

# **The Influence of Satisfaction and Relationship Commitment on Student Loyalty in Self-financed Tertiary Education Institutions**

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*Student satisfaction has traditionally been regarded as a fundamental determinant of student loyalty. The more satisfied the students are, the greater is their loyalty. In explaining the link between student satisfaction and loyalty, relationship commitment plays an important role and provides useful insight. For example, the presence of relationship commitment can mean that some seemingly loyal students are actually dissatisfied but do not defect because of high relationship commitment. Thus, the level of relationship commitment moderates the link between student satisfaction and loyalty. This study develops a research model with two features. First, it examines the effects of student satisfaction and relationship commitment on student loyalty. Second, the model examines the moderating effect of relationship commitment on the relationship between student satisfaction and student loyalty. The model was tested using data collected from students studying associate degree courses at eight self-financed tertiary education institutions in Hong Kong. The results of this study support the main effects of student satisfaction and relationship commitment on student loyalty. The results also support the moderating role of relationship commitment on the student satisfaction-loyalty link.*

**Field of Research:** Student Loyalty, Student Satisfaction, Relationship Commitment, Moderating Effect, Self-financed Tertiary Education Institutions

## **1. Introduction**

Knowledge is considered as an important economic asset in the society; governments in different countries have become increasingly concerned about the development of intellectual capital, i.e. education (Rowley, 2003). The Hong Kong Special Administrative Region (HKSAR) government has always put in great efforts and resources to provide quality education in Hong Kong. The number of self-financed associate degree graduates has risen from 1,068 in 2002 to 14,050 in 2008 (IPASS, 2010). Around 54% of self-financed associate degree graduates pursued further studies in 2005/06 (Steering Committee, April 2008). It is expected that by the year 2010/11, 60% of senior secondary school students in Hong Kong would be going on to tertiary education (Education Commission, 2006). In Hong Kong, tertiary education institutions are funded in two ways; some are government-funded and some are self-financed. To meet the government's target of enabling 60% of the young generation to get access to tertiary education, significant progress has been made by self-financed tertiary education institutions to offer a wide range of educational opportunities meeting interests and abilities of the students.

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## Wong

Some, however, consider that there is an over-supply of self-financed tertiary education in Hong Kong which had led to excessive competition (Steering Committee, April 2008). The number of full-time self-financed tertiary programmes (including bachelor degrees and associate degrees) offered in Hong Kong has risen from 20 in 2000/01 to 347 in 2008/09. Because of the growing number of self-financed tertiary education institutions, there is keen competition among self-financed tertiary education institutions. These educational institutions need to earn revenue to maintain themselves and student enrolment is the primary source of income for them. Running a self-financed tertiary education institution is quite similar to running a business firm. The institution has to earn enough income to cover teachers' remuneration and infrastructure costs, etc. Thus, in addition to recruitment of new students, it is vitally important for self-financed tertiary education institutions to retain existing students as it is generally believed that the cost of attracting new students is considerably larger than the cost of retaining existing students.

The HKSAR Government provides interest-free loans and allocates land to tertiary education institutions running self-financed programmes. However, students still have to pay high tuition fees to study self-financed programmes because the government does not provide funding to run these programmes. With the rapid growth of self-financed tertiary education, associate degree students in tertiary education have more choices to pursue bachelor degree studies. Obviously, it is better to retain existing associate degree students by encouraging them to continue their bachelor degree studies at the same institution.

After graduation, a loyal student may recommend his/her educational institution to friends and may also continue to support the educational institution through donations, financial support or offering placements to existing students (Hennig-Thurau et al., 2001). Advantages of student loyalty, therefore, are not limited to students' study period; they last even after their graduation. Therefore, the importance of student loyalty is far reaching.

The concept of the student as customer is not new. Crawford (1991) first used the phrase 19 years ago. Thus insights concerning student loyalty and drivers of student loyalty should be of great importance when determining the most appropriate management strategy for self-financed tertiary education institutions (Helgesen and Nasset, 2007). Student satisfaction is supposed to be positively related to student loyalty (Athiyaman, 1997; Marzo-Navarro et al., 2005). In addition, numerous studies in business settings have validated the relationship commitment-loyalty link (Amine, 1999; Caceres and Paparoidamis, 2007; Dimitriades, 2006; Macintosh and Lockshin, 1997; Wetzels et al., 1998). Adidam et al. (2004) and Holdford and White (1997) found that student relationship commitment is also positively linked to student loyalty. Student relationship commitment exists when the individual student is willing to maintain the relationship with his/her educational institution (Morgan and Hunt, 1994). However, when explaining the link between student satisfaction and loyalty, only a few studies of education marketing have investigated how relationship commitment affects the relationship between student satisfaction

## Wong

and student loyalty. The objectives of this study are two-fold.

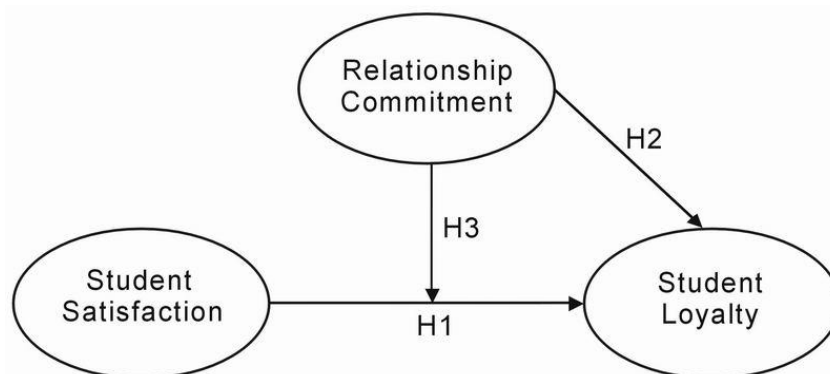
- i. First, it examines the main direct effects of student satisfaction and relationship commitment on student loyalty.
- ii. Second, it examines the moderating effect of relationship commitment on the relationship between student satisfaction and student loyalty.

The remainder of this paper is organized as follows. Section 2 reviews findings of previous studies relating to the influence of student satisfaction and relationship commitment on student loyalty. Section 3 discusses how various considerations shaped the research methodology adopted in this study. Section 4 presents the findings of this study. The final section presents discussions of findings and conclusions of the study, besides its limitations and suggestions for future research.

## 2. Literature Review

In the present day competitive environment faced by self-financed tertiary education institutions in Hong Kong, student loyalty is a top concern for managements. Having good relationship with students is important to enhance student loyalty. Commitment to a relationship is the desire to develop a stable relationship and confidence in the stability of the relationship (Anderson and Weitz, 1992).

Consistent with research objectives, a research model which links student satisfaction and relationship commitment to student loyalty is developed (Figure 1). The research model has two main features. First, it examines the main effects of each of the two independent variables (student satisfaction and relationship commitment) on the dependent variable (student loyalty), besides examining the simultaneous influence of student satisfaction and relationship commitment on student loyalty. Second, the model examines the moderating effect of relationship commitment on the student satisfaction-loyalty link. The research model is used to develop the three hypotheses proposed and tested in this study.



**Figure 1 Research Model**

# Wong

## **2.1. Student Satisfaction as a Driver of Student Loyalty**

Among the many articles published, customer satisfaction has been taken as the required premise for retention of customers; thus customer satisfaction is placed at the forefront of relational marketing approaches (Rust and Zahorik, 1993). In numerous publications, customer satisfaction has traditionally been treated as a fundamental determinant of long-term customer behavior and retention of customers (Oliver, 1980; Yi, 1990). Fornell (1992) stated that a fundamental aim of firms is to manage and increase customer satisfaction in order to increase customer retention rates. Cronin and Taylor (1992) and Patterson et al. (1997) found that customer satisfaction has a significant impact on repurchase intentions in a range of services. Day et al. (1988) concluded that customer satisfaction is unquestionably the key determinant in retaining current customers in professional services. Kotler (1994) summarizes this by stating: "The key to customer retention is customer satisfaction" (p. 20). Student satisfaction is positively related to student loyalty (Athiyaman, 1997; Helgesen and Nettet, 2007; Marzo-Navarro et al., 2005). Using the aforementioned literature, the first hypothesis was formulated:

H1: Students' satisfaction with the education institution has a significant positive impact on student loyalty.

## **2.2. Relationship Commitment as a Driver of Student Loyalty**

Relationship commitment is a key element of long-term loyalty (Morgan and Hunt, 1994). In addition, past research has also validated the relationship between relationship commitment and student loyalty. (Amine, 1999; Caceres and Papparoidamis, 2007; Dimitriades, 2006; Macintosh and Lockshin, 1997; Wetzels et al., 1998). In tertiary education, enhancing student commitment to the education institution is a top priority of institutions' managements. Adidam et al. (2004) and Holdford and White (1997) suggested that relationship commitment has a positive impact on cooperation between students and the education institution, and a negative impact on propensity to leave the education institution. Based on the aforesaid, the second hypothesis was formulated:

H2: Students' relationship commitment to the education institution has a significant positive impact on student loyalty.

## **2.3. Moderating Effect of Relationship Commitment on the Student Satisfaction-loyalty Link**

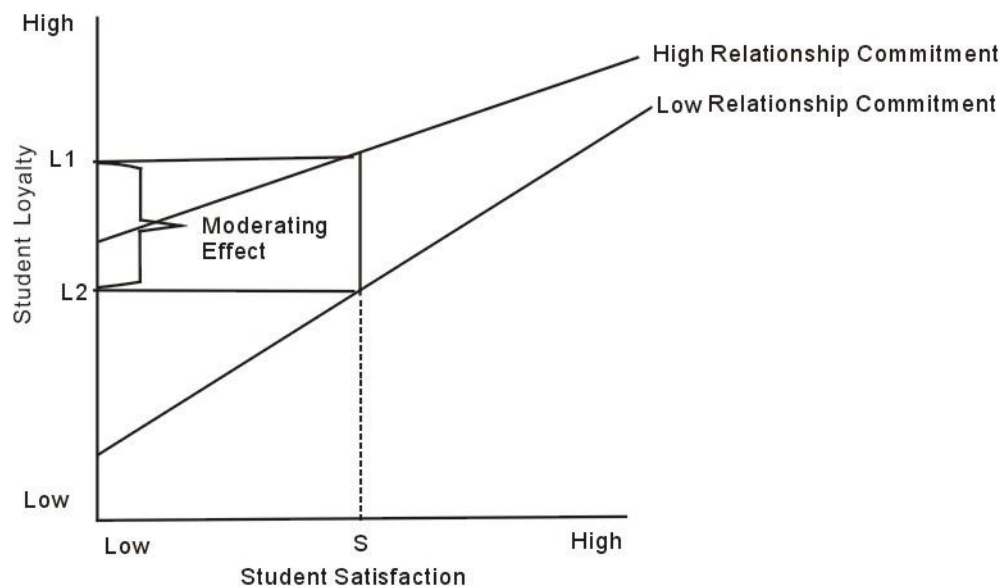
All other things being equal, both student satisfaction and relationship commitment are thought to be key antecedents of student loyalty. However, under the conditions of low relationship commitment, students would be expected to stay or leave based on their satisfaction with their educational institutions. In this study, it is argued that a dissatisfied student may also remain loyal because of high relationship commitment. In other words, while student satisfaction with a relationship may be less than satisfactory, the student may stay in the relationship because of high relationship commitment.

## Wong

Mattila (2004) suggested that relationship commitment might reduce the spill-over effects of service failures to future loyalty behaviors. Consequently, observed student loyalty may be due to student satisfaction or it may be due to dissatisfaction in which high relationship commitment makes students loyal to their educational institutions. Based on the aforesaid, the third hypothesis was formulated:

H3: For a given level of student satisfaction, the higher the level of perceived relationship commitment is, the higher is the level of student loyalty.

Diagrammatically, the above moderating effect of relationship commitment can be represented as follows (Figure 2). For a given level of student satisfaction ( $S$ ), students may perceive two different levels of loyalty,  $L_1$  and  $L_2$ , depending on their perceived level of relationship commitment. The difference between  $L_1$  and  $L_2$  is due to the moderating effect of relationship commitment on the student satisfaction-loyalty link.



**Figure 2: Moderating Effect of Relationship Commitment on the Student Satisfaction-loyalty Link**

### 3. Methodology

#### 3.1. Measures of Constructs

There are two common methods to design measures for the constructs under examination: develop own set of measures or adopt measures previously developed. Developing a new set of measures for the same construct leads to absence of common basis of measurement. Therefore, it is preferable to adopt existing measures for one's research unless there are good reasons to develop a new set of measures (Churchill, 1979). The three constructs included in this study are student satisfaction, relationship commitment and student loyalty. There is no consensus concerning the measurements of these three constructs. However, recommended approaches are available (e.g.,

## Wong

Davies et al., 2004; Fornell, 1992; Helm, 2005; Hennig-Thurau et al., 2001; Lam et al., 2004; Mattila, 2003; Morgan and Hunt, 1994; Ryan et al., 1995). All three constructs were measured using multiple item, seven-point Likert-type scales with anchors "1=strongly disagree" and "7=strongly agree", based on validated scales from extant literature.

### **Student Satisfaction (SS)**

Ryan et al. (1995) asserted that satisfaction may be measured by asking questions related to three aspects: summary judgment, comparison with expectations, and comparison with an ideal situation. The scale of student satisfaction was adapted from measures developed by Ryan et al. (1995). The student satisfaction was measured by the following three items:

1. I feel satisfied with my educational institution compared with expectations.
2. I feel satisfied with my educational institution compared with an ideal one.
3. Overall, I feel satisfied with my educational institution in general.

### **Relationship Commitment (RC)**

Following Moorman et al. (1992), relationship commitment is conceptualized as an enduring desire to maintain a valued relationship. According to Morgan and Hunt (1994), relationship commitment is the participant's willingness to maintain the relationship and intention to stay in the relationship. Morgan and Hunt (1994) used a 7-item scale for relationship commitment. Five items were adopted from this original scale, with minor modifications to fit the education context. Relationship commitment was measured by the following five items:

The relationship that I have with my educational institution:

1. is something I am very committed to.
2. is very important to me.
3. is worth my maximum effort to maintain.
4. is something I really care about.
5. is something I intend to maintain indefinitely.

### **Student Loyalty (SL)**

As there is no generally accepted model of student loyalty in education context, researchers usually adopt the related concept of customer loyalty in marketing literature. Since this study wanted to find out whether existing self-financed associate degree students would like to further take up their bachelor degree studies at their current self-financed tertiary education institutions, this study conceptualizes student loyalty as repurchase intention of students. The scale of student loyalty was measured by three items adapted from measures in education context developed by Nguyen and LeBlanc (2001).

1. I would attend a bachelor degree course at my educational institution if it offers bachelor degree courses in future.
2. I would attend an advanced course at my educational institution if it offers them in the coming years.
3. If I had to apply for an associate degree course now, my educational institution would be my first choice.

## 3.2. Data Collection

As part of the empirical component of this study, ten associate degree students in a self-financed tertiary education institution were first interviewed with a view to gaining qualitative support for the conceptual model, as well as developing items for the three constructs of this study. Following the interviews, a questionnaire with items measuring the three constructs was developed. The proposed research model and hypotheses were then field tested in a survey. There are twenty-one tertiary education institutions in Hong Kong, including government-funded and self-financed. As the study wanted to find out whether the current self-financed associate degree students will continue their bachelor degree studies at the same self-financed tertiary educational institution, personal interviews with 800 students in their final semester of associate degree courses were carried out on campuses of eight self-financed tertiary education institutions by using a systematic sampling method; 100 interviews were conducted in each campus. Participation in the study was voluntary. The students were asked to complete the questionnaires outside class hours. The questionnaires were collected by a student helper in each self-financed tertiary education institution. All data collection was conducted between May and June of 2010. The number of responses was considered sufficient for data analysis as Alreck and Settle (1985) stated that most experienced researchers would probably consider a sample size between 200 and 1000 respondents for a population size of 10,000 or more.

## 4. Findings

### 4.1. Construct Validity and Reliability Tests

Following Ruyter and Bloemer (1999), exploratory factor analysis was employed to confirm the underlying structure of the three measures. A common factor analysis with varimax rotation was undertaken for 11 items of the three constructs of student satisfaction, relationship commitment and student loyalty. The results confirmed that the three constructs, which were previously validated, are uni-dimensional, factually distinct and applicable in education setting. As reported in Table 1, the proportion of variance accounted for by each of the rotated factors is frequently reported in literature to indicate the relative importance of each factor. The first, second and third variables accounted for 41.791%, 27.757% and 11.179% of variance of the eleven items. In total, the three factors accounted for 80.727% of variable variance. Cronbach's coefficient alpha was used to examine reliability of the three scales of student satisfaction, relationship commitment and student loyalty. The lowest estimate of reliability was reported for the student loyalty scale ( $\alpha=0.8591$ ). Estimates for student satisfaction and relationship commitment scales were 0.9052 and 0.9378, respectively. Since the coefficient alpha of each scale was above the acceptable value of 0.700 (Nunnally, 1978), all three scales were considered to be reliable.

# Wong

**Table 1: Scale Items and Factor Analysis**

Scale Items	Factor Loadings
<i>Relationship Commitment (RC)</i> (eigenvalue=4.597, variance=41.791, alpha=0.9378)	
The relationship that I have with my educational institution:	
1. is something I am very committed to.	0.888
2. is very important to me.	0.874
3. is worth my maximum effort to maintain.	0.847
4. is something I really care about.	0.847
5. is something I intend to maintain indefinitely.	0.838
 <i>Student Satisfaction (SS)</i> (eigenvalue=3.053,, variance=27.757, alpha=0.9052)	
1. I feel satisfied with my educational institution compared with expectations.	0.895
2. I feel satisfied with my educational institution compared with an ideal one.	0.837
3. Overall, I feel satisfied with my educational institution in general.	0.800
 <i>Student Loyalty (SL)</i> (eigenvalue=1.230, variance=11.179, alpha=0.8591)	
1. I would attend a bachelor degree course at my educational institution if it offers bachelor degree courses in future.	0.829
2. I would attend an advanced course at my educational institution if it offers them in the coming years.	0.764
3. If I had to apply for an associate degree course now, my educational institution would be my first choice.	0.725

## 4.2. Descriptive Statistics and Correlation Matrix

Mean scores of student satisfaction, relationship commitment and student loyalty were 3.639, 3.554 and 4.163, respectively (Table 2). Student satisfaction and relationship commitment scores being below 4 in the seven-point Likert-type scale indicates that respondents generally perceived less satisfaction and low commitment towards their educational institutions. However, the mean of student loyalty was more than 4, indicating that respondents were generally loyal to their educational institutions. For checking the extent of the actual departure from normality of each construct, skewness and kurtosis of the three constructs were computed. As all values of skewness and kurtosis of the three factors were within acceptable limits of  $\pm 1$ , the data obtained from the three constructs did not show deviations from normality (Hair et al., 1998).

**Table 2: Descriptive Statistics and Correlation Matrix for Constructs**

Constructs	Mean	Std Dev	Skewness	Kurtosis	Student Satisfaction	Relationship Commitment	Student Loyalty
SS	3.639	1.514	0.238	-0.8.4	1.000		
RC	3.554	1.515	0.312	-0.861	0.067 (0.058)	1.000	
SL	4.163	1.476	-0.01	-0.786	0.463* (0.000)	0.272* (0.000)	1.000

\* Correlation significant at 0.01 level (2-tailed)



## Wong

Results of correlation analysis suggest that there were significant positive effects of student satisfaction ( $p < 0.00$ ) and relationship commitment ( $p < 0.00$ ) on student loyalty, with satisfaction explaining a higher proportion of variance in student loyalty ( $R = 0.463$ ) than in relationship commitment ( $R = 0.272$ ). In addition, relationship commitment was found marginally correlated with student satisfaction ( $p = 0.058$ ) at 0.05 significance level. The overall results of the correlation matrix tentatively confirm that the theoretical research model of this study is true (Figure 1). There is a significant relationship between student satisfaction and student loyalty (H1). In addition, there is also a significant relationship between relationship commitment and student loyalty (H2).

### 4.3. Hypothesis Testing

Moderated hierarchical multiple regression analysis was conducted to test the three hypotheses of this study. The interaction variable (moderator) was derived by multiplying the student satisfaction variable by relationship commitment variable. A significant regression coefficient of the product term confirmed the moderating effect of relationship commitment on the relationship between student satisfaction and student loyalty. The direction of the moderating effect explains how students with the same level of satisfaction become more loyal. In hierarchical multiple regression analysis, independent variables were entered in steps, according to theoretical or logical considerations (Shannon and Davenport, 2001). In this study, independent variables were entered according to the logical consideration as suggested by Ranaweera and Prabhu (2003). The resultant models are shown in Table 3.

**Table 3: Results of Regression Analysis of Drivers of Student Loyalty**

Independent variables	Model 1	Model 2	Model 3
SS	0.463*	0.447*	0.737*
RC		0.242*	0.519*
SS $\times$ RC			-0.436*
$R^2$	0.214	0.272	0.291
Adjusted $R^2$	0.213	0.271	0.288
$F$	217.687*	63.688*	20.536*

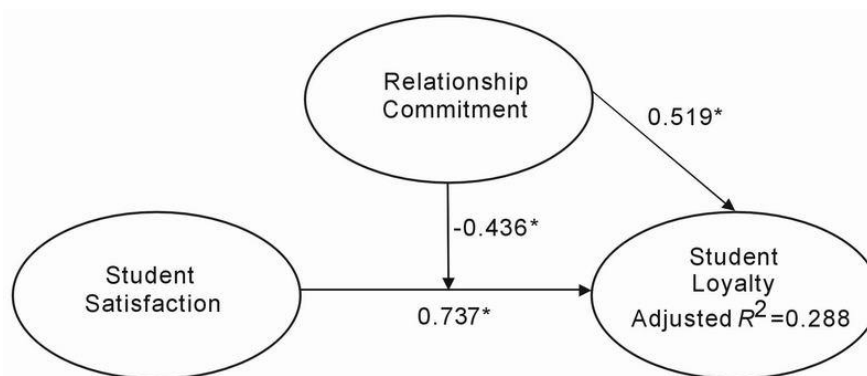
Dependent variable: Student loyalty

Notes:  $\alpha < 0.01$ .  $\beta$  coefficients have been reported. All changes in  $R^2$  values had a significant F statistic ( $*p < 0.01$ ).

Student satisfaction was entered into Model one to test the simple effect of student satisfaction on student loyalty. In Model two, relationship commitment was entered to test the simultaneous influence of student satisfaction and relationship commitment on student loyalty. In Model three, the interaction variable was entered to test for significant moderating effect, over and above the main effects of the two independent variables.

## Wong

The initial model (Model 1) contained the simple effect of student satisfaction on student loyalty and had an adjusted  $R^2$  value of 0.213, indicating that 21.3% of the variance in student loyalty could be explained using student satisfaction (Table 3). In Model 2, the relationship commitment variable was added to the model to examine the main effects of both independent variables acting together. This resulted in the adjusted  $R^2$  value increasing to 27.1%, which was statistically significant ( $F$  change = 63.688,  $p < 0.001$ ). Finally, the interaction variable was added to the model. As shown in Model 3, this addition resulted in a further increase in the adjusted  $R^2$  value to 28.8%, which was statistically significant ( $F$  change = 20.536,  $p < 0.001$ ). Indeed, while the marginal increases in  $R^2$  values were not necessarily of large magnitude, Model 3 explains the highest variance in the dependent variable and is the best model derived from this study (Figure 3).



**Figure 3: Results of Research Model**

The results of Model 3 show that the main effects of student satisfaction ( $\beta = 0.737$ ,  $p < 0.01$ ) and relationship commitment ( $\beta = 0.519$ ,  $p < 0.01$ ) are all significant and positive, thus confirming Hypotheses H1 and H2. These results also indicate that student satisfaction is a stronger driver of student loyalty than relationship commitment ( $\beta_{ss} = 0.737 > \beta_{rc} = 0.519$ ). Indeed, this finding is also supported by Model 2 in which the main effects of only student satisfaction and relationship commitment were examined ( $\beta_{ss} = 0.447 > \beta_{rc} = 0.242$ ). Model 3 provides evidence in support of H3. Specifically, the interaction effect of student satisfaction and relationship commitment is significant and negative ( $\beta = -0.436$ ,  $p < 0.01$ ). The negative sign indicates that the higher the level of relationship commitment is, the lower is the slope of student loyalty on student satisfaction. This shows that relationship commitment acts as a constraint, limiting those who are less than satisfied from leaving their educational institutions. This indicates that relationship commitment, where appropriate, can be an effective and alternative means of strengthening student loyalty.

To cross-validate the results, each individual response was randomly assigned to one of two subsamples, each having a sample size of 400. As shown in Table 4, analysis of both subsamples yielded similarly significant results. All hypotheses were significant. The results also show results similar to those obtained from analysis of the entire sample. Therefore, findings from the two subsamples validate the results obtained earlier from the entire sample.

## Wong

**Table 4: Results of Regression Analysis of Drivers of Student Loyalty of Two Subsamples**

Independent variables	Subsample 1			Subsample 2		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
SS	0.481*	0.450*	0.691*	0.402*	0.412*	0.776*
RC		0.170*	0.422*		0.349*	0.685*
SS × RC			-0.396*		-	-0.514*
$R^2$	0.231	0.260	0.274	0.161	0.283	0.309
Adjusted $R^2$	0.230	0.256	0.268	0.159	0.280	0.304
F	119.856*	15.070*	7.622*	76.641*	67.394*	15.006*

Dependent variable: Student loyalty

Notes:  $\alpha < 0.01$ .  $\beta$  coefficients have been reported. All changes in  $R^2$  values had a significant F statistic (\* $p < 0.01$ ).

## 5. Conclusions

### 5.1. Discussions of Findings

Strategies for managing student loyalty have become increasingly important for self-financed tertiary education institutions since the length of student relationship is the most important determinant of educational institutions' profitability. The results of this study support the main effects of student satisfaction and relationship commitment on student loyalty. The results also support the moderating role of relationship commitment on the student satisfaction-loyalty link. The significant moderating effect of relationship commitment implies that less satisfied students with high relationship commitment are more loyal to their educational institutions. The main implication is that it is vitally important for tertiary education institutions to create and maintain high relationship commitment among their students. Maintaining high relationship commitment may not be easy, but if successful, then student recruitment, retention and financial stability of the institution could be improved significantly. Overall, the results show that once a student has enrolled in an educational institution, the next logical step for the management is to develop student relationship management programmes to increase students' commitment towards the institution.

### 5.2. Limitations

This research should be seen as one of the preliminary attempts to apply relationship marketing concepts in self-financed tertiary education context in Hong Kong. It is understood that any preliminary attempt will involve a number of limitations. Firstly, the present study was conducted in an education setting with several unique features. The sample was drawn from students of only eight out of twenty-one tertiary education institutions in Hong Kong, limiting generalizability of the findings. Results may vary in different educational

## Wong

institutions, in different environments, and in different countries. Secondly, due to time constraints, a cross-sectional study was conducted, which was unable to take the actual behavior of respondents into account. Besides, this study focused on behavior intention (the repurchase intention of current associate degree students) of respondents, which is only a proxy of actual behavior. Thirdly, measurement scales used were adopted from previous studies. As the features of self-financed tertiary education context may be different from features of other contexts, the adopted scales might not be as effective as tailor-made scales for a particular context.

### 5.3. Future Research

Firstly, the sample was drawn from only eight identified self-financed tertiary education institutions. To enhance generalizability of findings, the study can be extended to other self-financed tertiary education institutions in Hong Kong. Besides, the study can also be conducted in other countries and other environments. Secondly, future research can be extended to analysis of segments having different demographic characteristics, in order to understand whether there are different perceptions among respondents from different genders, age groups, study disciplines, and courses of study. Thirdly, future research can consider studying other potential outcomes of relationship commitment. Repurchase intention aspect of loyalty is just one outcome. Other potential outcomes can include students' willingness to recommend their educational institutions to others, propensity to leave the educational institution, and co-operation with lecturers.

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