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## Factors Influencing Employee Performance in The Toll Road Operations and Maintenance Division of PT Hutama Karya (Persero)

Beni Yuriskiawan<sup>1</sup>, Fibria Indriati<sup>2</sup>

<sup>1</sup>Fakultas Ilmu Administrasi, Universitas Indonesia, Indonesia, [yuriskiawanbeni@gmail.com](mailto:yuriskiawanbeni@gmail.com)

<sup>2</sup>Fakultas Ilmu Administrasi, Universitas Indonesia, Indonesia, [fibria.indriati@gmail.com](mailto:fibria.indriati@gmail.com)

Corresponding Author: [yuriskiawanbeni@gmail.com](mailto:yuriskiawanbeni@gmail.com)<sup>1</sup>

**Abstract:** This study aims to analyze the influence of transactional leadership, performance management effectiveness, training, incentives, and job satisfaction on employee performance in the Toll Road Operations and Maintenance Division of PT Hutama Karya (Persero). In addition, this study also examines the simultaneous influence of these five variables on employee performance. The method used in this research is a quantitative approach utilizing a survey technique. Data was collected through questionnaires distributed to 171 respondents working in the operational division of PT Hutama Karya (Persero). Data analysis was conducted using multiple linear regression to examine the influence of each independent variable on the dependent variable. The results show that transactional leadership, performance management effectiveness, training, incentives, and job satisfaction have a positive and significant effect on employee performance. Among these five factors, incentives have the greatest influence on employee performance. Additionally, simultaneous testing results indicate that the variables of discipline, work motivation, training, incentives, and job satisfaction collectively contribute to the improvement of employee performance.

**Keyword:** transactional leadership, performance management effectiveness, training, incentives, job satisfaction, employee performance

### INTRODUCTION

Employee performance is one of the main factors of success of an organization (Diamantidis & Chatzoglou, 2019; Saadouli & Al-Khanbashi, 2021). Good performance not only has an impact on increasing productivity but also on operational effectiveness, innovation, and the competitiveness of the organization in a competitive market (Mangkunegara, 2018). However, the implementation of effective performance management is often faced with a gap between theory and practice. Armstrong (2020) stated that ideal performance management must cover the entire cycle, starting from planning, monitoring, to feedback. However, many companies, including PT Hutama Karya, face challenges in implementing this system optimally.

In PT Hutama Karya (Persero), which is one of the largest infrastructure companies in Indonesia, performance management is important because employees, especially in the operations department, play a key role in ensuring the success of ongoing projects. However, based on initial observations, there are several problems that hinder the effectiveness of performance management in the operations department of this company. The problem of performance management at PT Hutama Karya, especially in the Toll Road Operation and Maintenance Division, can be seen from the suboptimal achievement of Key Performance Indicators (KPI).

Based on data from Human Resources Manager of PT Hutama Karya (Persero), in the Toll Road Operation and Maintenance Division, the average project achievement only reached 83.9% of the target set over the last year, with an average on-time completion of only 75%. This indicates a deeper problem in performance management, especially related to minimal training and low feedback frequency (Aguinis, 2019). Based on internal company data, the achievement of Key Performance Indicators (KPI) in this division shows unsatisfactory results. The average project achievement only reached 83.9% of the target set, with an on-time completion rate of 75%. This indicates obstacles that hinder the effectiveness of performance management. These problems are not only related to quantitative achievements, but also other aspects such as employee motivation, training, and job satisfaction.

According to the literature, there are many factors that can affect employee performance. This study focuses on several factors, namely transactional leadership, performance management effectiveness, training, incentives, and job satisfaction.

Transactional leadership, which emphasizes supervision, rewards, and sanctions, has a positive effect on employee performance (Brahim, Ridic, & Jukic, 2015; Nurlina, 2022). Transactional leadership is effective in operational contexts where tasks must be carried out in accordance with strict targets and procedures, such as those implemented in the Toll Road Operations and Maintenance Division. Leaders who use this approach tend to ensure that employees remain focused on achieving the expected results (Hamstra et al., 2014).

In addition, effective performance management plays an important role in improving employee performance (Awan et al., 2020; Neher & Maley, 2020). Structured performance appraisals, continuous feedback, and clear targets help employees stay motivated and understand clearly what is expected of them. This suggests that effective performance management can improve employee productivity and work quality.

Training is one of the main factors in improving employee performance (Mahardika & Luturlean, 2020; Rodriguez & Walters, 2017). Training enables employees to continuously update their skills and adapt to technological developments or new work methods. In this context, employees who receive appropriate training tend to be more able to complete tasks more effectively and efficiently.

Incentives also play an important role in motivating employees to perform better (Daniel, 2019; Butt et al., 2015). An inconsistent incentive system can reduce employee motivation. Some employees expressed that rewards were rarely given even though targets had been achieved, while sanctions for low performance were not applied consistently. This creates a perception of unfairness that negatively impacts overall team morale. Another study suggests that incentives play a major role in motivating employees to achieve better results (Alfandi & Alkawsaneh, 2014). Providing clear and fair incentives helps employees feel appreciated for their contributions, which ultimately increases productivity and work satisfaction. Incentives also influence employee behavior in pursuing the achievement of company targets.

Finally, job satisfaction is a significant mediating factor in the relationship between incentives and performance (Kumari et al., 2021). Employees who are satisfied with their working conditions tend to show better performance. Factors such as role clarity, a conducive

work environment, and appreciation for work results greatly influence this level of satisfaction. Work satisfaction is an important factor that influences performance. Employees who are satisfied with their work conditions, environment, and reward system will lead to better performance (Salah, 2016; Taba, 2018). Job satisfaction acts as a mediator between motivation and performance, where employees who feel satisfied tend to be more motivated to work optimally.

Taking the above into account, this study aims to analyze the influence of transactional leadership, performance management effectiveness, training, incentives, and job satisfaction on employee performance in the Toll Road Operations and Maintenance Division of PT Hutama Karya (Persero).

## METHOD

The curative framework focuses on the study of the relationship between independent variables such as Transactional Leadership (X1), Performance Management Effectiveness (X2), Training (X3), Incentives (X4), and Job Satisfaction (X5) on employee performance (Y). These six variables have indicators that can be seen in Table 1.

Variable	Indicators
Employee performance	1. Achievement of work targets 2. Quality of work results 3. Productivity
Transactional leadership	1. Rewards and Punishments 2. Contingent Rewards 3. Active Supervision 4. Passive Supervision 5. Role Exchange
Performance management effectiveness	1. Performance Planning 2. Performance Appraisal 3. Regular Feedback 4. Development and Training 5. Providing Incentives
Training	1. Skill Development 2. Training Requirement 3. Training Material Quality 4. Training Frequency 5. Training Evaluation
Incentives	1. Financial Bonus 2. Non-Financial Rewards 3. Fairness of Incentives 4. Incentive Motivation 5. Satisfaction with Incentives
Job Satisfaction	1. Work Environment 2. Job Suitability 3. Relationships with Coworkers 4. Job Recognition 5. Work Life Balance

This study is based on a positivistic paradigm using a quantitative approach. In its implementation, the quantitative approach in this study is applied through data collection using a structured instrument in the form of a questionnaire based on a Likert scale of 1–5. This instrument is designed based on theoretical indicators of each variable to ensure that the data obtained represents the construct in a valid and reliable manner. The validity of the instrument is tested to determine the extent to which the instrument is able to measure what should be measured, while reliability is tested to determine the level of consistency of the

measurement results. This is important considering that validity and reliability are the main prerequisites for obtaining accurate and accountable research results.

The population in this study was all employees working in the operational department of PT Hutama Karya (Persero), totaling around 300 employees. The sample was taken from the population of operational employees using the simpler random sampling method. This method was chosen to ensure that each member of the population has the same opportunity to be selected as a respondent, so that the results of the study can be generalized well. Based on the Slovin formula, the sample determined was 171 employees. Quantitative data were analyzed using descriptive statistical and inferential statistical methods.

## **RESULT AND DISCUSSION**

### **Respondent Characteristics**

In this study, the characteristics of respondents were analyzed to provide an overview of the demographics of employees in the operational division of PT Hutama Karya (Persero). The analysis of respondent characteristics aims to understand the distribution of samples based on demographic factors such as gender, age, length of service, and last level of education.

Based on gender, the majority of respondents in this study were male, which was 124 people or 72.5% of the total 171 respondents. Meanwhile, female respondents numbered 47 people or 27.5%. This percentage shows that the workforce in the operational division of PT Hutama Karya (Persero) is more dominated by men than women. This can be caused by the characteristics of work in the operational division which generally requires greater physical strength, so that it is filled more by male workers.

Based on age, respondents with an age range of 31 - 35 years have the largest number, which is 55 people or 32.2% of the total research sample. Respondents aged 25-30 years were in second place with 48 people or 28.1%, followed by the 36-40 age group with 36 people or 21.1%. Meanwhile, the age group under 25 years old only numbered 19 people or 11.1%, and the age group over 40 years old was the smallest, namely 13 people or 7.6%. This data shows that most employees in the operational division of PT Hutama Karya (Persero) are in the productive age range (25-40 years), which is an age with a relatively high level of mobility and work power.

The distribution of respondents based on length of service shows that the group with a work period of 1-3 years dominates with 62 people or 36.3% of the total respondents. The group with a work period of 4-6 years is in second place with 61 people or 35.7%, followed by the group with a work period of more than 6 years as many as 38 people or 22.2%. Meanwhile, the group with less than 1 year of work experience is the smallest, which is only 10 people or 5.8%. This result shows that the majority of employees in the operational division of PT Hutama Karya (Persero) have quite long work experience, with most respondents having worked for more than 1 year, which can indicate the level of stability and employee loyalty to the company.

Based on education, it shows that the majority of respondents in this study have a Diploma level of education, which is 57 people or 33.3% of the total 171 respondents. The group with the last education of SMA/SMK is in second place with 53 people or 31.0%, followed by the group with Bachelor's degree education of 46 people or 26.9%. Meanwhile, respondents with Postgraduate education (Master or Doctoral) are the group with the smallest number, which is 15 people or 8.8%. This finding reflects that the majority of workers in the operational division of PT Hutama Karya (Persero) have a secondary to diploma education background.

## Descriptive Statistics

Descriptive statistics are used to provide an overview of the data distribution of each variable studied, including employee performance, transactional leadership, performance management effectiveness, training, incentives, and job satisfaction. Descriptive statistical analysis aims to determine the minimum, maximum, average (mean), and standard deviation values of each variable. The results can be seen in Table 2.

**Table 2. Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Employee performance	171	11	30	23.94	4.225
Transactional leadership	171	11	25	21.02	3.292
Performance management effectiveness	171	11	25	21.11	2.961
Training	171	10	25	20.51	3.451
Incentives	171	10	25	20.71	3.435
Job Satisfaction	171	12	25	21.32	3.408
Valid N (listwise)	171				

Based on the analysis results presented in Table 2, the explanation of the five variables is as follows:

1. The employee performance variable has a minimum value of 11 and a maximum value of 30. The average (mean) of employee performance is 23.94 with a standard deviation of 4.225. This shows that in general, employees have a fairly high level of performance, with most respondents showing performance that is above the middle value. A relatively moderate standard deviation indicates that there is variation in performance levels between respondents, although the majority remains within a fairly consistent range.
2. The transactional leadership variable has a minimum value of 11 and a maximum value of 25, with an average value of 21.02 and a standard deviation of 3.292. A fairly high average value indicates that the majority of respondents feel that there is an application of a transactional leadership style in the company. A standard deviation that is not too large indicates that respondents' perceptions of transactional leadership are relatively homogeneous, with most employees giving responses that are not much different from each other.
3. The effectiveness of performance management has a score range between 11 and 25, with an average value of 21.11 and a standard deviation of 2.961. This mean value indicates that most respondents have a fairly positive view of the effectiveness of performance management in the company. The lower standard deviation compared to other variables indicates that the data is fairly concentrated around the mean, meaning that there is relative agreement among respondents regarding the effectiveness of the performance management system at PT Hutama Karya (Persero).
4. The training variable has a minimum value of 10 and a maximum of 25, with an average of 20.51 and a standard deviation of 3.451. A fairly high mean indicates that most respondents consider the training provided to be quite good in supporting their work. However, the larger standard deviation compared to the performance management effectiveness variable indicates that there is variation in respondents' perceptions regarding the quality and frequency of training provided. Some employees may be quite satisfied with the existing training, while others feel that there is still room for improvement in this aspect.
5. The descriptive results for the incentive variable show that the minimum value obtained is 10 and the maximum value is 25, with an average of 20.71 and a standard deviation of 3.435. The fairly high average indicates that most employees feel that the incentive



system implemented by the company is quite effective in providing work motivation. However, the relatively high standard deviation indicates differences in perception among respondents, which may be caused by variations in the implementation of the incentive system in various divisions or employee job levels.

6. The job satisfaction variable has a minimum value of 12 and a maximum value of 25, with an average of 21.32 and a standard deviation of 3.408. The high average indicates that most employees are satisfied with their working conditions. High job satisfaction has the potential to have a positive impact on employee performance and loyalty to the company. However, the standard deviation is still quite high indicating variations in the level of job satisfaction among respondents, which may be caused by differences in working conditions, work environment, or individual expectations of their work.

### Inter-Variable Analysis

The results of the analysis between variables can be seen in Table 3 below.

**Table 3. The results of the analysis between variables**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Performance management effectiveness -> Job Satisfaction	0,059	0,086	0,083	0,713	0,476
Incentives -> Job Satisfaction	0,152	0,168	0,068	2,253	0,024
Transactional leadership -> Job Satisfaction	0,319	0,327	0,080	3,982	0,000
Job Satisfaction -> Employee Performance	0,392	0,415	0,061	6,459	0,000
Training -> Job Satisfaction	0,262	0,263	0,071	3,699	0,000

Based on table 3, it can be interpreted as follows:

1. The results of this study indicate that transactional leadership has a positive and significant effect on employee job satisfaction, with a coefficient value of 0.319 and a significance level of 0.000. This finding indicates that the higher the intensity of the application of transactional leadership style by superiors, the higher the level of job satisfaction felt by employees in the organization. This strengthens the assumption that leadership practices based on an exchange system—namely giving rewards for performance achievement and implementing structured supervision—can form positive perceptions of the work environment, increase trust in leaders, and strengthen loyalty to the organization. Transactional leadership conceptually emphasizes psychological contract-based work relationships and reward systems. Leaders set clear expectations, tasks, and goals, and provide concrete feedback and measurable rewards for good performance. Thus, this leadership style provides a sense of certainty and stability in work relationships, which are important components in forming job satisfaction. Employees feel that their roles are appreciated and their performance is recognized, thus forming intrinsic motivation that strengthens emotional attachment to work.
2. The results of the study indicate that the effectiveness of performance management has a coefficient value of 0.059 on job satisfaction, with a p-value of 0.476 ( $> 0.05$ ). This indicates that the relationship between the effectiveness of performance management and job satisfaction is not statistically significant in the context of the organization studied. In other words, improvements in the performance management system implemented are not necessarily directly proportional to increased employee job satisfaction. This finding is interesting, considering that theoretically, an effective performance management system is believed to be able to increase job satisfaction by

creating role clarity, measurable and fair target planning, and objective and continuous evaluation. The Goal-Setting Theory developed by Locke and Latham emphasizes that specific, challenging but realistic work goals, accompanied by regular feedback, can increase individual motivation and job satisfaction. Within this framework, the effectiveness of performance management should not only be administrative, but also be a strategic instrument to support employee development and the achievement of organizational goals.

3. The results of this study indicate that training has a positive and significant effect on job satisfaction, with a coefficient value of 0.262 and a p-value of 0.000. This finding indicates that the higher the intensity of training received by employees, especially relevant, quality, and continuous training, the higher the level of job satisfaction they feel. Effective training not only enriches employee knowledge and skills, but also signals that the organization is committed to human resource development.
4. The incentive variable has a significant effect on job satisfaction with a coefficient value of 0.152 and a p-value of 0.024. This means that the better the incentive system implemented by the organization, the higher the job satisfaction felt by employees.
5. In this study, the job satisfaction variable was proven to have a significant effect on employee job satisfaction, with a coefficient value of 0.392 and a p-value of 0.000 ( $<0.05$ ).

### Analysis of Mediating Variables

The results of the indirect effects between variables can be seen in Table 4 below.

**Table 4. Indirect effects**

Specific indirect effects	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Performance management effectiveness -> Job Satisfaction -> Employee Performance	0,023	0,036	0,035	0,662	0,508
Incentives -> Job Satisfaction -> Employee Performance	0,060	0,071	0,031	1,909	0,056
Transactional leadership -> Job Satisfaction -> Employee Performance	0,125	0,136	0,039	3,219	0,001
Training -> Job Satisfaction -> Employee Performance	0,103	0,110	0,036	2,843	0,004

Based on Table 4, it can be interpreted as follows. The results of the specific indirect effects analysis in this study indicate that job satisfaction acts as a mediating variable in the relationship between several organizational factors and employee performance. Furthermore, it was found that job satisfaction significantly mediates the effect of transactional leadership on employee performance with a  $\beta$  coefficient of 0.125 and a p-value of 0.001. The same thing happened in training, with a  $\beta$  value of 0.103 and a p-value of 0.004, indicating a significant mediation effect. Meanwhile, incentives also showed a significant direction of influence through job satisfaction, although it was at the threshold of significance ( $\beta = 0.060$ ;  $p = 0.056$ ). On the other hand, the indirect effect of performance management effectiveness on performance through job satisfaction was not statistically significant ( $\beta = 0.023$ ;  $p = 0.508$ ).

These findings reinforce the important role of job satisfaction as a psychological mechanism that bridges the influence of managerial policies and practices on organizational output in the form of employee performance. In the context of Affective Events Theory (Weiss & Cropanzano, 1996), emotionally pleasant work experiences, such as fair treatment

from superiors, relevant and applicable training, and transparent incentive systems, will create positive perceptions and high job satisfaction. These positive emotional conditions then increase work engagement and enthusiasm, which ultimately contribute to more optimal performance.

## CONCLUSION

Based on the results of research conducted on employees working in the operational division of PT Hutama Karya (Persero), it can be concluded that:

1. Transactional leadership has a positive and significant effect on job satisfaction. A leadership style that emphasizes rewards and a clear work structure can increase employee satisfaction with their work.
2. The effectiveness of performance management does not have a significant effect on job satisfaction. Employees have not felt the real benefits of the performance management system, both in terms of fairness of assessment and support for achieving work goals.
3. Training has a positive and significant effect on job satisfaction. Training programs that are in accordance with employee needs can improve their skills, self-confidence, and satisfaction in the workplace.
4. Incentives have a positive and significant effect on job satisfaction. A fair incentive system, both in material and non-material forms, has a direct impact on increasing employee job satisfaction.
5. Job satisfaction has a positive and significant effect on employee performance. Employees who are satisfied with their work show better performance and contribute more to achieving organizational goals.
6. Job satisfaction significantly mediates the influence of transactional leadership, training, and incentives on employee performance. This means that the three variables can improve employee performance indirectly through increased job satisfaction.
7. Job satisfaction does not significantly mediate the effect of performance management effectiveness on employee performance. This shows that performance management has not been able to improve performance indirectly through job satisfaction.

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