Loyalty Among Academics at UiTM Terengganu: Application of Logistic Regression

Nor Aini Hassanuddin
Universiti Teknologi MARA (UiTMT), Faculty of Computer and Mathematical Sciences
23000 Dungun, Terengganu, Malaysia
Tel: 098403971 Fax: 098403777 E-mail: norai548@tganu.uitm.edu.my

Sakinah Mat Zin
Universiti Teknologi MARA (UiTMT), Faculty of Business Administration
23000 Dungun, Terengganu, Malaysia
Tel:098400644 Fax: 098403777 E-mail: sakin405@tganu.uitm.edu.my

Rohana Yusoff
Universiti Teknologi MARA (UiTMT), Faculty of Computer and Mathematical Sciences
23000 Dungun, Terengganu, Malaysia
Tel:098403845 Fax: 098403777 E-mail: rohanayu@tganu.uitm.edu.my

Yunita Awang
Universiti Teknologi MARA (UiTMT), Faculty of Accountancy
23000 Dungun, Terengganu, Malaysia
Tel: 098403949 Fax: 098403777 E-mail: yunita@tganu.uitm.edu.my

Abstract

Factors that determine loyalty among academics at UiTM Terengganu were looked into. This study was conducted on 202 lecturers at UiTM Terengganu who have served for at least one semester. Descriptive analysis was used to gauge the overall picture of factors influencing academics' loyalty. Logistic regression was applied to look at the relationship between variables. Evidence showed that field, management-lecturer relationship and SKT satisfaction factors contributed towards loyalty. Findings of this study will provide insight for management to evaluate the university climate in improving the learning environment and elevating the productivity of the university.

Keywords : **Loyalty, Productivity, Intention, Logistic regression, University, Management**

1.0 Introduction

When employees leave an organization, either voluntarily or involuntarily, the impact can be substantial. Loyal employees are considered as incredible assets to a growing company since they represent cost savings over recruiting and training new hires. Moreover, turnover has also been directly linked to low levels of employee morale, job satisfaction, and customers' perceptions of service quality (Gray, Niehoff, & Miller, 2000).

Human resources professionals know that employee retention is a key factor in determining an organization's success. Employee loyalty can best be defined as employees who are dedicated to the success of the organization. To be successful, employers should focus on improving employee satisfaction and lifetime loyalty. Furthermore, there is a direct relationship between employee loyalty and a company's growth and profitability. Wagner (2007) indicated that organizational commitment is an individual's willingness to dedicate efforts and loyalty to an

organization. As the years of experience increased, job satisfaction would be elevated (Herrera, 2003). Adeyemo (2000) reported a positive correlation between education and organizational commitment. According to Chuan (2005),employees who had the intention to quit were found to be lowly committed.

Job satisfaction is influenced by intrinsic factors including personal achievement, sense of accomplishment, and prestige and extrinsic factors such as pay and benefits, working conditions, and resources (Zaghloul, Al-Hussaini, & Al-Bassam, 2008). It is of great importance for university administrators to identify the level of academic staff satisfaction and identify the dimensions of high dissatisfaction as a means of maintaining a stable work force. The dimension with high correlation to intention to quit remains a crucial aspect of job satisfaction facing university administrators to tackle.

As in academic institutions, their success depends on well-qualified, committed and adequately remunerated professoriate. Academic staff job satisfaction, commitment, and retention are the significant contributing factors to its effectiveness. Elevated academic staff job satisfaction will be translated into healthy university climate which at the same time improves the learning environment and increases the university productivity. The contributions of effort, involvement, and most importantly on the overall academic staff professionalization are crucial in emerging good educational programs. This is true in every society in which academics play various roles: they teach, carry out research and provide expertise to the government and industries (Fatma, 2003).

The management of UiTM Terengganu (UiTMT) is emphasizing on the achievement of the underlying purposes and objectives of the institution so that it will be in line with the university's mission; `To enhance the knowledge and expertise of Bumiputeras in all fields of study through professional programs, research work, and community service based on moral values and professional ethics'. Recently, the job expectations of academic staff have been growing exponentially leading to a combination of increased job related stress for the academic staff, and decreasing level of job satisfaction (Fauziah, 2009).

The purpose of this paper is to study the influence of job satisfaction elements and demographic factors that determine loyalty. The main focus is to look at the relationship between loyalty with job satisfaction elements and demographic factors

2.0 Materials and methods

2.1 Sampling and data collection

The population for this study is 293 lecturers who have worked for one or more semesters at UiTMT. This is a population survey, thus no sampling technique was applied. At first, questionnaires were distributed to every UiTMT lecturer's pigeonhole and after answering, lecturers were expected to put the questionnaires in containers strategically situated around the campus. However response was very sluggish, only 98 lecturers (33.5%) returned the questionnaires.

In view of the low percentage of responses, the researchers decided to redo the data collection with a different strategy. Questionnaires were distributed to every UiTMT lecturer during an academic meeting. About 69% (202 lecturers) responded and returned the questionnaires.

2.2 Instrument

In consideration of the fact that job satisfaction is situational and very much influenced by immediate and current events evolving around the workplace, the researchers decided to develop their own instrument for this study. The process started with pooling related items from literature reviews. The significant determinants of job satisfaction such as company and administrative policy, supervision and salary, interpersonal relations, working condition and work itself, achievement and recognition, and responsibility and advancement, found by other researchers were referred to as guidelines in designing the questions.

The research instrument developed is a questionnaire consisting of two sections, A and B. Section A consists of questions on demographic information while section B consists of questions, (which are related) to the objectives of the study. Every question in section B uses a Likert scale of 1 to 7, where scale of 1 indicates strongly disagree and scale 7 indicates strongly agree. All questions use sentences in the affirmative form.

2.3 Method

A check on the distribution of data reveals that they were not normally distributed. Thus, Logistic regression was used because there is no need for the assumption of normality of the independent variables. Logistic regression allows one to predict a discrete outcome, such as group membership, from a set of variables that may be continuous, discrete, dichotomous, or a mix of any of these. Generally, the dependent or response variable is binary or dichotomous, such as presence/absence or success/failure.

Logistic regression analysis is used to identify the factors that affect academics' loyalty to UiTMT. The goal of an analysis using the logistic regression method is basically to find the best fitting and most parsimonious, yet biologically reasonable model to describe the relationship between an outcome (nominal dependent or response variable) and a set of independent (nominal or scale predictor or explanatory) variables. These independent variables are often called covariates. Logistic distribution from a mathematical point of view is an extremely flexible and easily used function, and it leads itself to biologically meaningful interpretation. There are two main uses of logistic regression. The first is the prediction of group membership. Since logistic regression calculates the probability or success over the probability of failure, the results of the analysis are in the form of an odd ratio.

To determine loyalty, a new variable called loyalty is created from the item 'I intend to stay working with UiTM until I retire' by recoding it into a binary variable. If the mean satisfaction score for intention to stay is more than 3.5, the academics are said to have high intention to stay in UiTMT. Similarly, to determine job satisfaction, the item 'As a whole I am satisfied with my job' is recoded into another binary variable. If the mean satisfaction score for job satisfaction is more than 3.5, the academics are said to have high satisfaction with their job. The eight variables under satisfaction elements were recoded into a new variable called *sat*. If the mean satisfaction scores for the variables are less than 3.5, the respondents are considered to have low satisfaction (coded as 0) while values more than 3.5 are considered as high satisfaction (coded as 1). Stepwise automatic model building method is used in variables selection.

Chi-square test is used to identify any significant difference in the level of loyalty between faculties, gender, marital status, age group and rank. . The 12 faculties were divided into three fields namely as Science & Technology, Social Science & Humanities and Business & Management since more than 20% expected cell frequency for two-way associations involving these variables are mostly less than five.

3.0 Result and discussion

Tables 1, 2, and 3 exhibit the respondents' profiles for this research. Most of the respondents were female lecturers (72.3%) while the rest were male. Most of them were married and aged below 39 years old. 140 lecturers had less than 10 years teaching experience, 108 were at job grade of DM45/46 and most of the respondents earned less than RM4000 with masters' degree from local universities.

Table 1. Marital status * age cross tabulation

Marital Status	Age				Total
	20-29	30-39	40-49	50 and above	
Single	49	13	3	1	66
Married	19	57	44	11	131
Total	68	70	47	12	197

Table 2.Teaching experience * rank cross tabulation

Teaching experience	Grade 41	Grade	Grade	Grade	Others	Total
<=3	30	41	1	0	15	87
4-9	4	45	4	0	0	53
10-15	0	14	14	0	0	28
16-20	0	2	5	5	0	12
21>	0	6	2	12	0	20
Total	34	108	26	17	14	200

Higher grade number implies higher rank

Table 3. Salary * education qualification cross tabulation

Salary	Highest Education qualification						Total
	Bachelor	Bachelor	Master	Master	PHD	PHD	
< 2000	1	20	0	4	0	0	25
2001-3000	0	13	7	42	0	0	62
3001-4000	0	0	7	50	0	0	57
4001-5000	0	0	6	15	1	1	23
5001-6000	0	0	5	6	0	0	11
>6000	0	0	10	6	1	3	20
Total	1	33	35	123	2	4	198

Results from Chi Square test in Table 4 show that there is a significant difference between loyalty and gender (p-value=0.007), job grade (p-value=0.054), faculty (p-value=0.042) and education level (p-value=0.024). Result shows that there are significant differences between loyalty with field (p-value=0.040). Overall results show that most of the academics are more likely to stay at UiTMT compared to leaving. 90.1% of the academics from Business & Management are more likely to stay compared to only 74.0% academics from Science & Humanities and 80.4% from Science & Technology.

Table 4: Loyalty by Demographic Characteristics

Demographic characteristics	P-value	Significant or not?
Gender	0.007	Significant
Job Grade	0.054	Significant
Age	0.924	Not Significant
Marital status	0.163	Not Significant
Salary	0.776	Not Significant
Teaching experience	0.054	Significant
Faculty	0.042	Significant
Education Level	0.024	Significant
Field	0.040	Significant

Table 5 shows the results of Chi Square test on loyalty with job satisfaction elements. There are significant differences between intention to stay with satisfaction in friendship, immediate-boss treatment, management-lecturer relationship, SKT, teaching, research and performance evaluation.

Table 5**:** Loyalty by Job Satisfaction elements

	Low intention to stay	High intention to stay	p-value
Low satisfaction in Teaching	7	7	0.001 ***
High satisfaction in Teaching	27	154	
Low satisfaction in Research	7	11	0.012 **
High satisfaction in Research	27	150	
Low satisfaction in Writing and Publication	4	18	0.922
High satisfaction in Writing and Publication	30	143	
Low satisfaction in Immediate-boss treatment	8	9 (52.9%)	0.001 ***
High satisfaction in Immediate-boss treatment	26	152	
Low satisfaction in SKT	11	13	0.000 ***
High satisfaction in SKT	23	148	
Low satisfaction in Management-Lecturer	11	7 (38.9%)	0.000 **
High satisfaction in Management-Lecturer	23	154	
Low satisfaction in Friendship	3	2 (40.0%)	0.011 **
High satisfaction in Friendship	31	159	
Low satisfaction in Performance Evaluation	11	10	0.000 ***
High satisfaction in Performance Evaluation	23	151	

* significant at p= 0.1, * * significant at p= 0.05, *** significant at p= 0.001

In determining faculty turnover and retention, it is important to do research on discipline-specific areas as mentioned by Stagniti (2006). University administrators would be able to identify the factors that contribute to elevated levels of staff job satisfaction within and across disciplines if they understand the matter well. In the initial stage, the *enter* method is used to identify important predictor variables. It is indicated that field (p-value= 0.013), management-lecturer relationship (p-value= 0.000) and SKT satisfaction (p-value= 0.042) are significant. Hence, those three characteristics are reentered into the logit model. Results in Table 6 show that the best fitted model is:

$$g(X) = 0.177 - 0.546 \text{ Social Science \& Humanities} + 1.542 \text{ Business \& Management} + 2.796 \text{ Satisfaction with management} + 1.324 \text{ Satisfaction with SKT}$$

The three variables, Business & Management (p-value= 0.017), Satisfaction with management (p-value= 0.000) and Satisfaction with SKT (p-value= 0.021) are all significant predictors of loyalty. However Social Science & Humanities is not significant.

Once again, these three variables were entered into the logit model to see whether there is any significant interaction between those significant variables. There is no significant interaction found between all the variables and therefore field, Satisfaction with management and Satisfaction with SKT are chosen to be the factors that influence academics' loyalty with UiTMT.

Based on the odd ratio shown in Table 6, there is a positive relationship between Business & Management field, Satisfaction with management and Satisfaction with SKT, with loyalty to UiTMT. The odd ratio for Business & Management is 4.676. It can be said that academics from Business & Management are almost five times more loyal to UiTMT compared to those who are from Science & Technology. The odd ratio for Satisfaction with management is 16.377. This shows that those who are satisfied with management are 16 times more loyal compared to those

who are low satisfied. Academics who have high satisfaction with their SKT are almost 4 times more loyal to UiTMT than those who have low satisfaction since the odd ratio is 3.760.

Table 6: p-value for 3 significant factors contribute towards loyalty

	B	S.E	Wald	d.f	p-value	Odd ratio
Field			10.860	2	0.004	
Social Science & Humanities	-0.546	0.530	1.062	1	0.303	0.579
Business & Management	1.542	0.649	5.652	1	0.017	4.676
Satisfaction with Management	2.796	0.699	15.983	1	0.000	16.377
Satisfaction with SKT	1.324	0.575	5.298	1	0.021	3.760
Constant	0.177	0.329	0.289	1	0.591	1.193

4.0 Conclusion

This study demonstrates that in general, lecturers are satisfied with their job. Evidence shows that loyalty differs significantly across gender, job grade, education level and faculty. High satisfaction with management, friendship among colleagues, treatment by immediate-boss, Satisfaction with SKT, teaching, research and performance evaluation will induce high loyalty towards the institution. Nevertheless, high satisfaction with writing and publication does not induce high loyalty.

Field, Satisfaction with management and Satisfaction with SKT are crucial factors that influence academics' loyalty to UiTMT. Findings from this study imply that good relationship between management and academics as well as satisfaction with SKT performance will induce high loyalty amongst academics. Another interesting conclusion that can be made is that academics from Business & Management fields are more likely to be more loyal to UiTMT compared to those from Science and Technology.

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