Hakim and Rahmat Alhakim. Effect of motivation, leadership, and work discipline on employees’ performance (Case study of PT. Injakayu Terpadu, Gunung Putri - Bogor)

**INTRODUCTION**

Globalization in the free market era drives all elements to be able to compete both locally and internationally. It also includes a company as an organization which must be able to adapt to rapid changes and complex problems. Therefore, every company must spur itself as an organization which has a target to continually increase from year to year. One of the organizational resources which has an important role in achieving these targets is human resources (HR) since it is the subject of implementation of the organization's operational activities and policies. Employees as the organization's human resources are company's assets which greatly influence the achievement of the...
company’s vision and mission. Therefore, the general development strategy must be aligned with proper human resource planning. In order to cope with this, the company must ensure that each employee delivers performance that is in line with the company’s targets.

Performance is the result of quality and quantity of work achieved by an employee in carrying out their duties in accordance with the responsibilities delegated to him/her (Mangkunegara, 2010: 9). Company’s performance depends on that of employees in it, so as to achieve good performance, they are required to be able to carry out the tasks assigned to them professionally. However, not a few companies whose performance has declined from time to time, both in terms of employees and organization that seems to occur from the employees’ declining performance in these companies. The decline in performance also occurs in the manufacturing industries, one of which is PT Injakayu Terpadu which is one of the blackboards producing companies in the Gunung Putri, Bogor. The company experienced a quite great decline trend in performance. It can be observed from the data on the achievement of production targets from January to November 2019 which were unable to reach the target and even tended to decline with the following data:

Figure 1. Blackboard production target achieved by month to November 2019 (data compiled)

The decline in performance is presumed from the declining performance of employees, among others, as evidenced by the failure to achieve production targets every month. There is of lack employee morale, the high violations of employee regulations, and the increasing number of complaints from consumers regarding unsatisfactory products. Therefore, the authors conducted initial observations to identify the causes of the decline in employees’ performance.

Based on the observation results, there were several factors which have resulted in a decline in employees’ performance, such as motivation, competence, communication, leadership, organizational structure, workplace discipline, job satisfaction, and organizational culture. There was employees’ poor motivation to achieve the best performance due to the lack of internal and external encouragement to them to improve their performance. There was still a gap between the competencies of the employees and the competencies of their positions. Communication among divisions in the company was less effective, thus, mistakes often occurred in the coordination process. The leadership of the superiors in the company was considered less able to direct subordinates to do the work and less motivate subordinates to excel. The organizational structure in the company was also considered unclear and inconsistent. Therefore, improving work discipline needs to be carried out in order to improve employees’ performance. One of the methods is that the leader as one of the determinants of the direction and objectives of the organization is expected to provide a good example and direct it to the improvement of performance in employees and affect performance improvement.

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Among these factors, it shows that there are three factors which most often arise and cause a decline in employee performance, namely motivation, leadership, and work discipline. Motivation in question is the driving force both internally and externally which encourages and directs employees to improve their performance. Leadership is the ways in which leaders carry out their duties in managing human resources in the company. Finally, the last factor is work discipline, one's awareness and willingness to obey all company regulations and social norms which apply. Motivation is an important aspect which must be considered by the company to improve employees’ performance. Motivation is a driving force which creates the excitement of someone in their works, so they want to work together, work effectively, and be collaborated with all their efforts to achieve satisfaction (Hasibuan, 2011). The problem of reduced motivation in an individual can be caused by economic and family pressures, personality conflicts, lack of understanding which an attitude can have a certain impact on others. Meanwhile, leadership is a process of influencing others to achieve certain goals (Winandi, 2002). In addition, work discipline relates to the nature of its employees which obey the regulations set by the company. With a safe and comfortable work discipline, employees will be more active in working without any interruption. Work discipline itself is obedience to the institution or organization along with all aspects which become the provisions without involving personal feelings, instead based on the conviction and the acknowledgement that without such obedience all of the provisions in the organizational goals cannot be achieved (Sedarmayanti, 2009). The aforementioned phenomenon of the performance decline of PT Injakayu Terpadu Gunung Putri Bogor indicated as a result of motivational factors, leadership and work discipline has to be proven. Based on this, the authors are interested in conducting this study which analyze the influence of motivation, leadership, and work discipline on employees’ performance in PT Injakayu Terpadu, Gunung Putri Bogor.

**LITERATURE REVIEW**

**Motivation**

Motivation is a driving factor which creates an excitement in someone to perform work, so they are willing to work together, effectively, and be collaborated with all their efforts to achieve satisfaction (Hasibuan, 2011). Luthans (2006) defined motivation comprehensively as a process which starts with physiological or psychological deficiencies which drive behaviors or impulses aimed at goals or incentives. To further facilitate the understanding of work motivation, below is stated the notion of motives, motivation and work motivation. Abraham Sperling (1987:183) argued that motive is defined as a tendency to activity, starting with a drive and ended by an adjustment. The adjustment is said to satisfy the motive.

**Leadership**

Leadership is a process of influencing others to achieve certain goals (Winandi, 2002). The boss is a leader who is able to influence subordinates, colleagues or even their superiors to direct their efforts to achieve organizational goals. Armstrong (2003) stated that leadership is the process of inspiring all employees to work as well as possible to achieve the expected results. Leadership is a way to get employees to act right, achieve commitment and motivate them to achieve common goals.

**Work discipline**

Discipline indicates a condition or attitude of respect which exists in employees toward the rules and regulations of the company; thus, if the rules or regulations in the company are ignored or often violated, the employees have poor work discipline. According Yuspratiiwi (1990), she stated that discipline can be referred to as a person’s or group’s attitude who intends to follow the rules set with regard to the work. Work discipline is said to satisfy the motive.

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discipline is the behavior of an attitude and behavior which shows the obedience of employee to organizational regulations.

**Performance**

Performance is the result of quality and quantity of work achieved by an employee in carrying out their duties in accordance with the responsibilities given to him/her (Mangkunegara, 2010:9). According to Rivai (2010: 17), performance is a real behavior exhibited by an individual as work performance produced by employees in accordance with their role in the company. Performance is one's ability to carry out tasks in an organization (Pramudyo, 2010).

**RESEARCH METHODS**

**Sampling**

The sample is a part (subset) of the population, referring to a number of people, events, objects, or certain objects selected from the population to represent that population (Mulyanto and Wulandari, 2010: 100). The sample in this study was taken using the Slovin formula with a 10% error margin:

\[ n = \frac{N}{1 + Ne^2} \]

\[ n = \frac{230}{1 + (230 \times 0.01)} \]

\[ n = \frac{230}{3.3} \]

\[ n = 69.6 \approx 70 \]

\[ n = 70 \text{ people} \]

The study used cluster sampling method where the samples were taken from each department of PT Injakayu Terpadu according to the proportion of the population.

**Research design**

In this study, a causal type explanatory research was used to test the influence of independent variables on the dependent variable. The scope of this study was to examine the influence of each variable, i.e. motivation, leadership, and work discipline on the employees’ performance of PT Injakayu Terpadu, Gunung Putri, Bogor.

![Figure 2. Research design](image)

*Hakim and Rahmat Alhakim. Effect of motivation, leadership, and work discipline on employees’ performance (Case study of PT. Injakayu Terpadu, Gunung Putri - Bogor)*
Data analysis

Prior to the actual multiple linear regression analysis, a test of analysis requirements, i.e. the classic assumption test was carried out. The test was used to prove that multiple linear regression equation model is econometrically acceptable because it satisfies the BLUE (Best Linear Unlimited Estimator) estimation. It means that the estimation is unbiased, linear and consistent. The assumption test consists of tests of normality, linearity, multicollinearity, autocorrelation, and heteroscedasticity, which are explained as follows (Mulyanto and Wulandari, 2010:181).

1. Normality test

Normality which shows that the research variable data comes from the normally distributed variable data must be fulfilled. Data normality in the multiple linear regression analysis in this study was carried out graphically using the Normal P-P plot. Normality is fulfilled if the points on the Normal P-P plot spread around and follow the diagonal lines of the graph.

2. Multicollinearity test

Multicollinearity indicates that there is a very strong correlation between independent variables which is not expected. Thus, testing is carried out to ensure that there is no multicollinearity which shows that the independent variables are equal to each other (independent). There is no multicollinearity provided that:

a. The tolerance value of all independent variables is close to 1 and or greater than 0.2.

b. VIF values for all independent variables are around 1 and cannot exceed 10.

3. Autocorrelation assumption test

A good regression model is indicated by no autocorrelation, where testing is done by observing the value of the Durbin-Watson data processing results compared with the dl and du values in the Durbin-Watson table with the following criteria:

a. $1.21 < \text{DW} < 1.65 = \text{cannot be concluded,}$

b. $2.35 < \text{DW} < 2.79 = \text{cannot be concluded,}$

c. $1.65 < \text{DW} < 2.35 = \text{there is no autocorrelation,}$

d. $\text{DW} < 1.21 \text{ and } \text{DW} > 2.79 = \text{there is autocorrelation.}$

4. Heteroscedasticity assumption test

The test is done graphically by looking at the points on the scatter plot graph. If random scattered points do not form a certain pattern such as triangles, rectangles, regular curves and so on, then this assumption test is fulfilled. After the assumption test is fulfilled, a multiple linear regression analysis is performed. The main analysis results are the value of the correlation coefficient $R$, the value of the coefficient of determination $R^2$, and the multiple linear regression equation model.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3$$

Where:

$X_1 =$ motivation,

$X_2 =$ leadership,

$X_3 =$ work discipline,

$Y =$ performance,

$a =$ constant.
RESULTS AND DISCUSSIONS

Multiple linear regression analysis starts with testing the analysis requirements. The results of analysis requirements are as follows:

1. Normality test

Testing the normality graphically produces a normal P-P plot of the residual regression data which can be found in Figure 3 below. The graph shows that the distribution of residual value points on the Normal P-P plot spreads around and follows the direction of the diagonal line. Therefore, it shows that the variable data used for the multiple regression analysis follow the normally distributed data.

![Figure 3. Normal P-P plot of normality assumption test (data processed, 2020)](image)

2. Multicollinearity

The collinearity statistics coefficient table below is used to test the multicollinearity analysis requirements. Based on the table, the independent variable of $X_1$ has tolerance value = 0.972 and VIF 1.029, independent variable of $X_2$ has tolerance value = 0.890 and VIF 1.124, independent variable $X_3$ has tolerance value = 0.886 and VIF = 1.129. Since the tolerance value of each independent variable is greater than the minimum requirement (tolerance value > 0.2) and the VIF value of each independent variable is less than the maximum requirement (VIF value < 10), it can be concluded that multiple linear regression analysis does not have multicollinearity issues (the model developed is appropriate).

<table>
<thead>
<tr>
<th>Model</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>.972</td>
<td>1.029</td>
</tr>
<tr>
<td>Leadership</td>
<td>.890</td>
<td>1.124</td>
</tr>
<tr>
<td>Work discipline</td>
<td>.886</td>
<td>1.129</td>
</tr>
</tbody>
</table>

a. Dependent variable: performance *(Data processed, 2020)*
3. **Autocorrelation**

The Durbin-Watson value based on calculation shows $DW = 1.879$. Based on the existing categories, the DW value is in the range $1.65 < DW (1.879) < 2.35$, which means that there is no autocorrelation. It can be concluded that the analysis of multiple linear regression performed does not have autocorrelation issue. Therefore, the test can proceed to the multiple linear regression analysis.

Table 2. Model summary of Autocorrelation assumption test (data processed, 2020)

<table>
<thead>
<tr>
<th>Model</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.879$^a$</td>
</tr>
</tbody>
</table>

a. Predictors: (constant), motivation ($X_1$), leadership ($X_2$), work discipline ($X_3$);

b. Dependent Variable: performance ($Y$)

4. **Heteroscedasticity**

In figure below, it shows that plot graph shows that the points of calculation (the intersection between the residual and predictive values) relatively randomly scatters above and below the origin and do not form a specific pattern. It can be concluded that the multiple regression analysis of $X_1$, $X_2$ and $X_3$ against $Y$ is linear since it does not have a heteroscedasticity issue; therefore, the multiple linear regression analysis can be performed.

![Scatterplot](image)

Figure 4. Scatterplot of heteroscedasticity assumption test

Because the analysis requirements (classic assumptions) have been satisfied, i.e. normality, no autocorrelation, no multicollinearity, no heteroscedasticity, multiple linear regression analysis can be performed. The data used for analysis is those which have been tested without changes since all the classic assumption requirements have been met.

**RESEARCH ANALYSIS METHOD**

Research data analysis was performed using multiple linear regression analysis with the aid of SPSS 20 software, producing three main tables as follows:
According to column B and equation (a) follows:

\[
\text{R}^2 = 0.816
\]

From the table above, we can obtain correlation coefficient of \( R = 0.957 \) and multiple determination coefficient of adjusted \( R^2 \) of 0.912. The value of \( R^2 \) = 0.912 indicates that \( X_1 \), \( X_2 \) dan \( X_3 \) in the model are simultaneously able to explain 91.2% of variation of Y, while the rest (8.8%) of other variation of Y is not investigated in this study.

Table 4. ANOVA of effect of motivation, leadership, and work discipline on employees' performance (ANOVA²)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression Residual</td>
<td>10.426</td>
<td>3</td>
<td>3.475</td>
<td>240.253</td>
<td>.000²</td>
</tr>
<tr>
<td>Total</td>
<td>11.381</td>
<td>69</td>
<td>.14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent variable: performance (Y)
b. Predictors: (constant), motivation (\( X_1 \)), leadership (\( X_2 \)), work discipline (\( X_3 \))

(Data processed, 2020)

Multiple regression analysis also results in coefficient table which shows the partial effect of motivation, leadership, and work discipline on the performance as follows:

Table 5. Coefficients of effect of motivation, leadership, and work discipline on the performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.167</td>
<td>.221</td>
<td>.756</td>
<td>.452</td>
</tr>
<tr>
<td>Motivation</td>
<td>.940</td>
<td>.036</td>
<td>.950</td>
<td>.2677</td>
</tr>
<tr>
<td>Leadership</td>
<td>.008</td>
<td>.037</td>
<td>.009</td>
<td>.226</td>
</tr>
<tr>
<td>Work discipline</td>
<td>.035</td>
<td>.037</td>
<td>.035</td>
<td>.926</td>
</tr>
</tbody>
</table>

a. Dependent variable: performance

(Data processed, 2020)

Based on the table above, multiple linear regression can be formulated. According to column B and sig., the model in this study can be depicted as follows:

\[
\hat{Y} = 0.167 + 0.940X_1 + 0.008X_2 + 0.035X_3
\]

\[
(0.000) \quad (0.822) \quad (0.358)
\]

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Hypothesis testing

F test is used to determine whether the model from the results of the study is feasible to explain the effect of the independent variables ($X_1$, $X_2$ and $X_3$) on the dependent variable ($Y$). The results of multiple linear regression analysis which shows the effect of motivation, leadership, and work discipline variables on the employees’ performance of PT Injakayu Terpadu Gunung Putri Bogor generates multiple determination coefficients adjusted $R^2$ of 0.912. The adjusted value $R^2 = 0.912$ indicates that the equation model of multiple linear regression $\hat{Y} = 0.167 + 0.940X_1 + 0.008X_2 + 0.035X_3$ is feasible to explain the influence of motivation ($X_1$), leadership ($X_2$) and work discipline ($X_3$) on employees’ performance ($Y$). The model of motivation, leadership, and work discipline variables are able to explain the variability of the $Y$ variable as much as 91.2%, while 8.8% of the other variations are explained by other variables not examined in this study. The effect of motivation, leadership, and work discipline on the employee performance variables of PT Injakayu Terpadu, Gunung Putri Bogor is significant because the calculated F probability value of 0.000 is less than the level of the study test (Sig F < α or 0.000 < 0.05). It shows that the performance will be better if the factor of motivation, leadership, and work discipline simultaneously improved.

DISCUSSIONS

The results of the multiple linear regression analysis which models the influence of motivation, leadership, and work discipline on the employees’ performance variable of PT Injakayu Gunung Putri Bogor generates an adjusted $R^2$ coefficient of 0.912. The adjusted value $R^2 = 0.912$ indicates that the multiple linear regression equation model $\hat{Y} = 0.167 + 0.940X_1 + 0.008X_2 + 0.035X_3$ is feasible to explain the influence of motivation ($X_1$), leadership ($X_2$) and work discipline ($X_3$) on employees’ performance ($Y$). The model of motivation, leadership, and work discipline is able to explain the variability of $Y$ as high as 91.2%, while 8.8% of the variations is explained by other variables not examined in this study.

The effect of motivation, leadership, and work discipline on the employees’ performance variables of PT Injakayu Terpadu, Gunung Putri Bogor is significant because the calculated F probability value of 0.000 is less than the level of the study test (Sig F < α or 0.000 < 0.05). It indicates that the employees’ performance will be improved if the factor of motivation, leadership, and work discipline variables of PT Injakayu Terpadu Gunung Putri Bogor is carried out simultaneously.

Effect of motivation on employees’ performance

Motivation has a positive and significant effect on performance, meaning that the level of motivation of employees at PT Injakayu Terpadu Gunung Putri Bogor affects the employee’s performance. The results of the analysis of the study obtained a motivational regression coefficient of $b_1 = 0.940$ in the multiple linear regression equation model $\hat{Y} = 0.167 + 0.940X_1 + 0.008X_2 + 0.035X_3$ with a probability value of $t$ count of 0.000 less than the level of study test (Sig $t < \alpha$ or 0.000 < 0.05).

Effect of leadership on performance

Leadership has an insignificant influence on performance, meaning that the leadership of the management at PT Injakayu Terpadu Gunung Putri Bogor will not affect the performance of the employees in the company. It is indicated by the leadership regression coefficient value of $b_2 = 0.008$ in the multiple linear regression equation model $\hat{Y} = 0.167 + 0.940X_1 + 0.008X_2 + 0.035X_3$ and the probability value of $t$ is 0.822 greater than the level of the study test (Sig $t > \alpha$ or 0.822 > 0.05).

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Effect of work discipline on performance

Similarly, work discipline does not seem to have a significant effect on the performance meaning that both good and poor discipline of employee at PT Injakayu Terpadu Gunung Putri Bogor does not influence the poor performance of employees in the company. The results of the analysis of the study obtained the work discipline regression coefficient of $b_3 = 0.035$ in the multiple linear regression equation model $\hat{Y} = 0.167 + 0.940X_1 + 0.008X_2 + 0.035X_3$, while the probability value of $t$ is 0.358 greater than the level of the study test ($\text{Sig } t > \alpha$ or $0.358 > 0.05$).

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The effect of motivation, leadership, and work discipline on the employee performance at PT Injakayu Terpadu Gunung Putri Bogor yields an adjusted $R^2$ of multiple determination coefficient of 0.912. The adjusted $R^2$ value = 0.912 indicates that the multiple linear regression equation model $\hat{Y} = 0.167 + 0.940X_1 + 0.008X_2 + 0.035X_3$ is feasible to explain the effect of motivation ($X_1$), leadership ($X_2$) and work discipline ($X_3$) on the performance ($Y$). The model is also reliable to explain the variability of variable $Y$ by 91.2% due to the variable of motivation, leadership, and work discipline. Meanwhile, 8.8% of other variations are explained by other variables not examined in this study. The results obtained for each variable is as follows:

1. Motivation has a positive and significant effect on performance, meaning that the level of motivation of employees at PT Injakayu Terpadu, Gunung Putri Bogor will affect the level of employees’ performance in the company. It is indicated by the regression coefficient value of $b_1 = 0.940$;
2. Leadership does not have a significant effect on performance with a positive direction, meaning that the quality of leadership of PT Injakayu Terpadu, Gunung Putri Bogor will not influence either high or poor performance of employees in the company although the regression coefficient value of $b_2 = 0.008005$.
3. Similarly, work discipline does not have a significant effect on the performance, meaning that whether good or poor discipline of employees at PT Injakayu Terpadu, Gunung Putri Bogor has no influence on the employees’ performance although the regression coefficient value of $b_3 = 0.035$.

Recommendations

Based on the results of research conducted at PT Injakayu Terpadu, Gunung Putri, Bogor, the authors propose the following recommendations:

1. Further research needs to be carried out by expanding other variables such as leadership and Work Discipline which in this study have not been able to prove a significant effect on employee performance. In addition, further research can be extended not only to one organization but can be developed by taking a sample of employees from several other organizations so that research can be more accurate.
2. In future research, it is recommended to analyze other variables that have not been examined in this study that will relate to performance issues, such as: competence, communication, organizational structure, job satisfaction, and organizational culture.

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