The Model of Job Satisfaction and Performance of University Lecturers in Batam City with Sem Smart PLS

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Abstract: ***Most common issues are encountered during introduction of human resources work achievement or peak performance for the purpose of the University to be achieved. Many aspects are affected by lecturer's achievement/performance who ultimately embody the achievement/performance of universities. Problems of work stress, job satisfaction with performance are important to be mentioned. In this research, job satisfaction with work performance of lecturers in Batam city are examined. Questionnaires are used for the data collection and analyzed by the statistical tool of SEM SmartPLS. This assessment tool involved comprosed of 11 items for work satisfaction and 12 items for work achievement/performance. Population sample was 179 lecturers as respondents. From the results obtained it was determined that satisfaction and performance had a clear and significant relationship. Researchers suggest further study to examine the demographic with new variables that are not studied in this research such as commitment and motivation.***

Index Terms**: *Satisfaction, Performance, Lecturer, University of a Bath, SmartPLS*.**

I. INTRODUCTION

The current human resources should be seen as element of fulfillment of the objectives of the organization, community, and not exclusively the interests of the country. Professors are already able to enhance quality in giving services in resolving problems, both individually and as a member of a group. The involvement of lecturers at colleges in giving service needs to be realized. Services must be made part of the process starting from planning, implementation, results, and utilization. Professors are required to achieve a level of performance which is a main components in a educational system.

The study of related exercises and impression of construction worker's achievements through accomplishing job satisfaction is being undertaken in Pakistan. The studies showed a positive impression on the development, training and job satisfaction within the achievements of workers. Training and development will bring to the stage a higher job satisfaction in the workforce and they will accomplish their tasks with a lot of accountability with the best results (Osama, Haseeb, Waseem, Ayaz, & Ijaz, 2016).

Another study with associated model structure tested the association between the aspects of emotional intelligence, conflict management, and work achievement. The discovery of the stem rather than the model structure indicates that it is a positive impression and no significant among variables in the investigation. In addition, the role of the mediator in conflict management in this study using the SERVQUAL model in the relationship amid emotional intelligence and achievements of the work has been authenticated (Heidari & Heidari, 2016).

Many factors can lead to the achievement of the staff performance associated with emotional intelligence, conflict management, commitment, job satisfaction and more. Job satisfaction among the lecturers is the driving influence of success of an educational organization. Based on these explanation, the authors are interested in conducting an investigation on "job satisfaction and Job Performance of University's environmental faculty at Batam city". Problem statement in this study is limited to the variable job satisfaction and performance of staff members.

Formulation of the problem statement in this study are;

1. What is job satisfaction influence on performance in lecturers of Batam City University?

The purpose of this study is;

1. To understand the influence of job satisfaction toward the performance of university lecturers in Batam city.

Robbins & Judge, (2008) stated that performance is the outcome or the person's overall success rate through a certain time period in relation to the execution of tasks with a variety of probabilities, such as the specification of work, target or criterion. The performance was the result of the work of the process of how the job is done (Wibowo, 2011). Job satisfaction is feeling positive about the work of someone which is the result of an assessment of their characteristics (Robbins & Judge 2012). While according to Siagian (2013) job satisfaction is a negative and positive perspective of someone associated with the job.

The measurement of job satisfaction and work achievement in this case points to a lecturer in the University's environmental faculty and grounded on the perception of lecturers by evaluating items of performance and job satisfaction in accordance with literature references and relevant adaptations of (Mellor *et al.*, 2003; Robbins, 2001; George & Jones, 2002;

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Locke, 1976; Robbins & Judge, 2008; Rivai, 2011).

Research conducted by the Shin, Hur, & Oh, (2015) shows the relationship amongst emotional labor and employment-related issues. The results showed that the relationship between emotional labor strategy and work achievement is marked with job satisfaction.

II. RESEARCH METHODS

Design of research is essential in doing research. This research is descriptive quantitative research in nature. This research is carried out in universities in the city of Batam, Batam University, University of Prince of Batam and the University of Riau Islands. The sample in this study is 179 respondents who are lecturers at the University City of Batam.

The questionnaire is provided to the penal in this study on the basis of voluntary involvement by lecturers who have been told by researchers about the purpose of the study.

The variables used in this study are job satisfaction along with performance. Job satisfaction instrument consists of 11 items and performance instrument consists of 12 items in this study which are adapted from (Mellor *et al.*, 2003; Robbins, 2001; George & Jones, 2002; Locke, 1976; Robbins & Judge, 2008; Rivai, 2011).

As the quantitative approach is used in this study, the data acquired using the questionnaire developed by scholars with the respondent as University lecturer in Batam city. Instruments item of satisfaction with performance in this study total to 23 items.

Primary data is the source of the data used in this study. Data collection is completed by the method of survey questionnaires distributed to respondents. Respondents gave answers for each item with the option of a scale of one to five. Here is a graphical representation of the model of research;

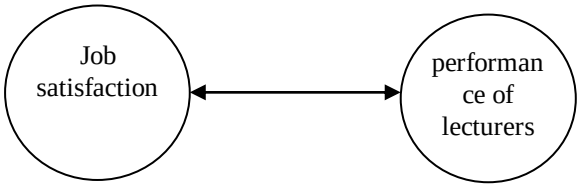

Fig 1. Job Satisfaction and Performance

Data analysis uses descriptive analysis of correlation with factors of job satisfaction with performance. This measurement method was chosen because of the understanding of researchers and the nature of the appraiser have a difference when performing the evaluation. In this study, analysis is conducted to find out the number and percentage of the demographic attributes of respondents.

The analysis of data with descriptive statistics using statistical tools namely SEM SmartPLS.

Analysis of the variable job satisfaction toward performance of lecturer in Batam City University by using SEM analysis with Smart 2.0 PLS Partial Least Square. PLS is a method of Structural Equation Modelling (SEM) that is capable of analyzing variable, indicators and measurement errors directly.

Partial Least Square (PLS) is a method of Structural Equation Modelling (SEM) which is capable of analyzing latent variables, variable indicators, and measurement errors directly. PLS is a potential method of analysis because it can be utilized on all scales of data and does not need a lot of assumption when the sample size is not large. In addition, it can be used to substantiate the theory, PLS can also be utilized to build a relationship when there has not been a cornerstone of his theory nor testing proposition (Wiyono 2011).

Analysis of the relationship between variables with the indicator consisted of Outer and Inner Model. The test Model was done through the outer and inner model. For the outer measurement model or models, in theory the test indicator against the latent variable indicates how far it can account for the variable latency. Reflective indicators are tested with convergent validity, discriminant validity or with an average variance extracted (AVE) and the composite reliability. Inner structural model or models in principle is to test the influence of latent variables between one with latent variables are exogenous or endogenous. It can also be used to test the hypothesis of latent variables with the other variables. Testing is done by studying the percentage of the variant described i.e. R^2 for latent variable bound to the modeled impact of the latent variable as it gets free by using the size of the stone-geyser Q square test, as well as observing the magnitude of the coefficients within their structural lines. The stability of this estimation was tested with the t-test statistics used and is obtained through the bootstrapping procedure. More detailed assessment criteria is shown in the following table:

Table 1. Test Model(Wiyono, 2011)

Test Model	Output	Criteria
Outer Model (Test Indicators)	a. *Convergent Validity*	a. Loading factor value of 0.50 to 0.60 been deemed sufficient
	b. *Discriminant Validity*	b. The value of Cross-correlation latent variable Loading must be greater than the correlation against another latent variable
	c. *Average Variance Extracted (AVE)*	c. The value must be above 0.50 AVE
	d. *Composite Reliability*	d. The value of the composite reliability is good when having ≥ 0.70
Inner Model (The Test Of	a. R^2 for endogenous latent variables	a. The result R^2 of 0.67; 0.30; 0.19 indicating that the model was "good", " Moderate", "weak".

Hypothesis)	b. Parameters and Coefficients T-Statistics	b. Value estimation for the relationship line in the structural model, which may have to be obtained by the procedure bootstrapping

If an item is consistently placed in a particular category, then it can be considered to demonstrate the validity of convergence (convergent validity) and invalid constructs that deal with the validity of the discriminant (discriminant validity). Scale reliability is generally assessed with Cronbach's ALPHA score (1984). Nunnally proposes that in the early stages of study, reliability value of 0.05 up to 0.60 is considered quite adequate (Jogiyanto, 2011). Generally accepted reliability score on numerious researches ranged from 0.70 up to 0.80.

Table 2. Limits Score Reliability Cronbach's Alpha (Jogiyanto, 2011)

Score	Reliability
< 0.50	Low
0.50 – 0.60	Enough
0.70 – 0.80	High

III. RESULTS AND DISCUSSION

The data of the respondents in the study can be seen in the following table:

Table 3. The Data Of The Respondents

Gender	The Total Number
Men	91
Women	88
Total	179

Table 3 shows that the number of respondents in the study comprised of 91 lecturer male and 88 female with a total of 179 respondents. Furthermore, the results of the tests of the validity of the item against the variables examined can be seen in the following table:

A. The test Indicator/Outer Model with SEM SmartPLS

Outer specification model is the correlation between latent variables with the charge indicators. For the first test of this research model to test indicators (measurement models) indicator is believed valid if the value of the loading factor is at least 0.50. For more detail those values can be seen in the following table.

Table 4. The Results Of Test Validity

Validity	The Influence	Original Sample	Status
Outer Loading (Convergent Validity)	**JS1**	0,719242	Valid
	JS10	0,479241	Invalid
	JS11	0,70323	Valid
	JS2	0,770246	Valid
	JS3	0,455098	Invalid
	JS4	0,77476	Valid
	JS5	0,669321	Valid
	JS6	0,689986	Valid
	JS7	0,703602	Valid
	JS8	0,61263	Valid
	JS9	0,718353	Valid
	P1	0,785422	Valid
	P10	0,51436	Valid
	P11	0,587483	Valid
	P12	0,616115	Valid
	P2	0,722947	Valid
	P3	0,737577	Valid
	P4	0,695563	Valid
	P5	0,755873	Valid
	P6	0,746355	Valid
	P7	0,657122	Valid
	P8	0,61765	Valid
	P9	0,64095	Valid

Test your back needs to be done because in this first test contained invalid data. For the second test of this research model details are described in the following table:

Table 5. Test Validity and reliability

Validity and Reliability	The Influence	Original Sample		Status
Outer Loading (Convergent Validity)	**JS1**	0,724442		Valid
	JS11	0,703286		Valid
	JS2	0,775932		Valid
	JS4	0,781355		Valid
	JS5	0,670702		Valid
	JS6	0,699205		Valid
	JS7	0,706325		Valid
	JS8	0,602105		Valid
	JS9	0,715718		Valid
	P1	0,787211		Valid
	P10	0,51823		Valid
	P11	0,583207		Valid
	P12	0,612595		Valid
	P2	0,725831		Valid
	P3	0,736701		Valid
	P4	0,695907		Valid
	P5	0,757098		Valid
	P6	0,745962		Valid
	P7	0,659415		Valid
	P8	0,617518		Valid
	P9	0,643219		Valid
Cross Loading (Discriminant Validity)	Indicator	Variable Laten Job Satisfaction	Performance	Status
	JS1	0,724442	0,275951	Valid
	JS11	0,703286	0,369293	Valid
	JS2	0,775932	0,383864	Valid
	JS4	0,781355	0,351826	Valid
	JS5	0,670702	0,28177	Valid
	JS6	0,699205	0,346335	Valid
	JS7	0,706325	0,308997	Valid
	JS8	0,602105	0,175674	Valid
	JS9	0,715718	0,286161	Valid
	P1	0,300784	0,787211	Valid

P10	0,224178	0,51823	Valid
P11	0,3873	0,583207	Valid
P12	0,39981	0,612595	Valid
P2	0,183433	0,725831	Valid
P3	0,342889	0,736701	Valid
P4	0,210401	0,695907	Valid
P5	0,326011	0,757098	Valid
P6	0,275202	0,745962	Valid
P7	0,24565	0,659415	Valid
P8	0,265285	0,617518	Valid
P9	0,27195	0,643219	Valid

Validity and Reliability	**Variable**	**Original Sample**	**Status**
Average Variance Extracted (AVE)	Job Satisfaction	0,504935	Valid
	Performance	0,459755	Invalid
Composite Reliability	Job Satisfaction	0,901312	Valid
	Performance	0,909729	Valid

The second test result data of the loading factor value of AVE which is invalid because the performance is below 0.50. For the third test of that model, this research needs to be undertaken. The results of the third test for a value of loading factor of AVE which is more detailed performance are described in the following table.

Table 6. Test the Average Variance Extracted (AVE) and the Composite Reliability

Validity and Reliability	**Variable**	**Original Sample**	**Status**
Average Variance Extracted (AVE)	Job Satisfaction	0,504421	Valid
	Performance	0,504073	Valid
Composite Reliability	Job Satisfaction	0,901089	Valid
	Performance	0,90989	Valid

The third test results data for loading factor value of AVE i.e. job satisfaction is valid because it is in the above 0.50. The third test results data for the loading factor value is valid as it was above 0.50. A more detailed explanation of the third test of the values is described in the following figures and tables:

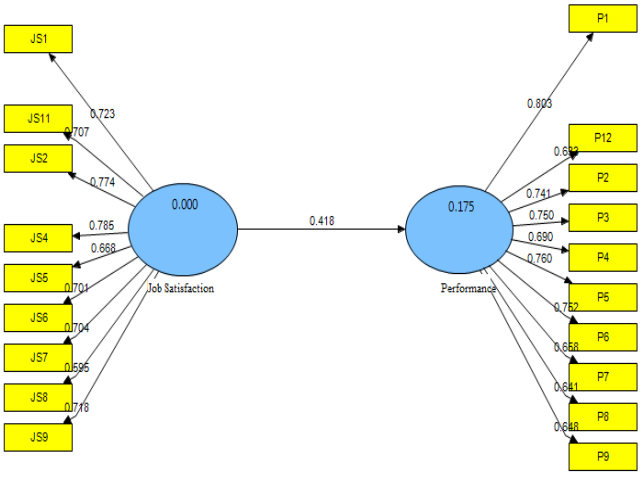

Fig 2. PLS Algorithm test results after eliminating Indicator is invalid.

Table 7. Test Validity and Reliability

Validity and Reliability	**The Influence**	**Original Sample**	**Status**
Outer Loading (Convergent Validity)	**JS1**	0,722859	Valid
	JS11	0,707074	Valid
	JS2	0,773647	Valid
	JS4	0,785199	Valid
	JS5	0,667651	Valid
	JS6	0,701049	Valid
	JS7	0,703721	Valid
	JS8	0,595241	Valid
	JS9	0,717972	Valid
	P1	0,802831	Valid
	P12	0,633244	Valid
	P2	0,741238	Valid
	P3	0,750425	Valid
	P4	0,68979	Valid
	P5	0,760427	Valid
	P6	0,751588	Valid
	P7	0,657509	Valid
	P8	0,641055	Valid
	P9	0,64839	Valid

	Variable Laten		
	Indicator	Job Satisfaction	Performance	Status
Cross Loading (Discriminant Validity)	**JS1**	0,722859	0,252953	Valid
	JS11	0,707074	0,352329	Valid
	JS2	0,773647	0,349599	Valid
	JS4	0,785199	0,339727	Valid
	JS5	0,667651	0,257387	Valid
	JS6	0,701049	0,32815	Valid
	JS7	0,703721	0,282353	Valid
	JS8	0,595241	0,146292	Valid
	JS9	0,717972	0,273331	Valid
	P1	0,301998	0,802831	Valid
	P12	0,40118	0,633244	Valid
	P2	0,185196	0,741238	Valid
	P3	0,344298	0,750425	Valid
	P4	0,21147	0,68979	Valid
	P5	0,326072	0,760427	Valid
	P6	0,27534	0,751588	Valid
	P7	0,245787	0,657509	Valid
	P8	0,267234	0,641055	Valid
	P9	0,272943	0,64839	Valid

Validity and Reliability	Variable	*Original Sample*	Status
Average Variance Extracted (AVE)	Job Satisfaction	0,504421	Valid
	Performance	0,504073	Valid
Composit	Job Satisfaction	0,901089	Valid

e			
Reliabilit y	Performance	0,90989	Valid

Based on the diagramtic representation and the table above it can be stated that all the indicators are valid since the value factor is above 0.50 loading and composite reliability since all variables can be declared reliable due to loading values above 0.70.

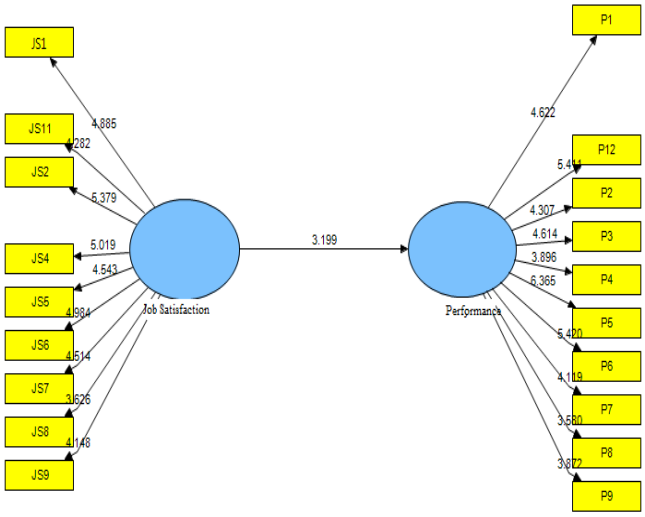

Fig 3. Bootstrap Test Results

The data that appears in the image above is a Bootstrap t-test statistics. These values describe the hypotheses that are examined. Test result data can also be presented in the form of tables making it simpler to analyze the results of such research. The following data is presented in the form of a table and more detailed explanations of the values of the test results from the data above.

Table 8. Test result AVE, Composite Reliability, R-Square, Cronbach's Alpha

Indicator	AVE	Status	Composite Reliability	Status	R Square	Status	Cronbach's Alpha	Status
Job Satisfaction	0,504421	Valid	0,901089	Reliable			0,877547	Reliable
Performance	0,504073	Valid	0,90989		0,175141	Weak	0,890657	

Explanation of Table 9 above are:

1. For the value of all variables, AVE is above 0.50 which means that value is valid.
2. Reliability of composite values for all variables is valid because of it is above 0.70.
3. The value of the variable R-square is weak as well as of performance.
4. Cronbach's alpha Value for all variables is reliable because of its value is above 0.70.

B. Structural-test (test of influence/Hypothesis Testing)

Inner models are to test the influence of latent variables with one latent variable whether endogenous or exogenous.

Table 10. Structural test results (test the influence/Test Hypotheses) after the Test Indicato

Test	Test Results
The Coefficient Of Determination R^2	
Performance	0.175
T- Statistics	
Job Satisfaction → Performance	3.199
Coefficient Parameters	
Job Satisfaction → Performance	0.419
Test	Test Results
The Coefficient Of Determination R^2	
Performance	0.175
T- Statistics	
Job Satisfaction → Performance	3.199
Coefficient Parameters	
Job Satisfaction → Performance	0.419

Explanation of the above test results is as follows:

C. Structural-test (test of influence/Hypothesis Testing)

1. The coefficient of determination R^2: The results of the test data shows that job satisfaction contributed to performance of the lecturer of 17.5% and the remaining 82.5% are affected by other factors that are not in the model. This implies that the performance of professors influenced by the job satisfaction of 17.5% whereas 82.5% are affected by other variables not examined in this study.
2. The T-statistics: The results of the t-test statistics from endogenous and exogenous variables are declared, against the job satisfaction and performance of lecturer which is significant because the t-value of his statistics are at the top of the t-table (t-table with 5% significance and DF = 179, is of 1.9733).

Coefficient Parameters: The magnitude of the coefficient of performance parameters of job satisfaction to the lecturer is 0419, meaning there is a positive influence of job satisfaction toward performance of lecturer. The higher the job satisfaction the increasingly higher the performance.

Test results showed that the relationship between job satisfaction with the performance of lecturers is at 0.419 is categorized low/weak (Cohen, 1988).

IV. CONCLUSION

After results and discussion in this study it can be determined that;

1. Job satisfaction has an Influence on performance as here is the influence of job satisfaction toward performance lecturer by 17.5%.
2. The relationship between job satisfaction and performance is a weak relationship/low and significant between job satisfaction with the performance of a lecturer.

These relationships need to be constantly supported and give the attention as there is a significant relationship

between variables accordingly.

V. ADVICE

From the results of the discussion and conclusions, suggestions for research has will come up as;

The relationship between job satisfaction and work achievement is positive as significant attention needs to be given, meaning that if job satisfaction is getting better then the work achievement will also get better. In addition, it is necessary to pay attention to other variables besides the work achievement for example stress work, commitment, and motivation.

The relationship of job satisfaction and work achievement of lecturers of universities in Batam city is also noteworthy given that the relationship is significant although weak/low. In addition, need is to pay consideration to other variables for your perusal as the organizational culture demands.

It is recommended to conduct research with larger sample size and statistical tools such as SEM, and Rasch Models.

THANK YOU

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