

The Effect of Transformational Leadership on Employee Individual Creativity

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Abstract—This study aims to analyze the effect of transformational leadership style on employee creativity. This study used primary data in the form of questionnaires distributed to manufacturing companies, supervisors, HRD, and administration at PT. Schneider, PT. Shimano, and PT. Infineon. This study used a sample of 150 respondents, each division based on the ratio of the total number of employees in each company. The results showed that intellectual stimulation has a positive and significant effect on individual creativity of employees, idealization of leadership has a positive and significant effect on individual employee creativity, individual consideration has a positive and significant influence on individual employee creativity, and inspirational motivation has a positive and significant influence on individual creativity. Hence, the future research, could add more manufacturing companies in Batam to serve as research samples.

Keywords—leadership, transformational leader-ship style, employee creativity, intellectual stimulation

I. INTRODUCTION

Manufacturing companies are branches of industry that apply natural resources, human resources, machinery and equipment that manage the process of raw goods to finished goods in the creation of products for customer consumption. Manufacturing companies have large competitors in the market to gain profits and increase customers. Developing product innovation is one way for companies to compete in the market. The more frequent companies make product innovations, the more customers will be loyal to the company. According to Amabile [1], an organization in developing innovation, organizations must pay attention to the creativity of employees and groups. Factors that can develop the level of employee creativity are internal and external factors. Internal factors are derived from one's personal personality while external factors are through the corporate environment [2]. Employee creativity can be seen how the employees completed the work and provide an opinion when the company was in trouble, or when the market is declining, but the creativity of employees can also develop through the company's leadership style. A good leadership style can be considered when leaders provide support and accept employee opinions in improving product innovation, it can also be seen how their performance in solving problems in the company so that leaders can give

pride and can be an example for their subordinates. When their opinions continue to be supported by leaders, employees will always participate to give their best ideas in achieving corporate prosperity. The right leadership style will lead to someone's motivation for achievement.

Leaders are people who are able to invite and encourage others to work on work targets based on the abilities of their subordinates, and have special expertise in certain situations [3]. Leaders have a responsibility to encourage their employees to meet work targets. The leader also has the responsibility to pay attention to the abilities of his employees. Leader behavior can develop the potential of self-creativity of employees and employee performance, so that companies can increase market share through increased product innovation and employee performance. Some of these facts can be concluded that a good leadership style is very influential on employee creativity.

Problem statement based on the introduction described above, the formulation of the problem posed in this study is whether there is an influence of intellectual stimulation of transformational leadership on individual creativity. Is there an effect of idealizing transformational leadership on individual creativity? Is there an influence of individual consideration of transformational leadership on individual creativity? Is there an influence of inspirational motivation on transformational leadership on individual creativity?

II. LITERATURE REVIEW

A. Transformational Leadership

The level of difficulty of the work is high, supportive supervision of the leader, the number of complaints of the leader will be given the employees creative action to solve the problem, a very strict control supervision led to a decrease for employees to think creatively and innovative [4]. Innovative behavior can develop because there is a good relationship between superiors, namely openness from a leader to subordinates and vice versa, employees are given challenges to be involved in solving problems, free to debate with other employees for problem solving, risk taking, and tolerance for diversity existing in the organization can support the development of employee creativity [5]. The explanation above can be concluded that leadership style has a great strength and influence on employee creativity by

providing support to develop a creative mindset, thus it can show that transformational leadership has a significant role in creating and forming conditions that can enhance individual employee creativity.

B. Intellectual Stimulation Transformational Leadership

Intellectual stimulation is the behavior of a leader who is able to increase the intelligence of his employees to increase the creativity and innovation they have, improve rationality, and solve problems carefully. Leaders who apply intellectual stimulation will promote their employees with the aim of questioning assumptions, reframing old problems in new ways [6]. Based on the description above, the hypothesis in this study are as follows:

H1: Intellectual stimulation of transformational leadership positively influences employee creativity.

C. Idealization of Transformational Leadership

The effect of idealization is the condition that a transformational leader has the charisma that is able to change his employees to react to follow the leader. In a concrete form, this charisma is demonstrated through behavioral understanding of the organization's vision and mission, having a firm stance, commitment and consistency in every decision that has been taken, and respecting subordinates. Transformational leaders can be role models that are admired, valued, and followed by their subordinates [7]. Based on the description above, the hypothesis in this study are as follows:

H2: The idealization of transformational leadership positively influences the individual creativity of employees

D. Individual of Transformational Leadership

The third dimension of transformational leadership that can affect individual creativity focuses on how leaders give individual attention to each individual's achievement of the goals and the company's growth by acting as a coach or a mentor. A leader with transformational style is someone who has a high awareness, and also communicates with his subordinates to facilitate new learning opportunities that tend to encourage individuals to get past problems in traditional work and each employee will try to issue new ideas with a mindset different, leaders will show tolerance, empathy and support to their subordinates to activities that might be risky [8]. Creative behaviors that appear tend to be seen as beneficial opportunities for improving subordinate learning [9]. Based on the description above, the hypothesis in this study are as follows:

H3: Individual consideration of transformational leadership has a positive effect on individual creativity.

E. Inspirational Motivation for Transformational Leadership

Inspirational motivation refers to the extent to which leaders are able to motivate their subordinates, provide ambitious inspiration that can foster a level of psychological security of employees, so employees will feel compelled to take interpersonal risks. Leaders can also provide support to followers to solve unexpected problems. Leaders can also

convince employees of their abilities, they help employees to face challenges and see them as opportunities by trying new approaches that can produce creative solutions to problems that arise in their assignments [10]. Based on the description above, the hypothesis in this study are as follows:

H4: Inspirational motivation of transformational leadership influences positively on individual creativity of employees.

Thus the hypothesis proposed in this study are based on the explanation described earlier.

III. RESEARCH METHOD

The research method in this study is a quantitative approach. The independent variables included in this study were intellectual stimulation (X1), the idealization of leadership (X2), consideration of the individual (X3), inspirational motivation (X4) and dependent variable is the creativity of an individual employee manufacturing firm in Kota Batam. This study uses a type of primary data that is giving questionnaires directly to respondents. Quantitative research method is one type of research whose specifications are systematic, planned, and clearly structured from the beginning to the design of the research. This study uses primary data types and uses a Likert scale. The location of this research was conducted at a manufacturing company, PT. Schneider Electric Manufacturing Batam, PT. Infineon Technologies Batam, PT. Shimano Batam. The object of this research is all employees in the HRD, supervisors, and administration who work in the manufacturing company. The number of population samples in this study used the Robbins[11]. That is a sample of more than 30 and less than 500 respondents, provided that researchers use a sample of 150 samples. The distribution of this sample is based on the average comparison with the following formula total employees of each company division by total number of employees and cross by 150.

The sampling technique in this research is by using purposive sampling technique Kriteria employees working in the human resources department, supervisor, and administration in a manufacturing company in Batam city in 2018, the employee required to have at least 1 working experience in manufacturing companies [12]. Data collection techniques in this study are opinions that use the type of data collection techniques in the form of surveys. The survey technique is carried out by distributing questionnaires to collect respondent's perceptions of the problem under study. Data processing techniques in this study using a computerized calculation program SPSS 17. K Questionnaire is tested for validity and reliability before the study is done.

TABLE I. RELIABILITY RESULT

Variable	Reliability			
	N of Item	Cronbach's Alpha	Cut Off Cronbach's Alpha	Result
(X ₁)	5	0.696	0.60	Reliable
(X ₂)	5	0.720	0.60	Reliable
(X ₃)	5	0.748	0.60	Reliable
(X ₄)	5	0.745	0.60	Reliable
(Y)	13	0.811	0.60	Reliable

Source: Data processed using SPSS 17.

The data analysis technique used is statistical analysis, and using multiple regressions with SPSS 17 program, because this multiple regression analysis is used to determine the direction of the relationship between the independent variable and the dependent variable. In this study the data analysis will be tested for validity and reliability. The hypothesis testing of the study was conducted using multiple regression analysis. Before the regression analysis is carried out, data analysis must be done, namely testing descriptive statistics and classic assumption tests.

TABLE II. VALIDITY RESULTS

Variable	Validity			
	Item	Coefficient of r _{hit}	Coefficient of r _{table}	Description
(X ₁)	Item 1	0.652	0.1348	Valid
	Item 2	0.650		Valid
	Item 3	0.745		Valid
	Item 4	0.708		Valid
	Item 5	0.610		Valid
(X ₂)	Item 1	0.786	0.1348	Valid
	Item 2	0.707		Valid
	Item 3	0.649		Valid
	Item 4	0.690		Valid
	Item 5	0.608		Valid
(X ₃)	Item 1	0.630	0.1348	Valid
	Item 2	0.811		Valid
	Item 3	0.742		Valid
	Item 4	0.648		Valid
	Item 5	0.703		Valid
(X ₄)	Item 1	0.640	0.1348	Valid
	Item 2	0.796		Valid
	Item 3	0.729		Valid
	Item 4	0.648		Valid
	Item 5	0.698		Valid
(Y)	Item 1	0.396	0.1348	Valid
	Item 2	0.436		Valid
	Item 3	0.559		Valid
	Item 4	0.559		Valid
	Item 5	0.540		Valid
	Item 6	0.549		Valid
	Item 7	0.711		Valid
	Item 8	0.629		Valid
	Item 9	0.585		Valid
	Item 10	0.594		Valid
	Item 11	0.591		Valid
	Item 12	0.517		Valid
	Item 13	0.533		Valid

Source: Data processed using SPSS 17.0

TABLE III. NORMALITY TEST

Normality Test	Unstandardized Residual
Kolmogorov-Smirnov Z	1.161
Asymp. Sig. (2-tailed)	0.135

Source: Data processed using SPSS 17.0

Based on Kolmogorov-Smirnov test in Table. III the value 1.161 is greater than 0.05, the data is normal.

TABLE IV. REGRESSION RESULT

Variable	N	Min	Max	Mean	St. Deviation
(X ₁)	150	12	25	22.00	2.72
(X ₂)	150	9	25	21.99	2.96
(X ₃)	150	11	25	21.82	3.00
(X ₄)	150	13	25	21.57	2.84
(Y)	150	36	65	57.06	5.85

Source: Data processed using SPSS 17.0

Based on table IV above, it is known that intellectual stimulation variable (X1) with the number of employee data (samples) of 150 has an average value of 22.00, this shows that leaders have good intellectual stimulation to improve employee knowledge in the company.

The minimum number of leaders who have intellectual stimulation value of 12% and a maximum amount of 25%. The standard deviation is known as 2.724, when it shows that the level intellectual stimulation leaders tend to be homogeneous / similar. The idealization of leadership variable (X2) with the number of employee data (sample) of 150 has an average value of 21.99, which shows that corporate leaders have good leadership ideals to become charismatic leaders, and can be an example for employees in the company, so employees easily develop creativity to improve product innovation. The minimum number of leaders who have a leadership idealization value of 9% and a maximum amount of 25%. The standard deviation is known as 2,961, which indicates that the level idealization of leadership leaders tend to be homogeneous/similar. Individual consideration variable (X3) with the number of employee data (sample) as many as 150 has an average value of 21.82, which shows that company leaders have good individual consideration of the employees of the company. The minimum number of leaders who have individual consideration values is 11% and the maximum number is 25% while the standard deviation is 3.00, which indicates that the level of consideration of individual leaders tends to be homogeneous/similar. Inspirational motivation variable (X4) with 150 employee data (sample) has an average value of 21.57, which shows that company leaders have good inspirational motivation for the employees of the company, thus improving employee performance and employee creativity. The minimum number of leaders who have inspirational motivation values is 13% and the maximum number is 25% while the standard deviation is 2,841, which indicates that the level of inspirational motivation leaders tend to be homogeneous/similar. Employee creativity variable (Y) with 150 employee data (sample) has an average value of 57.06, which shows that employees have good

individual creativity by providing ideas for the development of new innovations, solving problems with new ways to achieve corporate welfare. The minimum number of employees who have the value of individual creativity is 36% and the maximum number is 65% while the standard deviation is 5,855, which indicates that the level of inspirational motivation leaders tend to be homogeneous/similar. The first hypothesis proposed in this study is that there is an influence of intellectual stimulation towards individual employee creativity.

TABLE V. RESULTS OF FIRST HYPOTHESIS (H1)

Variable	Coefficient	T	Sig.
Constant	22.091	8.382	0.000
Intellectual Stimulation	1.590	13.368	0.000
R Square	0.547		
Adjusted R Square	0.544		

Source: Data processed using SPSS 17.0

Based on Table. V above, it can be seen that the results obtained are intellectual stimulation experience a significance of 0,000 smaller than 0.05 (0,000 <0.05) and the value of t count is 13,368 (positive) because it is greater than t table which is 1.97646. From the results of the significance it can be concluded that intellectual stimulation influences the individual creativity of employees. This states that the first hypothesis (H1) is supported. The equation of a simple linear regression formula can be written as follows: $KT = 22,091 + 1,590 SI$. This regression equation shows that there is an influence between the independent variables on the dependent variable. The second hypothesis proposed in this study is that there is an influence of idealization of leadership towards individual employee creativity.

TABLE VI. THE RESULTS OF THE SECOND HYPOTHESIS TEST (H2)

Variable	Coefficient	T	Sig.
Constant	19.483	10.738	0.000
Leadership idealization	1.709	20.896	0.000
R Square	0.747		
Adjusted R Square	0.745		

Source: Data processed using SPSS 17.0

Based on Table. VI above, it can be seen that the results obtained are the idealization of leadership experience a significance of 0,000 smaller than 0.05 (0,000 <0.05) and the value of t count is 20,896 (positive) because it is greater than t table which is 1.97646. From the results of the significance it can be concluded that the idealization of leadership affect the individual creativity of employees. This states that the second hypothesis (H2) is supported. The equation of a simple linear regression formula can be written as follows: $KT = 19,483 + 1,709 IK$. The third hypothesis proposed in this study is that there are individual considerations of individual employee creativity.

TABLE VII. TEST RESULTS THIRD HYPOTHESIS (H3)

Variable	Coefficient	T	Sig.
Constant	20.174	11.554	0.000
Individual Consideration	1.690	21.324	0.000
R Square	0.754		
Adjusted R Square	0.753		

Source: Data processed using SPSS 17.0

Based Table VII, it can be seen that the results obtained are individual consideration experience a significance of 0,000 smaller than 0.05 (0,000 <0.05) and the value of t count is 21,324 (positive) because it is greater than t table that is 1, 97646. From the results of the significance it can be concluded that individual considerations affect the individual creativity of employees. This states that the third hypothesis (H3) is supported. The equation of a simple linear regression formula can be written as follows: $KT = 20,174 + 1,690 PI$. The fourth hypothesis proposed in this study is that there is an influence of inspirational motivation on individual employee creativity.

TABLE VIII. TEST RESULTS OF THE FOURTH HYPOTHESIS (H4)

Variable	Coefficient	T	Sig.
Constant	42.049	12.119	0.000
Inspirational Motivation	0.696	4.363	0.006
R Square	0.114		
Adjusted R Square	0.108		

Source: Data processed using SPSS 17.0

Based on table VIII, it can be seen that the results obtained are inspirational motivation having a significance of 0.006 smaller than 0.05 (0.000 > 0.05) and t count value of 4.363 (positive) because it is greater than t table which is 1.97646. From the results of the significance it can be concluded that inspirational motivation influences the creativity of individual employees. This states that the fourth hypothesis (H4) is supported. The equation of a simple linear regression formula can be written as follows: $KT = 42,049 + 0.696 MI$.

A. The Effect of Intellectual Stimulation on Transformational Leadership on Employee Individual Creativity

Based on the results of testing the hypothesis H1 shows that intellectual stimulation of transformational leadership has a positive effect on individual employee creativity. The statement supports the first hypothesis which means that the higher the level of intellectual stimulation of transformational leadership possessed by the leader, the higher the creativity employees have. The results of this study are in line with previous research conducted by Hulya & Gonul [13], Jyoti & Dev [14], Hendry [15] which states that intellectual stimulation positively influences the individual creativity of employees.

B. The Effect of Leadership Idealization on Transformational Leadership on Employee Individual on Creativity

Based on the results of the H2 hypothesis testing shows that idealization of transformational leadership has a positive effect on individual employee creativity. The statement supports the second hypothesis which means that the higher the level of idealization of transformational leadership possessed by the leader, the higher the creativity employees have. The results of this study are in line with previous research conducted by Hulya & Gonul [13], Jyoti & Dev [14], Hendry [15] which states that idealization of transformational leadership has a positive effect on employee's individual creativity.

C. The Effect of Individual Considerations on Transformational Leadership on Employee Individual Creativity

Based on the results of testing the H3 hypothesis shows that individual consideration of transformational leadership has a positive effect on individual employee creativity. The statement supports the third hypothesis which means that the higher the level of consideration of individual transformational leadership possessed by the leader, the higher the creativity employees have. The results of this study are in line with previous research conducted by Hulya & Gonul [13], Jyoti & Dev [14], Hendry [15] which states that individual considerations of transformational leadership positively influence individual employee creativity.

D. The Effect of Inspirational Motivation on Transformational Leadership Employee Individual Creativity

Based on the results of testing the H4 hypothesis shows that inspirational motivation of transformational leadership has a positive effect on employee individual creativity. The statement supports the fourth hypothesis which means that the higher the inspirational level of transformational leadership possessed by the leader, the higher the creativity of the employee. The results of this study are in line with previous research conducted by Hulya & Gonul [13], Jyoti & Dev [14], Hendry [15] which states that individual considerations of transformational leadership positively influence individual employee creativity.

IV. CONCLUSION

Based on the results of the analysis and discussion above, it can be concluded that the intellectual stimulation of transformational leadership has a positive and significant effect on individual creativity of employees. The idealization of transformational leadership has a positive and significant effect on individual employee creativity. Individual consideration of transformational leadership has a positive and significant effect on individual employee creativity. Inspirational motivation of transformational leadership has a positive and significant effect on individual employee creativity. According to Bass & Avolio [6] said that transformational leadership has an influence to develop employee creativity well, this can be concluded that Transformational leadership has an influence to develop employee creativity. The research conducted by Hulya & Gonul, [13], and Jyoti & Dev [14] also has the same results as this study, that is, transformational leadership style has a positive and significant influence on individual employee creativity. The results of this study are consistent with research conducted by Bass & Avolio [6], Hulya & Gonul, [13], and Jyoti & Dev [14] which also state that transformational leadership styles has a positive and significant influence on employee's individual creativity.

REFERENCES

- [1] Amabile, *Motivating Creativity In Organization: On Doing What You Love And Loving What You Do*. 2000.
- [2] Shalley, and Zhou, "The effect of personal and contextual characteristic on creativity: Where should we go from here?," *Journal of Management*, vol. 30, pp. 933-958, 2004.

- [3] K. Kartono, *Pemimpin dan Kepemimpinan*, vol. 4, p. 283, Jakarta: PT. Penerbit Erlangga, 2005.
- [4] M. Cha, and J. G. Park, "Effects of team member psychological proximity on teamwork performance," *Team Performance Management*, vol. 20, issue 1-2, pp. 81-96, 2017.
- [5] M. Mumford and G. B. Scott, "Expertise and relationship", *The Leadership Quarterly*, vol. 13, no. 6, pp. 500-528, 2002.
- [6] Bass, and Avolio, *Increasing Organizational Effectiveness Through Transformational Leadership*. 2000.
- [7] G. A. Stone, R. F. Russel, and K. Patterson, *Transformational Versus Servant Leadership: A Difference in Leader Focus*, 2004.
- [8] R. L. Miller, J. Butler, and C. J. Cosentino, "The Leadership & Organization Development Journal", vol. 25, no. 4, 2004.
- [9] S. J. Shin and J. Zhou, "Transformational leadership conservation and creativity: evidence from Korea", *Academy of Management Journal*, vol. 46, pp. 703-714, 2003.
- [10] T. A. Norton, H. Zacher, and N. M. Ashkanasy, "Organisational sustainability policies and employee green behaviour: The mediating role of work climate perceptions," *Journal of Environmental Psychology*, vol. 38, pp. 49-54, 2014.
- [11] R. Kark, B. Shamir, and G. Chen, "The two faces of transformational leadership: Empowerment and dependency", *Journal of Applied Psychology*, vol. 88, no. 2, 246-255, 2003.
- [12] S. P. Robbins and T. A. Judge, *Organizational Behaviour*. United States, America: Pearson, 2011.
- [13] I. Ghozali, *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: UNDIP, 2012.
- [14] Hulya and Gonul, *Leadership and Creativity: The Impact of Transformational Leadership on Individual Creativity*. *Social and Behavioral Sciences*, pp. 1-7, 2016.
- [15] M. D. J. Jyoti, "The impact of transformational leadership on employee creativity: the role of learning orientation," *Journal of Asia Business Studies*, vol. 9, no. 1, 78 - 98, 2015.
- [16] S. Hendry, "Dampak kepemimpinan transformasional pada kreativitas karyawan: Peran orientasi pembelajaran," *Jurnal Manajemen Bisnis*, vol. 1, no. 130, 2017.