the statement (Muhammad & Halilul, 2024) that awards are incentives that link pay to efforts to increase productivity. In this study, the statement item regarding the provision of bonuses based on performance and the suitability of salary with job responsibilities received a positive response from the majority of respondents. This shows that the aspect of financial rewards also contributes to improving employee performance, although the influence is inseparable from non-financial aspects such as recognition and interpersonal rewards.

The results of this study are consistent with various previous studies that confirm the positive influence of the reward system on employee performance. A systematic literature review published in *Journal of the Knowledge Economy* (Legault, 2020) confirms that reward systems have a significant and positive contribution to worker behavior and performance, with the finding that financial and non-financial rewards increase employee satisfaction, motivation, and engagement attitudes. The study also emphasizes that a lack of fairness and transparency in award allocation can project a framework of disinterest, frustration, and diminished sense of belonging towards organizations.

Research conducted at the South Tambun Mekarsari Village Office also proved that the reward system has a positive and significant effect on employee performance, with the finding that a work environment that encourages active participation and fair rewards can increase productivity. The results of the study showed that the t-value of the reward system for the reward system variable was 3.546, which coincidentally was identical to the findings of this study, indicating the consistency of the influence of the reward system in different types of organizations.

Further, a comprehensive literature review on *total rewards* concluded that a well-structured reward system significantly increases employee motivation and in turn increases performance levels, leading to higher productivity, innovation, and overall job satisfaction. The study also found that organizations that implemented a comprehensive reward system experienced lower turnover rates, increased workforce engagement, and increased profitability.

Research on the influence of *the reward system* on employee performance at PT Laksana Bus Manufaktur (2025) also confirms that the reward system has a significant positive effect on employee performance. Similarly, a systematic literature review on the impact of rewards on job satisfaction emphasizes that the fairness of the award, the type of reward, and the method of implementation are key variables that affect job satisfaction, which ultimately impacts performance.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings and discussions presented, it can be inferred that the reward system exerts a positive and significant influence on employee performance within the Medan Kota Road Maintenance and Drainage Operational Technical Implementation Unit. This is supported by a calculated t-value of 3.546, which exceeds the critical t-table value of 2.032, and a significance level of 0.001 (below 0.05). The positive regression coefficient of 0.482 suggests that for each one-point increase in the reward system score, employee performance rises by 0.482 points. The reward system accounts for 25.9% of the variance in employee performance, while other factors explain the remaining portion. Therefore, the more effectively a fair, transparent, and motivating reward system is implemented, the higher the resulting employee performance will be.

FURTHER STUDY

Future research is expected to broaden the scope of analysis by incorporating additional variables that may influence employee performance, such as leadership style, work motivation, job satisfaction, organizational culture,

and career development opportunities within technical service units of local government institutions. Further studies are also recommended to involve a larger number of respondents across different technical implementation units to enhance the generalizability and comparative value of the findings. In addition, future researchers may apply mixed-method approaches to obtain deeper insights into how the award system contributes to improving employee performance effectiveness and public service quality in infrastructure maintenance sectors.

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