The Factor Analysis of Organizational Commitment, Job Satisfaction and Performance among Lecturers in Batam

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Abstract: *This article intended to determine the important elements in commitment, satisfaction and job performance of university lecturers. This study involved 179 respondents from 3 universities located in Batam, Indonesia. The survey instrument had used a 5-point Likert scale to obtain feedback. Overall, the survey had achieved a very high level of reliability for organizational commitment, job satisfaction, and job performance. The data obtained was processed using exploratory factor analysis (EFA) to examine the structure of commitment, satisfaction, and performance factors. Overall, the instrument, which was the questionnaire, was valid. It was found, based on the EFA, that the three important factors were commitment, satisfaction, and performance. Hence, how could the findings significantly solve the problem statement as well as state the vision and potential of future studies. The Rotated Component Matrix showed the correlation between items and the factors after the Varimax rotation. Factor 1 contained 13 items, Factor 2 contained 12 items, while Factor 3 contained 11 items. It was found that items in Factor 1 could be under the "Commitment Factor", items in Factor 2 could be under the "Performance Factor", while items under factor 3 could be under the "Satisfaction Factor". The outcome of this study could act as a guideline for lecturers to excel in their careers as well as assist institutions to develop effective evaluations.*

Keywords: *Exploratory factor analysis; organizational commitment; job satisfaction; performance; lecturer*

1.   Introduction

Educational problems faced by the university are related to the need to enhance the performance of university lecturers. Various efforts have been implemented by universities to improve the quality of education in efforts to support the excellent achievement of the university, which would then reflect the performance of the university lecturers (Suwanda, 2018). Enhancing job satisfaction among lecturers, developing commitment and improving performance has gained importance. This is related to job performance and also contributes towards the lecturer's achievements in job performance such as training, rewards, emoluments, discipline as well as various facilities for teaching and learning (Fatuma Mussa, 2017).

It is hoped that university lecturers would be able to enhance quality and independently solve problems and face challenges, especially those related to performance achievement (either individually or in a group) and when implementing tasks or responsibilities. According to Siagian (2013), job satisfaction is a negative and positive perspective of someone associated with the job. Performance is the work product obtained by the employee, a management process or an organization, in which the work product is explicitly in the form of quality or quantity (Sedarmayanti, 2011). Work satisfaction is one factor that contributes towards enhancing the achievement of a lecturer's job performance as well as commitment. An employee of an organization who obtains job satisfaction is

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inclined to possess a higher level of performance compared to an organization that has employees who face less job satisfaction (Robbins, 2006). Meanwhile, organizational commitment is how capable is an individual in identifying his/her capability and getting involved in an organization (Spector, *et al.,* 2000). Job satisfaction is inclined to have an effect on employee's performance, whereby an organization that has employees with a high level of job satisfaction are inclined to possess a higher performance level compared to organizations who have employees who are less satisfied with their jobs (Robbins, 2006).

A study by McCausland *et al.,* (2005) showed that job satisfaction could enhance employee performance and the performance provides a positive influence towards job satisfaction. Besides that, a high level of employee commitment can enhance quality-based employee productivity (Wibowo, 2011). In addition, Anari (2012) found a significant relationship between job satisfaction and organizational commitment... Besides that, there is a lack of studies concerning commitment, job satisfaction and performance of university lecturers, especially in Batam Province in the Riau Islands of Indonesia. This study aimed to identify the problems related to items such as job commitment, job satisfaction and job performance. The focus of this study is to determine the items for each factor related to commitment, job satisfaction and job performance.

There are reports regarding commitment, job satisfaction and performance of lecturers and their support for the university. This often occurs to lecturers and to those who are busy with management and office tasks. Chamundeswari (2013), Mangi, Soomro, Ghumro, Abidi, & Jalbani (2011) recommended the evaluation of commitment, job satisfaction, and performance of lecturers in order to meet their needs effectively. A variety of evaluation processes produce the best results. This variety involves investment in time and effort in formulating research objectives, and finally increase the input during the eventual preparation of the report.

The purpose of this study was to identify and describe the factors that contribute to commitment, job satisfaction, and performance of lecturers in Batam city. The study will also identify the factors that were developed by the Exploratory Factor Analysis.

2.   Research Methods

This study had used the survey instrument to measure commitment, satisfaction and job performance among university lecturers in Batam. The population for this study comprised lecturers from 3 universities. The target respondents were university lecturers from the universities in Batam. The data used in this study were the current data obtained from the 3 universities, namely Putera Batam University, Batam University, Riau Kepulauan University. A total of 179 lecturers had filled up the questionnaire that was distributed.

Table 1 - Descriptive Demographic Respondents

No	Gender	Frequency	Percentage
1	Men	91	50.8
2	Female	88	49.2
	Total	179	100

The result of the analysis presented in Table 1 can be identified that male respondents involved in the study a total of 91 people (50.8%) and female respondents found little more than male respondents, namely 49.2% or a total of 88 people with total respondents 179 respondents. The questionnaires used were related to commitment, satisfaction and performance and contained 46 items.

There are 25 performance indicators, 15 job satisfaction indicators, and 9 organizational commitment indicators. The items used in this study were adapted from numerous studies, such as Locke (1976), Mowdey *et al.,* (1979), Timpe (1992), Hersey, Blanchard, and Johnson (1996), Monday, et. al., (1996), Gibson et., al., (1996), Ravianto (1988), Armstrong and Baron (1998), Prawirosentono (1999), Robbins (2001), Kreitner and Kinicki (2001), Gomes and Larsen (2002), George & Jones (2002), Mellor *et., al.,* (2003), Syamsuddin (2006), Mitcell (Bachari, 2007), Pasolong (2008), Robbins (2008), Dikti (2010), Rivai (2011), *Job Descriptive Index (JDI)*, Sejjaaka & Kaawaase (2014).

All the data used in this study were analysed using mean, standard deviation and frequency. The method of analysis used in this study was the reliability and descriptive analyses. Next, the exploratory factor analysis (EFA) was carried out on the items in this study. The exploratory factor analysis (EFA) was intended to determine how the items used were classified according to certain structural factors (Hair et al. 2010).

Table 2 - Indicators of Commitment, Job Satisfaction, and Performance

Commitment	Job Satisfaction	Performance
Have strong beliefs against University	The Work is mentally challenged	Potential partners
Have confidence in the goals of the University	Appropriate Remuneration	Communication skills
Have the feeling the emotional with the University	Working Environment that supports	The ability to convey the idea in meeting
Have confidence in the values appearing in the University	Supportive co-workers	Ability to handle works
Benefit financially when remain in University	Personality	The system of work and facilities rendered organization
The production or financial resources are distracted when leaving University	Salaries	Leadership
Have an obligation to remain in his position at the University	Related work	Acknowledgements
Have a good relationship with the University	Monitoring	Division of roles
Have appropriate moral and ethics with in University	Organization and management	The perception of reward and satisfaction
	Work on the right place	Clarity of purpose and security
	Different people in employment	Expectations of appreciation
	Need fulfilment	Encourage
	Discrepancies	The desire to succeed
	Value attainment	Standard operating procedures
	Dispositional	Time Standard
		Standard Productivity
		Quality standards
		Standards of conduct
		Individual Commitment
		The personality Competency
		The quality of encouragement and guidance of the leaders
		Support do managers and team leaders
		High stress levels and changes in the internal and external environment
		The type of work
		The perception of the task

3.   Results and Discussion

The results of the descriptive analysis on commitment, satisfaction and performance shown in Table 3 indicates that the mean score variable is at a good level.

Table 3 - Descriptive Statistics

No	Variable	Mean	Standard Deviation
1	Commitment	3.71	0.86
2	Satisfaction	3.68	0.87
3	Performance	4.01	0.77

The results of the reliability test show that the *Cronbach's Alpha* value for the organizational commitment items is (0.902) and at a high level. The reliability value for job satisfaction items is (0.875) and at a high level. The reliability value for items related to job performance was (0.886) and was at a high level. It could be concluded that the values of the items in the survey regarding organizational commitment, job satisfaction and job performance were reliable (Bryman and Cramer, 1990; Aiken and West, 1991; Sekaran, 1992; Konting, 2003; Ghozali, 2004).

The *Bartlett's Test of Sphericity* was used to determine whether the correlation between the items was adequate to carry out the factor analysis. The results of the test were significant at $p < .05$ (.000 < .05), which shows that the items were adequate for the factor analysis. The KMO test indicates multicollinearity. If two or more items have the same correlation value, them the items measure the same aspect. The KMO test helps to identify the suitability of the items for the factor analysis. The factor analysis is suitable if the KMO value is bigger than .50. As in Table 2, the KMO value for this case shows that the data has no serious problems of multicollinearity; hence, the items are suitable for the factor analysis.

Table 4 - KMO and Bartlett's

Test KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	4868.151
	df	1035
	Sig.	.000

Table 5 - Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.844	27.922	27.922	12.844	27.922	27.922	5.734	12.466	12.466
2	5.188	11.278	39.199	5.188	11.278	39.199	5.394	11.726	24.192
3	2.5	5.434	44.633	2.5	5.434	44.633	4.133	8.985	33.177
4	2.159	4.694	49.327	2.159	4.694	49.327	3.691	8.024	41.201
5	1.716	3.73	53.058	1.716	3.73	53.058	2.764	6.009	47.209
6	1.424	3.095	56.153	1.424	3.095	56.153	2.321	5.046	52.255
7	1.406	3.058	59.21	1.406	3.058	59.21	2.213	4.811	57.066
8	1.255	2.728	61.939	1.255	2.728	61.939	1.976	4.296	61.361
9	1.111	2.416	64.355	1.111	2.416	64.355	1.377	2.993	64.355

Extraction Method: Principal Component Analysis.

There were 9 components (factors) that had an Eigenvalue of greater than 1, as shown in Table 5. These nine factors contributed to 64.35 percent changes to the overall variance (job performance). There were 37 other components that only contributed to 35.65 percent of the dependent variable's variance. However, only 3 factors shown below contributed to a variance that was more than 5 percent, which were component 1 (27.92 percent), component 2 (11.28 percent) and component 3 (5.43 percent). When observing the percentage of variance for the rotation loading value, three main factors contributed more than 8.98 percent. Since the contribution of the fourth factor and the rest were near the three factors, the researcher needs to examine the *Scree Plot* graph to ensure that the number of extracted main factors are the main actors shown in Diagram.

The *Scree plot* graph clearly shows that there are three main factors that have immensely contributed to the overall change in variance in the dependent variable (lecturer's job performance achievement).

The rotated component matrix shows the correlation between the items and its factors after the varimax rotation. Items in Factor 1 "Commitment" contained 13 items (items K1 to K9 and KK1, KK2 and KK5). Items in Factor 2 "Job Performance" contained 12 items (items PK4, PK 12 to PK 15 and PK 18 to PK 22), while items in Factor 3 "Job Satisfaction" contained 11 items (items KK 4 to KK 8 and KK10 to KK15).

Component Transformation Matrix in table 7 shows that the correlation between the three factors are weak, which was below 0.50 (the accepted strength of correlation should be between .097 and .465). Hence, all three factors are free from one another, which indicates they are independent constructs. The survey suggested that "Job performance", which contains 46 items, should be analysed using factor analysis. The Eigenvalues and *Scree Plot* graph shows that the questionnaire items contain more than one factor.

According to this result, the researcher rejected the null hypothesis and decided that the items in the questionnaire were non-unidimensional, as it contained more than one construct. Through the Varimax rotation, the *Rotated Component Matrix* table shows that the items in the questionnaire formed three dimensions (contains 3 factors). Hence, the three factors were extracted from the suggested survey.

All three factors predicted a 33.18 percent overall variance for the dependent variable "job performance" (Factor 1= 12.47 percent; Factor 2 = 11.73 percent; Factor 3 = 8.99 percent). The factor analysis also showed that the correlation between all three factors was less that .50 (the r value was between .09 to .46). This means that all three factors are free and independent of one another. In other words, all three factors are separate constructs.

An examination of items in each factor by referring to previous studies has items in Factor 1 under the "Commitment construct", items in Factor 2 under "Job Performance", while items in Factor 3 under the "Job Satisfaction" construct.

The results of the analysis show that there are six items with various concepts that could be loaded into two factors. Upon examination, the contents of all six items were found to be suitable with the aim this study. Thus, if the aim of this study is to differentiate these three constructs, then the six items should be discarded because an item cannot represent two constructs in a comparative analysis between constructs. The findings show a positive relationship between development, training and job satisfaction with the achievements of workers. Exercises and development will bring to the stage a higher job satisfaction in the accomplices and they will fulfil their tasks with a lot of responsibility with the best offerings (Osama, Haseeb, Waseem, Ayaz, & Ijaz, 2016). Similarly, Anwar (2015) found that job satisfaction and organizational commitment have a positive influence on the lecturer's achievements.

Table 6 - Rotated Component Matrix[a]

	Component		
	1	2	3
K2	0.808		
K1	0.791		
KK5	0.679		
K9	0.661		0.346
K3	0.600		
K4	0.593		
KK3	0.559		
K8	0.548		
K7	0.435		0.419
PK17		0.785	
PK16		0.765	
PK20		0.700	
PK18		0.700	
PK13		0.691	
PK14		0.690	
PK15		0.672	
PK21		0.605	
PK22		0.605	
KK15			0.742
KK10	0.347		0.641
KK11			0.621
PK6	0.349		0.574
KK14			0.558
KK4	0.379		0.537
PK8	0.391		0.508
PK11			
PK12		0.365	
PK10			
PK9			
KK9			
K5	0.358		
KK2	0.414		
KK12			0.394
K6	0.405		
PK3			
PK2			
PK1			
PK4		0.346	
PK19		0.391	
PK5			0.410
KK13			0.380
PK7			0.356
KK6			
KK7			
KK8			
KK1	0.432		

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 12 iterations.

Table 7 - Component Transformation Matrix

Component	1	2	3
1	0.55	0.411	0.439
2	-0.399	0.69	-0.277
3	0.097	0.465	0.123

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

4.   Conclusion

Therefore, by examining the characteristics of each item in each factor in reference to past studies, it was found that items in Factor 1 could be placed under the "commitment" construct (comprising 13 items, namely Commitment1 to Commitment13), items in Factor 2 could be placed under the "performance" construct (comprising 12 items, namely Performance1, to Performance12) and items in Factor 3 could be placed under the "satisfaction" construct (comprising 11 items, namely Satisfaction1 to Satisfaction11). Based on the factor analysis, items in the questionnaire (consisting of 36 items) were arranged according to the confined constructs.

This study revealed that there are ways to develop an effective evaluation, which involves aspects such as commitment, job satisfaction and performance. However, a lecturer might possess different levels of each aspect. This study has shown that commitment, job satisfaction, and performance are contributing factors to the performance of lecturers. The outcome of this study could act as a guideline for lecturers to excel in their careers as well as assist institutions to develop effective evaluations.

It was suggested that future studies use the CFA analysis to certify each item so that it is placed according to correct factor. CFA is used to test the unidimensional of dimensions, which explains the latent variable in a model. In addition, all indicators adopted in this study had helped to form the related variables (Rasmen, 2008). The *Confirmatory Factor Analysis (CFA)* was used to test a *measurement* model to determine whether current indicators could explain a construct in a more detailed fashion (Santoso, 2014). The acquired loose studies showed a positive relationship between job satisfaction and workers' achievements. Hence, when higher job satisfaction in accomplished employees can fulfil their tasks with a lot more responsibility (Osama, Haseeb, Waseem, Ayaz, & Ijaz, 2016).

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