Jurnal Mantik, 5 (2) (2021) 517-525

Published by:Institute of Computer Science (IOCS)

Jurnal Mantik

Journal homepage: www.iocscience.org/ejournal/index.php/mantik/index

The Effect of Motivation, Leadership and Productivity on Employee Performance at PT. Perimex Desa Sukaluwei

Hepi[1], Ruth[2], Ester[3], Yovie Ernanda[4]

[1,2,3,4]Program Studi Manajemen, Fakultas Ekonomi, Universitas Prima Indonesia

Email : yoviernanda@yahoo.com, Hepiadrianus@gmail.com

A R T I C L E I N F O

Article history:
Received: 01/05/2021
Revised: 25/05/2021
Accepted: 30/05/2021

Keywords:
Motivation, Leadership, Productivity, Employee Performance

A B S T R A C T

This study aims to determine the effect of motivation on employee performance at PT.Perimex, to determine the effect of leadership on employee performance at PT.Perimex, to determine the effect of productivity on employee performance at PT Perimex and to determine the effect of motivation, leadership and productivity simultaneously on employee performance at PT.Perimex. .Perimex with a population of all employees of PT. Perimex amounted to 96 people with a saturated sampling technique using total sampling, the research sample was obtained as many as 96 people. The results of the partial study obtained the t-count Motivation (X1) was 3.371 and the t-table value was 1.984 provided that the value of tcount > ttable (3.371 > 1.984) and sig value < 0.05 (0.001 < 0.05), partially obtained the t-count Leadership (X2) is 3, Leadership and Productivity make a big contribution in explaining employee performance by 76.80% while the remaining 23.20% is influenced by other factors outside the study. The conclusion of the study is that motivation has a significant effect on employee performance, leadership has a significant effect and is the dominant variable that affects employee performance, productivity has a significant effect on employee performance and simultaneously motivation, leadership and productivity have a significant effect on employee performance.

1. Introduction

The role of human resources is the most important subject needed by the company to support the company's success in the company's operational activities in empowering its human resources in managing resources effectively and efficiently.

PT.Perimex is a company engaged in the oil palm plantation business, and previously also owned a Crumb-Rubber Sheet Processing Factory. And over time, in 2010 the Crumb-Rubber Factory was closed because PT.Perimex no longer planted rubber plants, but had switched to oil palm plantations, and the surrounding community had also changed the function of plants, namely rubber plants into oil palm plants. .Da company PT.Perimex is very aware of the importance of product quality to customers.

Motivation is an encouragement given to humans, especially to subordinates to want to work hard by giving all their skills to realize company goals. Motivation questions how to encourage subordinates' work enthusiasm because basically the company does not only expect capable, capable, and skilled employees.

Leadership is management with good leadership, thus the management process will run smoothly and employees will be enthusiastic to carry out their duties. Good or bad, whether or not a company's goals are achieved is largely determined by the ability of managers to carry out their leadership to direct their subordinates. The skills and authority of a leader will encourage the work spirit of his subordinates.

Productivity is producing goods and services by utilizing resources efficiently. Therefore, productivity is defined as the ratio between output and input within a certain time. The problem of productivity is low labor, to

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.

increase productivity means to work harder and faster, improve the quality of goods and life.

2. Research methods

2.1 Research Location and Time

The research was conducted at PT.Perimex which is located in Bangun Purba District, Deli Serdang Regency, Sukaluwei Village, North Sumatra 20585. The time of the research starts from September 2020 – October 2020.

2.2 Research Approach

According to Sugiyono (2016: 8). Quantitative research method is defined as a research method based on the philosophy of positivism, used to examine the population or sample, collect data using research instruments, and analyze quantitative or statistical data.

2.3 Types and Nature of Research

According to Sukmadinata (2011:73). descriptive research is a form of research aimed at describing existing phenomena, man-made phenomena. This type of research is a type of descriptive research. According to Sugiyono (2012:21) explanatory research is research that explains the position of the variables studied with the relationship between one variable and another. The nature of this research is descriptive explanatory.

2.4 Population and Sample

According to Sugiyono (2016: 80). population is a generalization area consisting of: objects or subjects that have certain qualities and characteristics. The population used by the research is PT.Perimex employees totaling 96 people.

According to Sugiyono (2016: 81). The sample is part of the number and characteristics possessed by the population. The sampling technique is saturated sampling. Using the entire population as the research sample, with 96 people and 96 people will be taken from the company.

2.5 Data collection technique

According to Riduwan (2011: 51). Data collection techniques are by means of interviews, observation and documentation.

2.6 Research Identification and Definition

Table 1.
Operational Definition of Research Variables

Variable	Operational Definition	Indicator	Measurement
Motivation (X1)	Motivation is a process that describes the intensity, direction, and persistence of individuals to achieve their goals. According to Feriyanto and Triana (2015:71).	1. High or low attendance 2.The level of work productivity 3. Damage rate 4.Demand According to Nitisemito in Prasetyo (2014:4-5)	Likert scale
Leadership (X2)	Leadership is the way a leader influences the behavior of subordinates, so they are willing to work together and work productively to achieve organizational goals. According to SPHasibuan Malay (2011:170)	1. Coercive power (coercive power) 2. Reward power 3. Legitimate power (official power) 4.Expert power (power of expertise) 5. Referent power from the leader) According to French dan raven,, in Siswanto (2011:162)	Likert scale
Productivity (X3)	Productivity is producing or increasing the results of goods and services as high as possible by utilizing resources efficiently. According to Muchdarsyah (2011: 198).	1.Total productivity 2.Partial productivity. According to Muchdarsyah (2015:30-35).	

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.

Variable	Operational Definition	Indicator	Measurement
Employee Performance (Y)	Employee performance is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. According to Mangkunegara (2011: 67).	1. Internal factors 2. Factorexternal According to Dale Timple (2014:15).	Likert scale

2.7 Validity test

According to Ghozali (2016: 52). Validity test is used to measure whether or not a questionnaire is valid. A questionnaire is said to be valid if the questionnaire questions are able to reveal something. If r count is greater than r table, the questionnaire is said to be valid, otherwise if r arithmetic is smaller than r table, a questionnaire is said to be invalid.

a. 1. If r count > r table then the question item is said to be valid.
b. 2. If r count < r table then the question item is said to be invalid.

2.8 Reliability Test

According to Ghozali (2016:48). reliability test is a tool to measure a questionnaire which is an indicator of a variable or construct. Decision-making for the reliability test if the Cronbach Alpha is assessed > 0.70.

2.9 Classic assumption test

According to Ghozali (2017: 33). if the classical assumptions are met, the regression estimation with ordinary least squares (OLOS) will be BLUE (Best Linear Unbiased Estimator), meaning that decision making through the F test and T test is not allowed.

2.10 Normality test

According to Ghozali (2013: 160). Normality test aims to test whether in the regression model, the confounding or residual variables have a normal distribution. There are two ways to detect whether the residuals are normally distributed or not, namely by graphical analysis and statistical tests.

a. If the significant value is > 0.05, then the data is normally distributed.
b. If the significant value < 0.05, then the data is not normally distributed.

2.11 Multicollinearity Test

According to Ghozali (2013: 105). multicollinearity test aims to test whether the regression model found a correlation between the independent variables (independent). The cut off value commonly used to indicate the presence of multicollinearity is the tolerance value < 0.10 or the same as the VIF value > 10.

2.12 Test Heteroscedasticity

According to Ghozali (2013: 139). Heteroscedasticity test aims to test whether the regression model has an inequality of variance from the residual of one observation to another observation. If the variance from the residual of an observation to another observation is still called homoscedasticity, if it is different it is called heteroscedasticity. There are several ways to detect the presence or absence of heteroscedasticity, namely:

a. Looking at the plot graph based on the analysis, if there is a pattern of dots forming a certain pattern, then heteroscedasticity has occurred.
b. If there is no clear pattern of dots spread above and below the number 0 on the Y axis, then there is no heteroscedasticity.

$$Y = a + b1X1 + b2X2 + e$$

3. Results and Discussion

3.1 Descriptive statistics

Descriptive statistics show the condition of each variable used in this study, described as research results from each research variable such as the minimum, maximum, mean and standard deviation values of each variable, both independent and dependent variables. The results of the descriptive test of statistical data from all

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.

variables include:

Table 2
Descriptive Statistics

	N	Minimum	Maximum	mean	Std. Deviation
Motivation	96	16.00	40.00	33.1354	5.31853
Leadership	96	17.00	50.00	41.0625	6.95521
Productivity	96	8.00	20.00	16.6042	3.17052
Employee performance	96	8.00	20.00	16.6458	3.01916
Valid N (listwise)	96				

Source: SPSS Output Results (2021)

Based on the statistical data in Table 2, it shows that based on the Motivation Variable (X1) it has a mean of 33.1354 with a standard deviation of 5.31853. This mean value has a higher value than the specified minimum, which is 16.00. This shows that the motivation given by the leadership of PT.Perimex tends not to be accepted by employees so it still needs attention.

Leadership variable (X2) has a mean of 41.0625 with a standard deviation of 6.95521. This mean value has a higher value than the specified minimum value of 17.00. This shows that respondents tend to be able to accept the applied leadership but still need to be addressed so as to create the right leadership in leading employees for PT.Perimex.

Productivity variable (X3) has a mean of 16.6042 with a standard deviation of 3.17052. This mean value has a higher value than the specified minimum value of 8.00. This shows that respondents tend to have good productivity but still need to be addressed so as to create good work productivity for all employees of PT.Perimex

Employee performance variable (Y) has a mean of 16.6458 with a standard deviation of 3.01916. This mean value has a higher value than the specified minimum value of 8.00. This shows that the performance of PT.Perimex employees is relatively good but still needs to be addressed so that maximum performance is achieved.

3.2 Classic assumption test

The classical assumption test is intended to determine the fulfillment of a BLUE linear regression model (Best Linear Unbiased Estimator). This classical assumption test consists of normality test, multicollinearity test and heteroscedasticity test. A linear regression model will fulfill the BLUE assumption if the model has normal data, free of multicollinearity and free of heteroscedasticity.

3.3 Normality test

According to Ghozali (2018:161) the normality test is a test tool used to test whether the multiple linear regression model data is normally distributed. Normality test aims to test whether the regression model is normally distributed. Normality test can be done by graphical analysis, namely the Normal PP Plot of Regression Standardized Residual. If the points spread around the diagonal line, then the data is normally distributed. The normality test in this study is as follows:

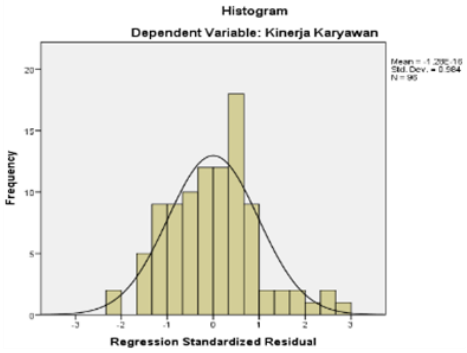

Fig 1 Histogram Graph

Data Source: SPSS Output Results (2021)

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.

Based on the data in the histogram graph, the residual data has shown an abnormal distribution pattern and a normal curve that forms a perfect bell. Then Fig Normal PP Plot of Regression Standardized Residual as follows:

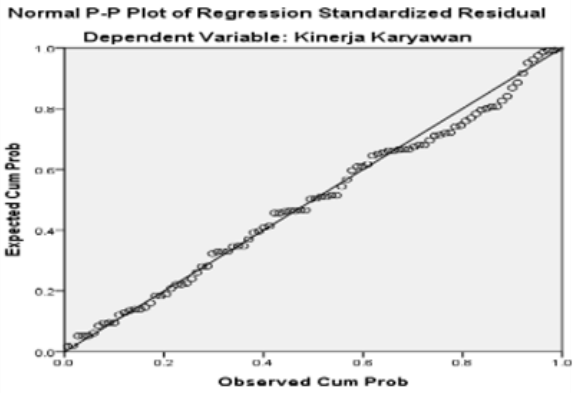

Fig 2 PP Plot Normal Graph

Source: SPSS Output Results (2021)

Based on the data from Fig 2, it can be seen that the P-Plot shape depicts the points of spread slightly away from the diagonal line, the points spread out following the data along the diagonal line, this means the data is normally distributed. In addition, normality test can also be performed using the Kolmogorov-Smirnov test at a significant level of 5% (0.05). The results of the Kolmogorov-Smirnov test can be seen in the following table:

Table 3

Kolmogorov-Smirnov.NormalityTest

		Employee performance
N		96
Normal Parameters, b	mean	16.6458
	Std. Deviation	3.01916
MostExtremeAbsolute		.184
Differences	Positive	.133
	negative	-.184
Test Statistics		.184
asymp. Sig. (2-tailed)		.200b

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Data Source: SPSS Output Results (2021)

Based on the data, it can be seen that the data is normally distributed with a statistical test value of 0.184 with an Asympy.Sig (2-tailed) value of 0.200 where this figure is above the significance level of 0.05 or 5%. or the asympy.sig (2-tailed) value > 0.05, thus the Asympy.Sig value > 0.05 (0.200 > 0.05).

3.4 Multicollinearity Test

According to Ghozali (2018:107) the multicollinearity test aims to test whether or not there is a correlation between independent variables in the regression model. Because a good regression model is that there is no correlation between the independent variables. Symptoms of multicollinearity can be seen from the value of Tolerance and VIF (Variance Inflation Factor). These two measures indicate which of each independent variable is explained by the other dependent variable. Tolerance is measuring the variability of the selected independent variables that are not explained by other independent variables. The value used for Tolerance > 0.10 and VIF < 1.0 then there is no multicollinearity. The value of Tolerance and VIF (Variance Inflation Factor) can be seen in the following table:

Table 4
Multicollinearity Test

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	(Constant)		
	Motivation	.220	4,538
	Leadership	.174	5.744
	Productivity	.319	3.138

a. Dependent Variable: Employee Performance

Data Source: SPSS Output Results (2021)

Based on the data in the table shows that all the values of the independent variables have a value of Tolerance > 0.10 and VIF < 10.0 where the Tolerance value of each variable in the form of Motivation, Leadership and Productivity as independent variables is (0.220 > 0.10), (0.174 > 0.10) and (0.319 > 0.10) while the VIF value of each independent variable in the form of Motivation, Leadership and Productivity is (4,538 < 10,0), (5,744 < 10.0) and (3.138 < 10 0,0), thus in this study there is no multicollinearity

3.5 Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. A good regression model is that there is no heteroscedasticity test. Heteroscedasticity test can be done with graphs and statistical analysis in the form of a scatterplot test. Through graphical analysis, a regression model is considered not to have heteroscedasticity if the points are randomly distributed and do not form a certain clear pattern and are spread above or below zero on the Y axis as shown in the following Fig:

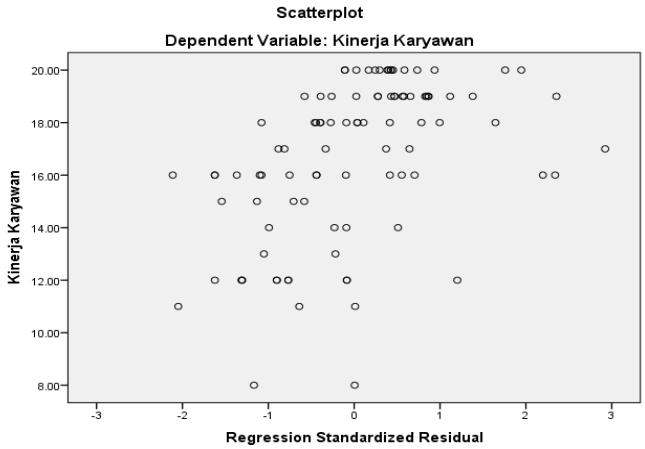

Fig 3 Scatterplot Heteroscedasticity Test

Data Source: SPSS Output Results (2021)

Based on the data in Fig. 3, it is known that the points spread randomly and do not form a certain clear pattern and are spread both above and below zero on the Y axis. This does not occur heteroscedasticity in the regression model, so the research regression model is feasible to use to predict the effect of motivation, leadership and productivity on employee performance as an independent variable.

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.

3.6 Multiple Linear Regression Analysis Model

Table 5
Multiple Linear Regression Test

Coefficientsa

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	.074	.952		.074	.952
	Motivation	.201	.060	.355	.201	.060
	Leadership	.194	.051	.447	.194	.051
	Productivity	.117	.083	.123	.117	.083

a. Dependent Variable: Employee Performance

Data Source: SPSS Output Results (2021)

Based on the data in the table, it is known that the multiple linear regression equation is as follows:

Y = a + a+b1X1+b2X2+b3X3 + e

Employee Performance = 0.074 + 0.201 X1 + 0.194 X2 + + 0.117 X3

Information :

Y	=	Employee performance	
α	=	Constant	
b1, b2, b3	=	Regression Coefficient	each Independent Variable
X1	=	Motivation	
X_2	=	Leadership	
X_3	=	Productivity	
e	=	error clearance rate 0.05	

The explanation of the multiple linear regression equation in Table 5 is as follows:

a. Constant value
   The constant value is 0.074, this indicates that if the independent variable (X) in the form of Motivation, Leadership and Productivity is 0 or not, then the employee's performance (Y) is 0.074.
b. Motivation Regression Coefficient (X1)
   The regression coefficient value of X1 is 0.201, meaning that if there is an increase or addition to X1 while the variables X2 and X3constant, then the value of Y will also increase and vice versa. This means that if motivation increases by 1 while other independent variables remain, the employee's performance also increases by 0.201 units and vice versa.
c. Leadership Regression Coefficient (X2)
   The regression coefficient value of X2 is 0.194, meaning that if there is an increase or addition to X2, while the variables X1 and X3constant, then the value of Y will also increase, and vice versa. This means that if Leadership increases by 1 while other independent variables remain, then employee performance also increases by 0.194 units and vice versa.
d. Productivity Regression Coefficient (X3)
   The value of the X3 regression coefficient is 0.117, meaning that if there is an increase or addition to X3, while the variables X1 and X2 variabelconstant, then the value of Y will also increase and vice versa. This means that if productivity increases by 1 while other independent variables remain, then employee performance also increases by 0.117 units and vice versa.

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.

3.7 Research Hypothesis Test

a. Partial Hypothesis Testing (t Test)

Table 6
Statistical Test Results Partially (t-test)

Coefficients[a]

Model		t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	.077	.939		
	Motivation	3.371	.001	.220	4,538
	Leadership	3,774	.000	.174	5.744
	Productivity	2,400	.016	.319	3.138

a. Dependent Variable: Employee Performance

Data Source: SPSS Output Results (2021)

Based on the data in Table III.5, the partial effect of each independent variable on the dependent variable will be described as follows:

1) The results of the t-test value (partial) of Motivation (X1) on employee performance (Y) where partially the t-value of Motivation (X1) is 3.371 and the t-table value is 1.984 (in the Excel formula = TINV(0.05.96)) with the provision that the t-value > t table (3.371 > 1.984) and sig < 0.05 (0.001 < 0.05), so it is stated that motivation partially has a positive and significant effect on the performance of PT NV Perimex employees.
2) The results of the t-test (partial) Leadership (X2) on employee performance (Y) where partially the t-value of Leadership (X2) is 3.774 and the t-table value is 1.984 (in the Excel formula = TINV(0.05.96)) with the provisions of the t-value > t table (3.774 > 1.984) and sig < 0.05 (0.000 < 0.05), so it is stated that leadership partially has a positive and significant effect on the performance of PT NV Perimex employees.
3) The results of the t-test (partial) of Productivity (X3) on employee performance (Y) where partially the t-value of Productivity (X3) is 2.400 and the t-table value is 1.984 (in the Excel formula = TINV(0.05.96)) with the provisions of the t-value > t table (2,400 > 1,984) and sig < 0.05 (0.001 < 0.05), so it is stated that productivity partially has a positive and significant effect on the performance of PT NV Perimex employees.
4) The results of the partial dominant test (t test) between (X1, X2 and X3) on employee performance (Y) where partially obtained the value of each variable tcount X1, X2 and X3 is 3.371; 3.774 and 2.5400 with sig values <0.05 (0.001; 0.000 and 0.016 <0.05), so it is stated that leadership is partially the dominant variable and has a positive and significant effect on employee performance at PT NV Perimex.

b. Simultaneous Hypothesis Testing (F Test)

Table 7
Statistical Test Results Simultaneously (F Test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	671,556	3	223,852	105,937	.000b
	Residual	194.402	92	2.113		
	Total	865,958	95			

a. Dependent Variable: Employee Performance
b. Predictors: (Constant), Productivity, Leadership, Motivation

Data Source: SPSS Output Results (2021)

Based on the data in the table, the simultaneous influence on employee performance (Y) is obtained where the F value of Motivation (X1), Leadership (X2) and Productivity (X3) is simultaneously obtained is 105,937 and the ttable value is 2,466 (in Excel formula = FINV(0.05) ,4,96)) with the provision that the value of Fcount > Ftable (105,937 > 2,466) and the value of sig < 0.05 (0.000 < 0.05), so that it is stated that

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.

Motivation, Leadership and Productivity Simultaneously have a positive and significant effect on the performance of employees of PT. Perimex.

c. Adjusted Coefficient of Determination (R2)

Table 8
Adjusted Coefficient of Determination Test (R2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.881a	.776	.768	1.45364	2,000

a. Predictors: (Constant), Productivity , Leadership, Motivation
b. Dependent Variable: Employee Performance

Data Source: SPSS Output Results (2021)

Based on the data in the table, it is known that the Adjusted RSquare value is 0.768 or adjusted R2 x 100% of 76.80%, meaning that the independent research variables in the form of Motivation, Leadership and Productivity styles make a major contribution in explaining employee performance by 76.80% while the remaining 23, 20% is influenced by other factors outside of this research, such as work climate, training, compensation, work culture, competence, personal and situational factors, government policies and the national economic situation.

4. Conclusion

Based on the results of the research above, conclusions can be drawn including:

a. Motivation partially has a significant effect on employee performance with a value of sig < 0.05 (0.001 < 0.05)
b. Leadership partially has a significant effect on employee performance and is the dominant variable that affects employee performance where the value with a value of sig < 0.05 (0.00 < 0.05).
c. Productivity partially has a significant effect on employee performance with a value of sig < 0.05 (0.016 < 0.05)
d. Motivation, Leadership and Productivity simultaneously have a significant effect on employee performance with a value of sig < 0.05 (0.000 < 0.05).

5. Reference

[1] Hasibuan, H. Malayu S.P 2011.Manajemen Sumber Daya Manusia. Jakarta: PT.Bumi Aksara
[2] Hasibuan, Malayu S.P.2011. Manajemen:Dasar, Pengertian, dan Masalah. Edisi Revisi.Cetakan ke-9. Jakarta: Bumi Aksara
[3] Robbins,Stephen P. dan Coulter, Mary.(2014).Management.12th Edition. Pearson Education
[4] Hasibuan, Malayu S.P. 2012. Manajemen Sumber Daya Manusia, Cetakan Keenam Belas. Edisi Revisi. Jakarta: Bumi Aksara
[5] Muchdarsyah Sinungan 2011 : Produktivitas apa dan Bagaimana. Jakarta Bumi Aksara
[6] Hasibuan malayu 2011 : Organisasi dan Motivasi : dasar peningkatan
[7] Hartatik, Indah Puji, Buku Praktis Mengembangkan SDM, Laksana, Yogyakarta : 2014.
[8] Mangkunegara, 2011, Dimensi dan Indikator Kinerja Karyawan. Bandung: Refika Aditama
[9] Malayu S.P. Hasibuan, Manajemen Dasar, Pengertian, dan Masalah Edisi Revisi, (Yogyakarta: Bumi Aksara, 2011), hlm.216
[10] Siswanto, 2011, Pengantar Manajemen, Bumi Aksara, Jakarta
[11] Prasetyo, Hendri dan Yuniati, Tri. 2014. Pengaruh Gaya Kepemimpinan dan Komunikasi Interpersonal Terhadap Semangat Kerja Karyawan. Jurnal Ilmu dan Riset Manajemen Vol. 3 No. 1 (2014)