

What Matters to Malaysian Students Retention: University Image or External Environment?

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Abstract: In Malaysia, the growth of higher education institutions provides not only more opportunities but increasing competition within the industry. Despite its enormous potential, investigating student retention and its antecedents will provide vital input for the industry to sustain and strategize the most appropriate marketing actions. Therefore, this study aims to investigate how university image (program, facilities, reputation, and cost) and external environment (influences of peers and family and students' achievement) have a relationship with students' retention. A total of 300 university students participated in this study, which they were required to complete the online questionnaire. This study employed a correlational study using a cross-sectional design and close-ended questions. Remarkably, the finding of the current study confirmed only one dimension of the university image, namely reputation, had a positive relationship with students' retention. In contrast, university image attributes such as program, facilities, cost; and external environment, which is peer/family influence and achievement, have no relationship with students' retention. Future recommendations are also discussed in dealing with the students' retention issues concerning students' characteristics such as socioeconomic status and the mediating variable effects.

Keywords: Malaysian higher education, student retention, university image, external environment

1. Introduction

Nowadays, the education sector is increasing in number, mainly in Malaysia. In 2011, there was a vast increase in the Malaysian higher learning industry after passing the Private Higher Education and Institution Act 1996. Due to a low barrier to enter the education sector, it allowed more private colleges and universities to participate in the local higher education industry (Mahadzirah, 2009). However, the increasing number of public and private institutions in Malaysia increases the competition of the industry, which eventually increases the need to be exceptional and different from the providers. Thus to survive and stay competitive, higher learning institutions should strive to be the best in delivering their services, and this effort in return will attract more students to enroll in their institutions.

Due to intense rivalry among Malaysian universities, they need to attract students locally and internationally (Mazzarol, 1998). Higher education is increasingly known as a service industry by higher education institutions and focuses on catering to their customers', students' expectations, and needs (DeShields et al., 2005). Students are said to be direct recipients of the university's services, for instance, a three-year degree program made up of several modules at each level (Douglas et al., 2006). Operating in such a competitive and commercial environment, the development of flexible strategies is undoubtedly essential to deliver a quality educational service to students and obtain competitive advantage (Poole et al., 2000; Khan and Matlay, 2009).

Noticeably, the higher institutions' trends are now moving towards branding their programs and thus engage in marketing (Azoury et al., 2014). The reason why there is intense competition is that universities are trying to attract the best students. Thus, the university plays not just an institution of higher learning but also a business. It is a vital role of institutional image and reputation in affecting the intention of customers' buying (Barich and Kotler, 1991). The purpose is often to enhance the university's reputation and to have a positive influence on university ranking. According to an established and long-held conclusion, brand image has a considerable influence on consumer behavior (Loudon and Della Bitta, 1995, p.406). According to James et al., (1999), image is deemed to be a strong predictor of current students' retention and the attraction of potential and future students. Thus, it is logical and not surprising that presently, brand image plays a significant role in companies and non-profit field of context (Palacio et al., 2002).

On the other hand, to create sustainable competitive advantage, private colleges and universities implement a variety of strategies such as improving their service quality so that they can promote their institutions via high service quality (Shaheen et al., 2015). Previous researchers have found that students' satisfaction and retention rates in higher education institutions have a positive relationship, and thus the same assumptions are applicable to be used in this study. High student satisfaction leads to high intention to continue to the next high level of education (Anderson, Fornell, & Lhmann, 1994; Berthon, Ewing, & Napoli, 2008).

Moreover, the growth of higher education institutions provides more opportunities for potential candidates to pursue their studies at a higher level (Mahadzirah, M. et al., 2009). Thus, students have more choices to select their higher learning institutions to continue their further studies. Hence, in turn, creating a situation where they have more 'bargaining power' for higher quality and more services. Buyers' bargaining power is one of the forces that make the industry becomes competitive, according to Porter Competitive Forces (Wheelen and Hunger, 2008). Also, in 2011, the government has allocated some amount of money of RM2.68 billion to fund higher education which is masters and Phds and expected to produce 5000 graduates through MyPhd, 40,000 holders from MyMaster program, 500 holders with industry Ph.D. and 9700 holders from SLAI in 2015 through MyBrain15 program. This is in line with the 10th Malaysian plan's mission to create a group of highly knowledgeable human resources as a catalyst for research, development, and innovation. Aim of this program is to develop a first world talent base, which will be one of the initiatives to promote Malaysia as a high-income country. The government aims to produce 60,000 Ph.D. holders among the people of Malaysia by the year 2023. Hence, it is a critical task for universities and colleges to increase the number of postgraduate students' enrollment in order to ensure successful long-term performance of institutions (Mahadzirah et al., 2009).

Student retention has always been an essential indicator of the survival of higher education institutions. Hence, investigating student retention and antecedents of student retention is very vital in order to come out with the most appropriate marketing strategy. The education institutions may consider increasing the value they offer to retain students and guarantee government funds in the future. Thus, this study focuses on what accounts for students' retention by considering external environment influences such as the influence of peers and family and students' achievement. Most of the previous studies have been conducted at public higher universities that provide the evidence that corporate image has the impact toward students' loyalty such as the study by Mahadzirah and Zainudin (2009), Zainudin (2007), and Peter, Hong, Gabriel, Mustafa and Tan (2010). However, numbers of studies are into students' satisfaction and not into students' retention. This student retention refers to the intention to stay for the next postgraduate program in the same university. Thus, there is still an unanswered question; that is what accounts for students' retention. Therefore, this study is carried out to fill the gap by examining the impact of Higher Education Institutions attributes on students' retention.

2. Institutions' Review and Hypotheses Development

2.1 Students' Retention

Students' retention can be elaborated in terms of retention with institutional courses, programs, and campuses (Sharma, 1998). Students' retention was often an indication of students' satisfaction with their university program and hence, indirectly, the quality of the university education (Druzdzel & Glymour, 1995). Researchers delineated four types of retention (Hagedom, 2005): 1) 'Institutional retention' can be linked to institutions including colleges and universities, 2) 'System Retention' refers on students' retention with the system of higher education, 3) 'Retention with academic discipline' regards students' selection and completion of a specialized academic discipline, 4) 'Retention with course' is measured by students' educational level. In higher educational institutions, students are customers (Guolla, 1999). Moreover, some past researchers have perceived and defined the concept of loyalty in a few definitions. Retention is positively related to loyalty (Dick and Basu, 1994; Oliver, 1997; Henning-Thurau et al., 2001).

2.2 University Image

The concept of an image has always been the issue of defining its term itself. According to Barich and Kotler (1991), institutional image is the overall impression made on the minds of the public on how institutions should be portrayed. Most authors defined image as "a set of beliefs and feelings that is prone merely to a cognitive approach." However, image is the feeling when the image is evaluated. Thus, Martineau came out with his definition regarding the image of commercial establishments as "...the way in which the stores are described in the consumer's mind based on functional qualities and psychological attributes."

Accordingly, Kennedy (1997) regarded that institutional image can be divided into two types of images, which are functional image and moving image. The functional component is related to physical stimuli that can be easily measured, while the emotional component is associated with psychological dimensions that are projected through feelings and attitudes towards an organization. Based on the study of Mazursky and Jacoby (1986), both explained that the functional qualities could be in the form of physical properties involving the range of goods, the price band and the layout of the store, while psychological attributes refer to the consumer's sense of belonging, to his sensation of good or bad taste and his feeling of warmth toward the store. These feelings are derived from

individual experiences with an organization and from the processing of information on attributes that constitutes functional indicators of corporate image. A study conducted by Palacio et al. (2002) on Spanish university students found that university image affected the students' satisfaction. The results of a study conducted by Mayo et al. (2004) have revealed that conflicting family/work demands, financial issues, and academic concerns were the factors identified by students for students' retention.

2.3 University Image Attributes

2.3.1 University's Program

Academic program offerings and its range of content and duration are found to have a significant link to student's college selection, as reported by Ford et al. (1999) and Yusof et al. (2008). The studies of Mehboob et al. supported this., (2012) that program found to be the second most influential factor by most students in selecting their higher education institutions. According to Hooley and Lynch (1981), their study suggested that the program's suitability turned out to be the most critical aspect to be considered in students' college choice. A study by Krampf & Heinlein (1981) found that post-secondary students were selecting their university by comparing the programs offered by institutions to assess their suitability. Most of the programs are evaluated by students based on following criteria: the selection of courses (Qureshi, 1995); availability of courses and entry requirements (Bourke, 2000); quality and variety of education (Shanka, Quintal & Taylor, 2005); and quality and flexibility of degree/course combinations (Holdsworth & Nind, 2006). It was also supported by studies of Ford et al. (1999) in which program issues such as range of programs of study, the flexibility of degree program, significant change flexibility ad range of degree options are the most critical factors to be considered by students to choose higher education institutions.

According to Boohene and Agyapong (2011), in their study of customer retention of the telecommunication industry involving 7,621 clients of Vodafone (Ghana), the coefficient indicated an increase in corporate image led to an increase in customer retention. Students' selection of an institution was related to another institution's characteristics which the institution itself offered the program. According to Hooley and Lynch (1981), to be considered by students in selecting students' institutions, the suitability of programs is away an essential factor for them. Hence, it is hypothesized that:

H1: When a university provides a better program, this will lead to students' retention

2.3.2 Facilities

Absher & Crawford (1996) and Hassan et al. (2008) stated that educational facilities such as classrooms, laboratories, and libraries are essential in selecting a college or university by students. The study of Ancheh et al. also supported this., (2007) the facilities are the third-factor influencing students' satisfaction. Besides, based on studies of Price, Matzdorf, Smith, and Agahi (2003), the result showed a positive significant of higher outstanding ratings for cleanliness and all questions regarding the facilities related to learning and teaching, including the library, availability of computers and students' study room. This was also supported by the study of Ancheh et al. (2007), stating that facilities were the third-factor affecting students' satisfaction. Hence, the university's facilities are one of the drivers of student enrollment's decision. Several previous studies found that institutional image and reputation strongly affect retention (Nguyen and Leblanc, 2001; Bloemer and De Ruyter, 1998). According to Boohene and Agyapong (2011), in their study, found that the coefficient indicated that an increase in corporate image led to an increase in customer retention.

Physical facilities in terms of the quality of academic, accommodation, sports, and recreation were necessary to students in choosing the institution to study (Joseph & Ford, 1997). According to Absher & Crawford (1996), Hassan, Azmi & Mohamad (2008) stated that university facilities such as classrooms, libraries, and others are essential factors for selecting a university. Therefore, it is proposed that:

H2: When a university provides better facilities, this will lead to students' retention

2.3.3 Reputation

College reputation appeared to be a powerful influence of college choice, as studied by Lay and Maguire (1981), Murphy (1981), and Keling (2006). It was prevailed to have a substantial impact and persuasiveness power on students' decision of college enrollment. University reputation has a significant effect on the university's choice. Reputation was viewed as an influential predictor by students in the college choice process (Lay & Maquire, 1981; Murphy, 1981; Servier, 1986; Keling, 2006).

Daily et al. (2010) stated that institutional reputation was one of the most critical attributes for international students to further their business degree in U.S. Reputation is regarded as critical intangible resources of the organization that is crucial for its survival (Nguyen and Leblanc, 2001). Reputation can be defined as an outcome of the process that the organization signals key characteristics to its constituents to maximize social status. Thus, this study suggests that:

H3: When a university has a good reputation, this will lead to students' retention

2.3.4 Cost

According to Joseph and Joseph (2000), cost-related issues seem to be more important as time flies. Paddle et al. (2010) regarded the cost of education like tuition fees, accommodation fees, exchange rates, etc. as one of the seven factors that determined the decision-making process by international students. Students considered cost and affordability. Jackson (1986) regarded that price negatively influences college choice, whereas financial aid is a

positive influence as it reduces costs. Financial support from parents and family may limit the choice of university students to choose as they consider economic factors before making any decisions.

The impact of school fees varies with other factors. Demand for private universities was found to be more price-sensitive than public universities (Bezmen & Depken, 1998). According to Heller (1997), the study showed that low-income students are more sensitive to price changes than those with a higher income's family background. Moreover, the cost refers not only to educational fees but also to other cost items to be influential in the studies. Wagner and Fard (2009) in Malaysia found that cost of education also has a significant relationship with a student's intention to study at a university. In this study, therefore, it is hypothesized that:

H4: When the study cost is reasonable, this will lead to students' retention

2.4 External Environment

The external environment in the context of higher education refers to non-academic in improving students' retention. Non-academic factors can also affect retention (Braxton, 2000). These non-academic factors include the level of commitment to obtaining a degree, level of academic self-confidence, academic skills, and level of academic and social integration into the institution. Colleges and universities need information on the non-academic factors related to college retention and performance (Schnell and Doetkott, 2003). In addition, once a student enrolls in college, retention can be influenced by Grade Point Average (GPA). According to Tinto (1993), first-year programming has a significant impact on academic achievement, academic persistence, and graduation for its participants. It turned out that academic achievement was regarded as one of the non-academic factors in higher education.

Besides that, formal sources of interpersonal information such as agents, experts, academicians, university staff, and counselor and informal sources such as friends, family, neighbors, and relatives have a positive influence on student commitment and increase persistence (Wyckoff, 1998). In that study, socializing agents and interactions outside of the classroom exert a direct influence on students' development and competence and, thus, influence the intention to remain in college.

2.5 External Environment Attributes

2.5.1 Peers and Family

Some studies have identified external factors of third-party influence could influence students' decisions (Gray et al., 2003; Cubillo et al., 2006; Ismail et al., 2007; Wagner and Fard, 2009). A study conducted by Baharun (2006) found that family advice and a recommendation was the most important factor, with advice from peers ranking second that influenced students' choice of tertiary education. According to Hayden (2000), friends and former students' advice and opinions weigh heavily on the minds of college applicants when deciding between colleges.

According to Maringe (2006), Hemsley-Brown, and Oplatka (2006), the study found that approximately 27% of the students turned to their friends and neighbors for their higher education institutions' choice. This is because formal sources of interpersonal information such as agents, experts, academicians, university staff, and counselors are less influential compared to informal sources such as friends, family, neighbors, and relatives. However, formal sources may be more trustworthy whenever the product is perceived as highly technical and with high involvement (Coccaro et al., 1995).

A study conducted in Malaysia by Wagner and Fard (2009) resulted that families, friends, and peers have a strong influence on the student's choice of university. Moreover, there is a significant relationship between influences from families, friends, and peers and students' intention to study at a higher education institution. Moreover, students' achievement influences students' intention to continue the study. Hence, the following hypothesis is proposed:

H5: When the students received support from peers and family, this will lead to their retention to the university

2.5.2 Students' Achievement

Test scores and essential skills measure students' achievement. These attributes reflected from students' aptitude, accountability, responsibility, and determination to achieve mastery goals and the community (Dweck et al., 1988). The definition of academic achievement is that as the grade's mean that students obtain through their different courses, academic achievement equals Grade Point Average (GPA). GPA is generally measured through a scholar evaluation system that translates the students' accomplishments into a quantitative gradation (Arevalo-Deleon, 2008). Another predictor of student retention, academic integration, has 'varying forms' (Tinto, 1975) that relate to the level of student academic engagement with faculty and fellow students as reflected in grades, intellectual stimulation and personal intellectual development. High school academic achievement indicators, including grade point averages and class rank, are positively related to undergraduate retention (Adelman, 1999).

Academic achievement can be seen as the measure of student's performance. According to Amin, Yap Seng, and Eng (2006), academic achievement is how governing bodies assess whether a medical graduate is sufficiently competent and fit to practice medicine. This performance is used as an indicator to determine which students

perform the appropriate level of competence as defined as academic standards. It is also used by students to ascertain their academic progression, whether they pass or fail in certain areas (Shumway & Harden, 2003). In undergraduate education, several tools are used to determine students' academic performance and competence. The most common methods for assessment are writing assignments (Chamorro-Premuzic, Furnham, et al., 2005). Those methods, including multiple-choice exams, written coursework essays, and short essay answer examinations. Thus, this study proposes that:

H6: When the students have an excellent study achievement, this will lead to their university retention.

3. Research Methodology

This study employed a correlational study using a cross-sectional design aimed to examine the relationships between university image (independent variable), the external environment (independent variable), and students' retention (dependent variable). An online questionnaire was developed using structured questions and targeted to 300 university students. By having an online distribution of questionnaires, the targeted samples will be directly aimed at mostly internet users, specifically social media users. Another evident reason to conduct the study using an online survey is that due to time constraints, the use of such an online survey can help to effectively minimize the time needed as in through physical distribution, as well as having a faster response and broader exposure to reach the targeted respondents.

In the research questionnaire, the close-ended questions were developed. The closed questions will give more advantages as they are comfortable and convenient in processing data and assessing the relationship between these variables (Bryman and Bell, 2003). The instruments for 1) the program (eight items) adapted from Ancheh et al., (2007) and Kusumawati (2013). 2) The facilities (seven items) adapted from Helgesen and Nettet (2007), Sia (2010), Baharun, et al., (2011), and Purgailis and Zaks (2012). 3) The reputation (seven items) adapted from Kusumawati (2013), Nguyen and LeBlanc (2001), Sidin et al. (2003), and Kaur and Soch (2012). 4) The cost using five items of measurement adapted from Wagner and Fard (2009) and Joseph and Joseph (2000). 5) Measurement for peer and family using six items adapted from Wagner and Fard (2009). 6) Measurement for students' achievement was determined through the Cumulative Grade Point Average (CGPA). 7) students' retention was determined by using four items of measurement adapted from Nurlida et al., (2010) and Kaur and Soch (2012). This study used a five-point Likert Scale ranging from "strongly disagree" (1) to "strongly agree" (5) to assess each statement. To achieve the objectives, all the obtained data were analyzed using the Statistical Package for Social Science, SPSS version 22.0, and Smart PLS version 2.0. The questionnaire began with screening questions to ensure this study targeted only students who intend to study further. The reason that the respondent was given a screening question was their experience studying in the university and understanding how university image and external influences affect their intention to further study in the same university. Moreover, this study could identify the antecedents of students' students' intention to stay or leave the university

4.0 Findings and Discussion

4.1 Measurement Model

To test the reliability, convergent validity, and discriminant validity of the model, all loadings must be higher than 0.60 and that the constructed Average Variance Extracted (AVE) must exceed 0.50 (Bagozzi et al., 1981; Hair et al., 2013) of which according to the Table 4.1, all loadings satisfied the requirement.

Table 4.1 Measurement Model

Construct	Measurement				
	Items	Loading	AVEa	CRb	Cronbach α
ACHIEVEMENTS	CGPA	SIM	1	1	1
COST	COST1	0.830	0.619	0.890	0.845
	COST2	0.782			
	COST3	0.756			
	COST4	0.810			
	COST5	0.751			
FACILITIES	FAC1	0.727	0.543	0.877	0.831
	FAC2	0.721			
	FAC3	0.744			
	FAC4	0.768			
	FAC5	0.650			
	FAC6	0.804			
PEERS AND FAMILY	PF1	0.851	0.634	0.896	0.855
	PF3	0.823			
	PF4	0.881			

		Rashid ^f			
	PF5	0.646			
	PF6	0.759			
PROGRAM	PRO1	0.730	0.573	0.889	0.851
	PRO2	0.786			
	PRO5	0.676			
	PRO6	0.787			
	PRO7	0.753			
	PRO8	0.804			
REPUTATION	REP1	0.814	0.636	0.924	0.904
	REP2	0.816			
	REP3	0.826			
	REP4	0.811			
	REP5	0.675			
	REP6	0.806			
	REP7	0.825			
RETENTION	RET1	0.895	0.780	0.934	0.905
	RET2	0.906			
	RET3	0.927			
	RET4	0.800			

a AVE = (summation of squared factor loadings)/(summation of squared factor loadings) (summation of error variances)

b Composite reliability = (square of the summation of the factor loadings)/[(square of the summation of the factor loadings) (square of the summation of the error variances)]

In this study, the convergent validity measurement model was assessed by examining the Average Variance Extracted (AVE) value in which convergent validity is acceptable when the AVE value is at least 0.5 or more than 0.5 (Chin, 1998). The table above shows that the entire constructed AVE for each construct has a range of 0.543 to 1.000, which exceeded the average recommend threshold value of 0.5. This result projected a result of an adequate convergent validity for this study measurement model that had been demonstrated. As recommended by Fornell and Cha (1994) and Fornell and Larcker (1981), the constructed AVE value should be higher than the correlation in between, as shown in Table 4.1, it indicated that constructed AVE has discriminant validity.

4.2 Discriminant validity

Table 4.2 Discriminant Validity

CONSTRUCTS	CGPA	COST	FAC	PF	PROG	REP	RET
CGPA	1.000						
COST	0.024	0.786					
FACILITIES	0.004	0.647	0.737				
PEERS AND FAMILY	-0.066	0.254	0.422	0.796			
PROGRAM	0.063	0.559	0.685	0.436	0.757		
REPUTATION	0.066	0.578	0.700	0.495	0.691	0.798	
RETENTION	-0.014	0.567	0.663	0.482	0.619	0.739	0.883

Note: Diagonals represent the square root of the AVE while the off diagonals represent the correlations

In this study, the discriminant validity measurement model was assessed using two different measurements: the Fornell and Larcker's (1981) criteria, while the second measurement is Cross Loading. The measurement for discriminant validity is when first, the square root of the AVE exceeds the correlation between the measurement and other measurements that had conducted. Meanwhile, for cross-loading is where the indicator for loadings' are higher against others constructed measurement. The bolded elements in Table 4.2 represented the square roots of the AVE value and correspondent with the non-bolded value, representing the inter-correlation value between the constructs. Thus, table 4.2 showed that the results are met based on Fornell and Larcker's criteria.

4.3 Cross Loading

The second assessment for discriminant validity is to measure the indicators' loading with all of the constructed correlation—the results of loadings obtained through cross-loading generated by the Smart PLS algorithm. Table 4.3 showed the output of the cross-loading between the other non-bolded constructs. The demonstration of the loading of each block is higher than the other rows and columns. The cross-loading showed a higher loaded value against their respective intended latent variable. Hence, the cross-loading results confirmed that the second assessment of the measurement model's discriminant validity was satisfied.

Table 4.3 Cross Loading

	CGPA	COST	FAC	PF	PROG	REP	RET
CGPA	1.000	0.024	0.004	-0.066	0.063	0.066	-0.014
COST1	0.056	0.830	0.584	0.246	0.514	0.503	0.440
COST2	0.039	0.782	0.513	0.179	0.453	0.460	0.450
COST3	-0.030	0.756	0.397	0.174	0.484	0.431	0.405
COST4	0.060	0.810	0.544	0.114	0.378	0.477	0.453
COST5	-0.037	0.751	0.493	0.281	0.374	0.401	0.477
FAC1	0.141	0.474	0.727	0.237	0.495	0.442	0.479
FAC2	0.006	0.448	0.721	0.309	0.452	0.500	0.457
FAC3	-0.016	0.446	0.744	0.310	0.514	0.531	0.452
FAC4	-0.033	0.490	0.768	0.271	0.500	0.459	0.435
FAC5	-0.007	0.447	0.650	0.195	0.440	0.453	0.423
FAC6	-0.063	0.543	0.804	0.480	0.601	0.666	0.638
PF1	-0.087	0.271	0.362	0.851	0.409	0.466	0.385
PF3	-0.086	0.176	0.345	0.823	0.337	0.396	0.384
PF4	-0.032	0.235	0.420	0.881	0.363	0.452	0.467
PF5	-0.013	0.059	0.215	0.646	0.260	0.254	0.263
PF6	-0.032	0.217	0.293	0.759	0.349	0.356	0.384
PRO1	0.045	0.390	0.462	0.352	0.730	0.421	0.387
PRO2	0.090	0.453	0.508	0.327	0.786	0.529	0.467
PRO5	0.041	0.401	0.483	0.306	0.676	0.451	0.412
PRO6	0.099	0.483	0.569	0.292	0.787	0.597	0.505
PRO7	-0.038	0.422	0.529	0.338	0.753	0.501	0.539
PRO8	0.048	0.390	0.549	0.370	0.804	0.606	0.476
REP1	0.154	0.523	0.582	0.413	0.649	0.814	0.638
REP2	-0.005	0.445	0.556	0.403	0.511	0.816	0.596
REP3	-0.012	0.468	0.578	0.350	0.634	0.826	0.646
REP4	-0.009	0.479	0.640	0.412	0.571	0.811	0.587
REP5	0.036	0.358	0.413	0.368	0.395	0.675	0.478
REP6	0.056	0.462	0.550	0.385	0.498	0.806	0.579
REP7	0.143	0.477	0.565	0.436	0.557	0.825	0.585
RET1	0.025	0.508	0.608	0.400	0.585	0.643	0.895
RET2	-0.053	0.486	0.602	0.496	0.492	0.654	0.906
RET3	-0.044	0.520	0.600	0.416	0.546	0.668	0.927
RET4	0.023	0.486	0.529	0.392	0.559	0.645	0.800

Horizontal check discriminant validity – Vertical check convergent validity (it must not higher than the loading of the variable in bold items)

4.4 Hypotheses Testing

To validate the proposed hypothesis, the structural model needs to be conducted and based on previous research conducted stated that the level of acceptance based on the path coefficient is at least 0.1 to impact the model (Hair et al, 2011; Wetzels et al, 2009). In addition, an acceptable significant level of at least 0.05 indicated to have a positive and consisted path coefficient value.

Table 4.4 Hypothesis Testing

Hypothesis	Relationship	Std. Beta	SE	t-value	Decision
H1	PROG -> RET	0.002	0.059	0.040	Not Supported
H2	FAC -> RET	0.101	0.082	1.236	Not Supported
H3	REP -> RET	0.322	0.063	5.150**	Supported
H4	COST -> RET	0.044	0.057	0.765	Not Supported
H5	PF -> RET	0.067	0.056	1.189	Not Supported
H6	CGPA -> RET	-0.032	0.033	0.965	Supported

Note: ** $p < 0.01$ (2.33); *0.05 (1.645) or $t\text{-value} > 1.65$ *($p < 0.01$)

The data used to measure the acceptable level of significance of the hypothesis was obtained by performing bootstrapping in Smart PLS 2.0 whereby the result of the t-value obtained from it to determine the significance of the hypothesis. The results from Table 4.4 showed that only reputation was significant.

4.5 The relationships between university image (program, facilities, reputation, cost) and students' retention

The present study examined the effect of university image attributes on students' retention. Based on the result, most of all dimensions of university image (program, facilities, and cost) had no positive relationship with students' retention except reputation.

The program was found to have no impact on students' retention. This finding indicates that even though students are satisfied with the university's programs, this factor does not lure them to further study in the same university when there are many other universities they could choose to study locally. Surprisingly, excellent facilities and reasonable study fees provided by universities were not good factors for students' retention, and these findings were not in line with many previous studies. However, it was different for reputation. The factor was found to have a positive relationship with students' retention, implying that a good reputation of a university among Malaysian university students was the essential attribute that enhances university image. A reputable image of one university may guarantee to satisfy its students and eventually retain the students to further their studies in the same university. Hence, realizing this vital attribute, universities could use their reputation to emphasize their marketing strategies, in which this approach may highlight the excellent image of the universities. This indirectly can increase satisfaction among students, and eventually, they will continue to study at the university. This strategy may also work to best compete with other universities, including private colleges.

4.6 The relationships between external environment (peers and family, students' achievement) and students' retention

Based on the result, which was to test if there was a positive relationship between the external environment and students' retention, the result found that all dimensions of the external environment, namely peers and family and students' achievement, did not influence students' retention to further study for next postgraduate program. This finding suggests that other factors that are essential than family influence and study achievement are considered by students when they decide to retain in the same university for their postgraduate program. Surprisingly, this finding was not consistent with numerous previous studies. A majority of findings have proven that the influence of third parties (for example, peer and family) impacts students' retention to further study in the same university. To conclude, Malaysian university students would not deliberate the issues of family influence and their study achievement compared to international students when deciding to stay or leave the university when continuing studies at the postgraduate level.

5. Conclusion

Importantly, there was only one significant factor that influenced student retention: university reputation yet other dimensions (for example program, facilities, cost, influence of peers and family and CGPA) were not significant towards retention of students. This study only focused on university attributes and external influences that affecting and students' retention. Hence future researchers can extend the study model with the extension of other antecedents of students' retention. More constructs can be defined if the researchers can look into other aspects of students' intention to further study in the same university. For instance, future research can explore students' characteristics such as socioeconomic status whether it has an impact on students. Other than that, exploring mediating variables can also be done to understand other mediating effects that will have on mediating relationship with students' retention. To further validate this area, further study can be carried out to test the conceptual model in private colleges and universities.

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