

The Effect Work Autonomy, Feedback, Responsibility, and Work Knowledge on the Work Motivation of Employees at Batam University with Partial Least Square (PLS)

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Abstract

In this study, researchers used respondent data, such as gender, age, and duration of work of respondents to be able to provide information about the characteristics of respondents. The population of this study is the employees at the University of Batam, which consists of lecturers and educational staff, such as staff/employees. The sample is determined by the number of sample members (sample size) of 50 people with a proportional random sampling technique. Thirty lecturers and 20 employees. The calculation of the path coefficient in this study was assisted by Smart PLS Ver 3.0. To find out direct and indirect interactions between variables, it can be seen from the calculation of the path coefficients and to determine significance.

Keywords: Autonomy, Feedback, Responsibility, Work Knowledge on the Work, Motivation

I INTRODUCTION

Batam University (Uniba) located on Jl. Abulyatama Batam Center Campus, Batam, as a private tertiary institution is developing itself by developing new faculties such as the Faculty of Health, and previously faculties have been opened such as Law, Economics, Engineering, and Postgraduate (master's degree programs) with the following titles: Management, Law and Accounting. As a private university located in a strategic area, North Side of the Singapore Strait, South Side of Senayang District, East Side of North Bintan District, West Side of Karimun Regency and Moro Karimun Regency this institution faces the need always to improve quality, in the provision of human resources academic level (D3, S1, and S2). Another challenge is that there are many other private universities such as Batam International University (UIB), STIE Ibnu Sina, STT Bentara Persada, Riau Islands University (Unrika).

The need for these institutions is also in improving the quality of human resources in Batam City residents in terms of education. The population of Batam City as of August 2007 amounted to 727,878 people consisting of 354,609 men and 373,269 women. Of the total population spread across twelve districts and 64 villages. Only the distribution is uneven, resulting in population density per Km² in this area varies.

Another challenge is the need to support the Batam City government policy in the future. General procedures for the development of Batam City in the future include: 1) Improving the quality of regional human resources, especially to fill existing business opportunities, through Improving and developing the quality of school education in line with the growth and progress of science and technology to increase resources human resources who are knowledgeable in science and technology and meet the needs of the workforce, and 2) Develop social and cultural aspects of society to build and develop new social values relating to improving the quality of human resources, such as developing insight, work ethics and enthusiasm for work.

Regional environmental challenges in the location of a tertiary institution in this era of local autonomy, such as regional needs to improve the quality of human resources. Regional needs to build their communities to be able to live more prosperously by utilizing available resources, require an

increase in the variety of human resources. This need is a real challenge for universities, especially at Batam University. The problem of improving the quality of higher education is a necessity that becomes the top priority.

Based on this fact, the institution needs the support of all parties, including employees at the study program level. The employees are expected to be more enthusiastic and work optimally. However, there is a tendency for temporary reports from program leaders at the study program level employees (there are 18 study programs) that their enthusiasm for work has declined but is still at a low level. To prevent and anticipate higher tendencies, the researcher draws on this condition to conduct an empirical study.

Employee work motivation is an aspect related to the quality of higher education services. The quality of more top education services one indicator is the satisfaction of the service needs of college students. Employees are one of the essential aspects of supporting the improvement of the quality of higher education. The provision of student administration services, library services, academic information services, room facilities services, learning media, allocation and arrangement of lecture rooms, and class schedules are the main tasks and functions of employees in tertiary institutions.

Employee work motivation is a prerequisite needed to be known early in supporting efforts to improve the quality of higher education. The aspects of the causes that affect employee work motivation can vary, such as the ability and work skills, the level of difficulty of the task, the level of meaningfulness of the job, work experience, autonomy or independence in carrying out the task, feedback, Responsibility on duty, work knowledge. These aspects need to be known empirically related to its influence as an effort to obtain practical information, especially in the scope of employees at the University of Batam. The problem to be examined in this study can be formulated as follows.

1. Is there a direct influence between work autonomy on employee responsibility?
2. Is there a direct influence between feedback on employee work knowledge?
3. Is there an immediate effect between Responsibility on employee work motivation?
4. Is there a direct influence between work knowledge on employee work motivation?
5. Is there an indirect effect between work autonomy on work motivation through employee responsibility?
6. Is there an indirect effect between feedback on work motivation through employee work knowledge?

This research is based on theoretical confirmation related to work motivation. The full theoretical basis that explains the relationship between job characteristics and worker motivation is the model developed by Hackman and Oldham, cited by Fred Luthans, as follows.

This

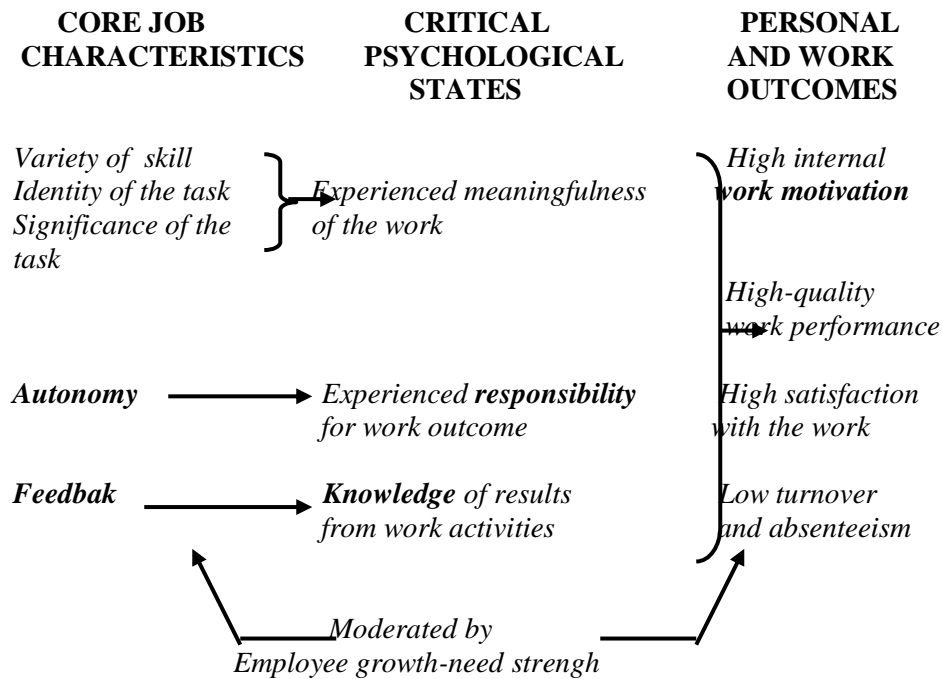


Figure 1: The Hackman-Oldham job Characteristics Model of Work Motivation. Source Fred Luthans. Organizational Behavior. Singapore: Mc Graw Hill, 2008. p. 349

The model describes the characteristics of work as having an effect on the psychological condition of individual workers and which increases the strength of the growing needs of employees, which has consequences for work improvement and results that include work motivation, performance, job satisfaction, and reducing absenteeism at work. This explanation theoretically confirms that the four variables, namely: autonomy, feedback, Responsibility, knowledge, affect employee work motivation. Based on this theory also explained how this motivation was measured, by using MPS (evening motivating potential), namely:

$$MPS = (\text{Skill variety} + \text{Task identity} + \text{Task significance}) / 3 \times \text{Autonomy} \times \text{Feedback}$$

II. RESEARCH METHOD

In this study, researchers used respondent data, such as gender, age, and length of work of respondents, to provide information about the characteristics of respondents. Wherefrom the questionnaire distributed as many as 50. The discussion in this chapter is the result of field studies to obtain questionnaire answer data that measures the five main variables in this study, namely morale, work responsibilities, work facilities, work motivation, and employee performance. Data analysis using parametric and non-parametric statistics using SEM-PLS (Structural Equation Modeling-Partial Least Square) regarding research variables, instrument testing, normality testing, hypothesis testing, and discussion of the results of hypothesis testing and Path Analysis Path. This study uses path analysis to examine the pattern of relationships that reveal the effect of a variable or set of variables on other variables, both direct and indirect. The calculation of the path coefficient in this study is assisted by Smart PLS Ver 3.0. To find out the direct and indirect effects between variables, it is seen from the calculation of the path coefficient, while to know the significance. The population of this study is the employees at the University of Batam, which consists of lecturers and educational staff, such as staff/employees. The sample is determined by the number of sample members (sample size) of 50 people with a proportional random sampling technique. Thirty lecturers and 20 employees.

III. RESULT AND DISCUSSION

1. Internal Consistency Analysis

Internal consistency analysis is a form of reliability used to assess the consistency of results across items on the same test. Internal consistency testing uses composite reliability values with the criteria

of a variable said to be reliable if the composite reliability value > 0.600 (Hair, Hult, Ringle, & Sarstedt, 2014).

Table 1: Internal Consistency Analysis. Source Data Processing (2020)

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Work Motivation (Y)	0.912	0.924	0.932	0.640
Work Autonomy (X1)	0.873	0.889	0.900	0.532
Word Knowledge (X4)	0.913	0.917	0.930	0.628
Responsibility (X3)	0.917	0.921	0.932	0.633
Feedback (X2)	0.882	0.887	0.907	0.549

Based on internal consistency analysis data in the above table, the results show that the variables X1, X2, X3, X4, Y have composite reliability > 0.600, so all questions developed on the five variables are reliable meaning cross-item questions designed on the questionnaire of all variables in the test the same has consistency.

2. Convergent Validity

Convergent validity is used to see the extent to which a measurement is positively correlated with alternative measures of the same construct. To see an indicator of a constructed variable is valid or not, it is seen from the outer loading value. If the external loading value is more significant than (0.4), then an indicator is valid. (Hair, Hult, Ringle, & Sarstedt, 2014).

Table 2: Convergent Validity. Source Data Processing (2020)

	Work Motivation (Y)	Work Autonomy (X1)	Word Knowledge (X4)	Responsibility (X3)	Feedback (X2)
X1.1		0.628			
X1.2		0.653			
X1.3		0.723			
X1.4		0.823			
X1.5		0.685			
X1.6		0.784			
X1.7		0.652			
X1.8		0.853			
X2.1					0.766
X2.2					0.831
X2.3					0.808
X2.4					0.685
X2.5					0.686
X2.6					0.728
X2.7					0.711
X2.8					0.699
X3.1				0.819	
X3.2				0.788	
X3.3				0.803	
X3.4				0.793	
X3.5				0.744	
X3.6				0.745	
X3.7				0.888	
X3.8				0.776	
X4.1			0.833		

X4.2			0.584		
X4.3			0.776		
X4.4			0.823		
X4.5			0.776		
X4.6			0.793		
X4.7			0.882		
X4.8			0.837		
Y1	0.403				
Y2	0.892				
Y3	0.792				
Y4	0.841				
Y5	0.870				
Y6	0.736				
Y7	0.877				
Y8	0.874				

Based on the above table, it can be seen that the outer loading value for variables X1, X2, X3, X4, Y, where the amount of all item items in the five variables tested is more significant than 0.4. All subjects developed for all variables are declared valid, meaning that the measurement is positively correlated with alternative measures of the same construct; thus, the indicators of all construct variables are correct.

3. Validity of Diskriminan

Discriminant validity aims to assess an indicator of a constructed variable is valid or not, namely by looking at the Heterotrait - Monotrait Ratio Of Correlation (HTMT) <0.90, then the variable has a good discriminant validity (valid) (Hair, Hult, Ringle, & Sarstedt, 2014).

Table 3: Validity of Diskriminan. Source Data Processing (2020)

	Work Motivation (Y)	Work Autonomy (X1)	Word Knowledge (X4)	Responsibility (X3)	Feedback (X2)
Work Motivation (Y)					
Work Autonomy (X1)	0.751				
Word Knowledge (X4)	0.566	0.821			
Responsibility (X3)	0.821	0.788	0.747		
Feedback (X2)	0.689	0.798	0.892	0.842	

Based on the above table, the correlation results obtained variables X1 with X2, X3, X4, Y and X3 with X2, X4 with X2, Y with X2 and X4 with X3, Y with X3 and Y with X4 have a correlation value <0.900, thus the value the correlation of all variables is declared valid.

4. Structural Model Analysis (Inner Model)

Analysis of structural models or (inner models) aims to test the research hypothesis. The part that needs to be analyzed in the structural model is the coefficient of determination (R Square) by checking the hypothesis.

Collinearity testing is to prove the correlation between latent / construct variables is reliable or not. If there is a strong correlation, it means that the model contains problems if viewed from a methodological point of view, because it has an impact on the estimation of statistical significance. This problem is called colinearity. The value used to analyze it is by looking at the value of the Variance Inflation Factor (VIF). (Hair, Hult, Ringle, & Sarstedt, 2014; Garson, 2016). If the VIF value is more significant than 5.00, then it means there is a colinearity problem, and in contrast, there is no colinearity problem if the VIF value <5.00 (Hair, Hult, Ringle, & Sarstedt, 2014)

Table 4: Collinearity. Source Data Processing (2020)

	Work	Work	Word	Responsibility	Feedback
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	Motivation (Y)	Autonomy (X1)	Knowledge (X4)	(X3)	(X2)
Work Motivation (Y)					
Work Autonomy (X1)	4.267			1.000	
Word Knowledge (X4)	3.007				
Responsibility (X3)	2.606				
Feedback (X2)	4.802		1.000		

From the above data, it can be described as follows: The VIF value for the correlation of X1 with Y, X2 with Y, X3 with Y, X4 with Y is <5.00 (there is no colinearity problem). Therefore, from the data above and the development of structural models, in this case, there is no problem. Colinearity.

In this test, there are two stages, namely testing the direct influence hypothesis and testing the indirect effect hypothesis. The coefficients of the hypothesis testing path are in the figure below: Test the significance of the structural coefficient of the path model (Structural Model Path Coefficient). This test is to determine the path coefficient of the structural model. The aim is to test the significance of all relationships or hypothesis testing.

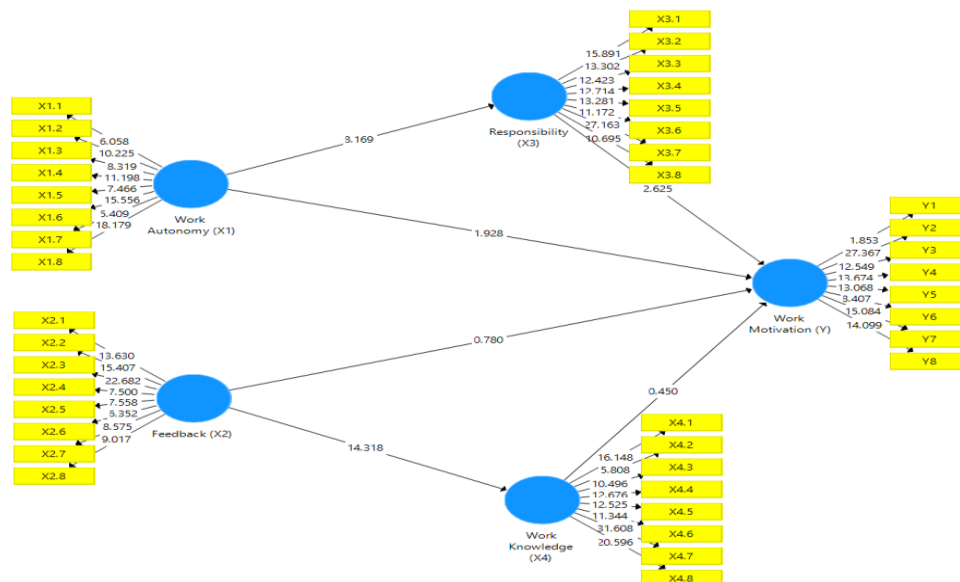


Figure 2: Hypothesis Testing

Direct influence hypothesis testing aims to prove the hypotheses of the influence of a variable on other variables directly (without intermediaries). If the value of the path coefficient is positive indicates that an increase follows an increase in the value of a variable in the value of another variable. If the value of the path coefficient is negative indicates that a decrease follows an increase in a variable in the value of other variables. If the probability value (P-Value) <Alpha (0.05), then Ho is rejected (the effect of a variable with other variables is significant). If the value of probability (P-Value) > Alpha (0.05) then Ho is rejected (the effect of a variable with other variables is not significant)

Table 5: Hypothesis of Direct Effect. Source Data Processing (2020)

Variable	Real Sample	Sample Average	Standard Deviation	t- Statistik	P Values
Feedback (X2) -> Work Knowledge (X4)	0.804	0.805	0.056	14.318	0.000
Feedback (X2) -> Work Motivation (Y)	-0.210	-0.147	0.269	0.780	0.044
Responsibility (X3) -> Work Motivation (Y)	0.652	0.624	0.248	2.625	0.011

Work Autonomy (X1) -> Responsibility (X3)	0.725	0.727	0.089	8.169	0.000
Work Autonomy (X1) -> Work Motivation (Y)	0.501	0.387	0.260	1.928	0.006
Word Knowledge (X4) -> Work Motivation (Y)	-0.151	-0.052	0.335	0.450	0.007

1. The direct effect of variable X1 on variable Y has a path coefficient of 1.928 (positive). An increase will follow an increase in the value of variable X1 in variable Y. The effect of the variable X1 on Y has a P-Values value of 0.006 <0.05, so it can be stated that the influence between X1 on Y is significant.

2. The direct effect of variable X2 on variable Y has a path coefficient of 0.780 (positive). An increase will follow an increase in the value of variable X2 in variable Y. The effect of variable X2 on Y has a P-Values value of 0.044 <0.05, so it can be stated that the influence between X2 on Y is significant.

3. The direct effect of variable X3 on variable Y has a path coefficient of 2.625 (positive). An increase will follow an increase in the value of variable X3 in variable Y. The effect of variable X3 on Y has a P-Values value of 0.011 <0.05, so it can be stated that the influence between X3 on Y is significant.

4. The direct effect of variable X4 on variable Y has a path coefficient of 0.450 (positive). An increase will follow an increase in the value of variable X4 in variable Y. The influence of variable X4 to Y has a P-Values value of 0.007 <0.05, so it can be stated that the impact between X4 to Y is significant.

5. The direct effect of variable X1 on variable X3 has a path coefficient of 8.169 (positive), then an increase in the value of variable X1 will be followed by the rise in variable X3. The effect of variable X1 on X3 has a P-Values value of 0.000 <0.05, so it can be stated that the influence between X1 to X3 is significant.

6. The direct effect of variable X2 on variable X4 has a path coefficient of 14.318 (positive), then an increase in the value of variable X2 will be followed by the rise in variable X4. The effect of variable X2 on X4 has a P-Values value of 0.000 <0.05, so it can be stated that the influence between X2 on X4 is significant.

Testing the hypothesis of indirect effects aims to prove the hypotheses of the influence of a variable on other variables indirectly (through intermediaries). If the value of the indirect effect coefficient > direct effect coefficient, then the intervening variable is mediating the relationship between one variable with another variable. Conversely, if the value of the indirect effect coefficient < coefficient of direct effect, then the intervening variable does not mediate the relationship between one variable with another variable.

Table 6: Hypothesis of Indirect Effect. Source Data Processing (2020)

Variable	Real Sample	Sample Average	Standard Deviation	t- Statistik	P Values
Work Autonomy (X1) -> Work Motivation (Y)	0.472	0.437	0.191	2.469	0.017
Work Autonomy (X1) -> Responsibilitas (X3)					
Word Knowledge (X4) -> Work Motivation (Y)					
Responsibility (X3) -> Work Motivation (Y)					
Feedback (X2) -> Work Motivation (Y)	-0.121	-0.085	0.229	0.828	0.006
Feedback (X2) -> Work Knowledge (X4)					

1. Based on the above table, the indirect effect coefficient value X1 to Y is 2.469 > 1.928 (X1's direct effect on Y); thus, it can be stated that X4 mediates the impact of X1 to Y.

2. Furthermore, the value of the indirect effect coefficient X2 on Y equal to 0.828 <0.780 (direct effect X2 on Y); thus, it can be stated that X4 mediates the impact of X2 on Y.

The coefficient of determination (R Square) aims to evaluate the accuracy of the predictions of a variable. In other words, to determine how the variation of the value of the dependent variable is influenced by the variety of the value of the independent variable in a path model.

Table 7: Coefficient of Determination. Source Data Processing (2020)

	R Square	Adjusted R Square
e3	0.627	0.593
e2	0.646	0.639
e1	0.525	0.515

In the table above the results obtained (e1) amounted to 0.525 or 52.5% , e2 is 0.646 or 64.6 % then e3 is 0.627 or 62.7 %

A description of the findings of the data analysis and hypothesis testing has been stated. Based on the results of this data analysis, the following discussion can be carried out. In the context of explaining the confirmation of the Hypothetic model of work motivation, the data support the model, and the results of the hypothesis test of each path coefficient are significant.

The coefficient of the first path between Work Autonomy has a direct effect on Responsibility is significant. It appears that independence for work has an impact on the Responsibility of employees at work. The responsibility then directly influences work motivation significantly. The indirect effect of work autonomy on work motivation is significant. Thus the theory is supported by data that Responsibility as an aspect that influences Work Motivation but should begin with providing positive support to the element of giving Autonomy in Work to employees.

Explanation of the hypothetical model turned out to be able to explain empirical symptoms, the influence of feedback on work motivation. Feedback directly influences Work Knowledge. The indirect effect of the feedback variable on work motivation through work knowledge is also significant. Likewise, the direct influence of Work Knowledge on Work motivation is significant. Thus the theory is supported by data that Work Knowledge as an aspect that has an impact on Work Motivation but should begin with providing positive support to the element of giving opportunities and a conducive work climate for employees in carrying out their duties and work.

The findings of this study indicate that the factors of Work Autonomy, Responsibility, Feedback, Work Knowledge have a significant influence on employee motivation. Thus if the employee's work motivation due to the possibility of the cause decreases and then there are efforts to increase it,

then aspects: Job Autonomy, Responsibility, Feedback, and Work Knowledge need to be considered as factors that can be chosen to improve employee motivation.

IV. CONCLUSION

Based on the results of the research hypothesis test, the following research findings are obtained: The conclusions that can be drawn from the description of the explanation previously stated are as follows. Based on the results of this study, it can be concluded that changes or variations occur in employee work motivation influenced by Responsibility, work knowledge, and indirectly by work autonomy, and feedback in work. Furthermore, if you want to minimize the variations that occur in work motivation, factors such as work autonomy, Responsibility, feedback, and work knowledge must be considered. Based on the research findings and conclusions stated above, then in an effort to increase employee motivation, especially employees in the scope of study programs at Batam University, researchers provide the following suggestions. It is expected that the leadership of the University of Batam can make efforts that encourage increased power of work autonomy, increase Responsibility, and improved feedback, and work knowledge. This is important because the impact will be able to increase work motivation. It is expected that employees within the faculty of Batam University will always make efforts that can improve their motivation to work because employees are

required to remain resilient in the face of the growing demands of study program needs in facing external challenges and the internal needs of Batam University.

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