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UNIVERSITY ENROLMENT INTENTIONS FROM STUDENTS' VIEWPOINT

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Abstract

The purpose of this study is to examine the effect of brand equity dimensions and university ranking on students' enrolment intentions. To achieve this objective, this study was able to obtain 200 respondents from the National Energy University's by using a simple random sampling method. The partial least square-structural equation modeling (SmartPLS) 3.0 was applied to analyse the data in this study. The data then was tested with two major analyses namely a measurement model and a structural model. The results indicate that the two dimensions of brand equity such as brand association and perceived quality have positive relation to students' enrolment intentions. In addition, university ranking has shown a positive influence on students' enrolment intentions at the National Energy University. However, brand awareness has no significant influenced on students' enrolment intentions. The findings in this study may help the National Energy University to craft a right marketing strategy in a way to recruit future students and competing against its rivalry.

Keywords: Brand equity, university ranking, enrolment intention.

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1. Introduction

Under the Malaysian Universities and University Colleges Act 1969, five public universities were established in the 1960s to 1970s, four in the 1980s to the early 1990s, and 10 in the late 1990s to the early 2000s. With a shift to a knowledge-based economy in the mid-1990s and failure of public institutions to satisfy and occupy the rising demand for higher education, higher education in Malaysia has been divided into public and private systems (Wong & Hamali, 2006). As at April 2017, there are 495 active private higher educational institutions and 20 public universities in Malaysia (Department of Higher Education, 2017). Based on the current figures, universities in Malaysia are facing intense competitions pertaining to enrolling new students (Joseph et al., 2012; Bock et al., 2014; Khanna et al., 2014). Nowadays, choosing a university is one of the most important decisions for university students and prospects. After all, a degree is a lifelong achievement and having a degree from a reputable university confers a non-physical advantage that will directly affect ones' workplace competitiveness and performance.

The recruitment process is only the beginning of a long-term relationship that higher educational institutions (HEIs) need to cultivate, not only while students attending the programs but also beyond graduation. How universities manage the relationship with the students and how students perceive their institution's brand can have an impact on the attachment with the institution and lead to students' intentions to engage with the university in the future. Brand is a form of quality attained through long labor and scientific studies. Brand also has become imperative to gain customer loyalty and the long term survival and development of businesses, and educational institutions are no exception (Chen & Chen, 2014). Many past studies highlighted the necessity for research to capture the outputs that comes from establish branding and how it practically match with HEIs context (Watkins & Gonzenbach, 2013; Dholakia & Acciardo, 2014; Goi et al., 2014).

This study develops and tests a unique model in the context of HEI (The National Energy University). Therefore, the review of the literature incorporates previous research in the branding field (see work by Aaker, 1991; Yoo et al., 2000; Escalas & Bettman, 2005; Chapleo, 2010; Jalilvand et al., 2011; Goi et al., 2014; Chen & Chen, 2014; Millot, 2015; Dennis et al., 2016; Satvati et al., 2016) to conceptualize the proposed model. From the reviewed literatures, this study has adopted the brand equity dimensions proposed by Aaker's (1991) and university ranking (Millot, 2015) onto the context of study. Aaker (1991) defined brand equity as a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and or to that firm's customers. He further suggests that brand equity consists of five dimensions: brand awareness, brand association, perceived quality, brand loyalty and patent and trademark. However, this study only selected three brand equity dimensions (brand awareness, brand association and perceived quality) which found applicable for the current study. In addition, one of the elements of brand attribute called university ranking is also used to explain the enrolment intentions in higher educational institution (Millot, 2015; Daraio et al., 2015).

Brand awareness defined as the strength of a brand's presence in consumers' minds and is an important component of brand equity (Aaker, 1991; Keller, 1993). Aaker (1991) added that the brand awareness as the ability of the potential buyer to recognize and recall that a brand is a member of a certain product category. In relation to brand association, Aaker (1991) justified as anything linked in memory to a brand. Aaker (1991) additionally stated that a brand association has a certain par of fortitude, and that the

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link to a brand will be stronger when related to experiences to communications, and when a network of other links supports it. Besides, perceived quality is one of another important dimension of brand equity (Aaker, 1991). Perceived quality is not the actual quality of the product or service but the consumer's subjective evaluation of the product or service (Jalilvand et al., 2011). It is a competitive necessity and many companies today have turned customer-driven quality into a potent strategic weapon. They create customer satisfaction and value by consistently and profitably meeting customer's needs and preferences for quality. Kotler et al., (2009) stated the intimate connection among product and service quality, customer satisfaction, and company profitability. The above mentioned of brand equity dimensions have influenced the enrolment intentions. Moreover, Dumitrescu et al., (2011) stated that intention is the strongest determinant of behavior.

University ranking is generally comes from the results of teaching and research activities. Most universities usually will use the ranking to draw attentions from future and existing students. According to Daraio et al., (2015) even though the ranking only include a small set of indicators like alumni nobel and field prizes, student and staff ratios, international students and international staff, but many universities used the ranking to recruit and maintain the existing (Millot, 2015). The university ranking will eventually generate a good image to the publics and helps to create a positive institutional reputation. A positive reputation can be of critical importance for crowded and competitive markets as prospective students may attend a leading university because of the overall reputation, even though a school or department may not be perceived as strong (Nguyen & LeBlanc, 2001; Melewar & Akel, 2005; Mohamad et al., 2007; Daraio et al., 2015; Cooper et al., 2017).

Marketing staffs employed in The National Energy University will gain some knowledge from this research such as reviewing the previous marketing or branding strategies and to design proper plans to recruit students and future prospects.

2. Problem Statement

Department of Higher Education, (2017) reported that 495 active private higher educational institutions and 20 public universities in Malaysia. The number indicates that the universities in Malaysia are competitively challenges to recruit new students or to sustain the current students (Joseph et al., 2012; Bock et al., 2014; Khanna et al., 2014). Lately, the number of new students enrol in majority of private universities were declined. In National Energy University, starting from 2016, the new intakes to enrol in the programs offered are decreasing. Table 01 displayed the active students from 2016 to 2017. In general, the National Energy University has three intakes per year (February, May and October). Table 01 show that the active students for the majority of programs like undergraduates, diploma and foundation are declining.

Table 01. Active students (2016-2017)

Program	May 2016	October 2016	February 2017	May 2017
Postgraduate	47	48	42	43
Undergraduate	3009	2965	2681	2618
Diploma	468	369	319	350
Foundation	202	185	175	101
Total	3726	3567	3217	3112

Source. Registrar office, The National Energy University (Sultan Haji Ahmad Shah campus)

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Based on the highlighted issue, the study incorporated the brand elements (brand equity dimensions and brand attribute) because it leads the intentions of students to connect with the university. Besides, Chen & Chen (2014) insisted that the brand has become imperative to gain customer loyalty and the long term survival and development of businesses including educational institutions.

3. Research Questions

The research question for this study is;

Does the brand equity dimensions and brand attribute (university ranking) have any effects on enrolment intentions?

4. Purpose of the Study

This paper aims to contribute to an underdeveloped area in the literature related to brand equity and brand attribute in the context of The National Energy University. Specifically, the purpose of this study is to examine the influence of The National Energy University's brand equity dimensions (brand awareness, brand association and perceived quality) and brand attribute (university ranking) towards enrolment intentions.

5. Research Methods

The unit of analysis in this study is the existing students who were studying at The National Energy University (Sultan Haji Ahmad Shah campus). A simple random sampling method has been used to this study. Three hundred questionnaires were emailed to respondents' email address and the data collection was carried out over a period of 1 month. A total of 200 questionnaires were received and used for further analysis. The questionnaire used in this study consisted of two parts. The first part is consisting of exogenous and endogenous factors and the second part is pertaining to the profile of respondents. There are 16 items were used to measure the brand awareness, brand association, perceived quality, university ranking and enrolment intention. The portions of items are: brand awareness (3 items); brand association (3 items); perceived quality (4 items); university ranking (3 items) and enrolment intention (3 items). The items were adapted from Yoo et al., (2000), Jalilvand et al., (2011) and Millot (2015). A six-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree) was used to measure the constructs in part 1.

In addition, four questions were used to explain the profiles of respondent. Among the questions to capture the profiles of respondent are like gender, age, level of study and areas of study. The completed instrument was pre-tested by 20 respondents in The National Energy University. Based on the feedback obtained from the pre-test, the questionnaire was subsequently refined. The data obtained was analyzed using the partial least square (SmartPLS) 3.0 (Ringle et al., 2015). Descriptive analysis, test of measurement model and test of structural model are among the type of analyses conducted for this study.

6. Findings

Table 02 shows the details of respondents' profile. Respondents are varied in the form of gender, age group, level of study, areas of study and parents monthly income. From a total of 200 respondents, 42.5 percent were male and 57.5 percent were female. With regard to age group, the majority (69.0 percent)

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of respondents was 21 to 24 years old and followed by 19.5 percent (18 to 20 years old). In relation to level of study, 84.5 percent of respondents were from Degree programs and followed by Diploma program with 8.5 percent. Additionally, most of respondents (30.5 percent) were enrolled with BBA in Human Resources Management program, 29.0 percent from Bachelor of Accounting and followed by Bachelor of Finance with 16.5 percent. Table 02 below has summarized the respondents' profile of this study.

Table 02. Respondent's profile

Item	Category	Frequency	Percentage (%)
Gender	Female	115	57.5
	Male	85	42.5
Age group	18-20 years old	39	19.5
	21-24 years old	138	69
	25-28 years old	23	11.5
	29 years old and above	0	0
Level of study	Foundation	13	6.5
	Diploma	17	8.5
	Degree	169	84.5
	Master	1	0.5
Areas of study	Bachelor of Accounting	58	29
	Master of Business Administration	1	0.5
	Diploma in Business Studies	14	7
	BBA in Entrepreneur Development	7	3.5
	Bachelor of Finance	33	16.5
	BBA in Human Resources Management	61	30.5
	Bachelor in International Business	17	8.5
	BBA in Marketing	9	4.5

The next analysis is to the goodness of measures. To test the measurement model, two types of analysis namely validity and reliability have been carried out. As suggested by Hair et al., (2014), the used of factor loading, recommended composite reliability and average variance extracted to test the convergent validity. As shown in Table 03 below, sixteen items of construct loaded is higher than 0.70. No single item was deleted because all items have achieved a higher loading. The loadings for all items exceeded the suggested value of 0.70. The loadings reported in Table 03 were ranging from 0.808 to 0.935. Moreover, the composite reliability values ranged from 0.904 to 0.951 and have surpassed the recommended value of 0.70 by Hair et al., (2014). With regard to the average variance extracted (AVE), the values of AVE were also higher than 0.50. The result of AVE as shown in Table 03 indicates in the range of 0.760 to 0.830. In general, the results show that all the five constructs namely brand association, brand awareness, enrolment intentions, perceived quality, and university ranking are all valid measures of their respective constructs. With regard to R^2, it shows that 59.7 percent of enrolment intentions is explained by constructs of brand equity dimensions (brand association, brand awareness and perceived quality) and university ranking. The R^2 value reported in this study was higher than 0.26 value, thus it considered as a substantial model (Cohen, 1988).

Further, the reliability analysis was conducted to test the reliability of the variables. The results of reliability test also can be viewed in Table 03. The variables like brand awareness, enrolment intentions, perceived quality and university ranking good internal consistency with a Cronbach Alpha coefficient

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reported 0.858, 0.872, 0.932 and 0.854 respectively. These coefficients are considered very good, as suggested by Pavot et al., (1991) where the scale of good is 0.85 and above. The values of Cronbach Alpha above 0.80 are considered preferable as suggested by Pallant (2016). This can be referred to the variable i.e. brand associations.

Table 03. Results of measurement model

Construct	Items	Loadings	AVE	CR	R^2	Cronbach's Alpha
BAS	BAS1	0.898	0.760	0.904		0.846
	BAS2	0.808				
	BAS3	0.904				
BAW	BAW1	0.857	0.779	0.914		0.858
	BAW2	0.904				
	BAW3	0.887				
EI	EI1	0.899	0.796	0.921	0.597	0.872
	EI2	0.886				
	EI3	0.892				
PQ	PQ1	0.911	0.830	0.951		0.932
	PQ2	0.935				
	PQ3	0.908				
	PQ4	0.890				
UR	RK1	0.857	0.773	0.911		0.854
	RK2	0.912				
	RK3	0.867				

Note: AVE (Average Variance Extracted); CR (Composite Reliability); BAS (Brand Association); BAW (Brand Awareness); EI (Enrolment Intentions); PQ (Perceived Quality); UR (University Ranking).

The next analysis is called discriminant validity test. According to Henseler et al., (2015), they had found out that the Fornell-Larcker (1981) criterion lack of reliably to detect the discriminant validity in common research situations. Due to this, they have recommended a different approach to check the discriminant validity. The procedure is based on the multitrait-multimethod matrix and known as the heterotrait-monotrait (HTMT) ratio of correlations. HTMT offers two types of techniques to measure discriminant validity namely criterion test or statistical test and $HTMT_{Inference}$. This study occupied both methods to measure the discriminant validity.

In relation to the first method, the value of HTMT are examined and if the HTMT value is higher than HTMT.85 value of 0.85 (Kline 2011), or HTMT.90 value of 0.90 (Gold et al., 2001) clearly indicate the discriminant validity issue. In this study (refer Table 04) the values of HTMT are in the ranged of 0.601 to 0.822 and passed neither the HTMT.90 (Gold et al., 2001) nor the HTMT.85 (Kline, 2011). The second procedure is to test the null and alternative hypothesis (Henseler et al., 2015). In specific, to test the null hypothesis (H0: HTMT $\geq$ 1) compared to the alternative hypothesis (H1: HTMT < 1). The issue of discriminant validity is identified if the confidence interval contains the value of one. Besides, the results of $HTMT_{Inference}$ (second method) displayed in Table 04 revealed that the confidence interval value for each construct is below than 1. Thus, the discriminant validity has been established for the research constructs.

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Table 04. HTMT ratio of correlation

	BAS	**BAW**	**EI**	**PQ**	**UR**
BAS					
BAW	0.813 **CI.90** (0.693,0.907)				
EI	0.616 **CI.90** (0.693,0.907)	0.601 **CI.90** (0.693,0.907)			
PQ	0.624 **CI.90** (0.693,0.907)	0.645 **CI.90** (0.693,0.907)	0.720 **CI.90** (0.693,0.907)		
UR	0.662 **CI.90** (0.693,0.907)	0.706 **CI.90** (0.693,0.907)	0.822 **CI.90** (0.693,0.907)	0.687 **CI.90** (0.693,0.907)	

Note: BAS (Brand Association); BAW (Brand Awareness); EI (Enrolment Intentions); PQ (Perceived Quality); UR (University Ranking).

Next is proceeded with the path analysis to test the four hypotheses created. To test the path analysis or structural model, a bootstrap procedure with 5000 times of resampling is used. This is to follow the suggestion of Hair et al., (2014) because the data is not normal. As depicted on Table 05, the results indicate three hypotheses (H2, H3 and H4) have influenced students' enrolment intentions. It shows that brand association, perceived quality and university ranking have influenced the enrolment intentions among The National Energy University students. However, H1 (brand awareness) is found insignificant to influence enrolment intentions. Thus, The National Energy University should identify strategic ways to increase the brand awareness in particular to future students. Some of the suggestions to increase the level of awareness are by creating original content in the form of articles, blog posts and videos. Posting of original images of students' activity through twitter or Instagram could also help to wider reach of the targeted audiences. All in all, The National Energy University should provide quality website, focusing on content and social marketing and top search rankings in order to increase the brand awareness.

In relation to hypothesis testing, this study also tested the effect size (f^2). To measure the effect size, this study followed the guidelines proposed by Cohen (1988). Cohen (1988) has clustered the effect size into three groups namely; (i) small effect size (0.02), (ii) medium effect size (0.15), and large effect size (0.35). The results of effect size (see Table 05) for this study can be classified small effect sizes (BAS->EI and PQ->EI) and medium effect size (UR->EI). Moreover, this study also evaluated the predictive relevance of the model. To achieve this objective, a blindfolding procedure was applied because all constructs in this study is a reflective measurement. Blindfolding is a sample reuse technique that omits every data point in the endogenous construct's indicators and estimates the parameters with the remaining data points (Chin, 1998; Henseler et al., 2009). To show the predictive model, the Q^2 value must higher than 0 (Hair et al., 2014). In this study, the Q^2 value for enrolment intentions ($Q^2 = 0.438$) is more than 0. Thus, the model has sufficient (large) predictive relevance because the value of Q^2 is above 0.35 (Hair et al., 2014).

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Table 05. Hypothesis testing

Hypothesis	Relationship	Std Beta	Std Error	t-value	Decision	f^2
H1	BAW->EI	-0.036	0.076	0.475	Not supported	0.001
H2	BAS->EI	0.141	0.073	1.917	Supported*	0.023
H3	PQ->EI	0.299	0.075	3.990	Supported**	0.119
H4	UR->EI	0.477	0.080	5.971	Supported**	0.287

*Note: **p<0.01;*p<0.05 ;BAS (Brand Association); BAW (Brand Awareness); EI (Enrolment Intentions); PQ (Perceived Quality); UR (University Ranking).*
H1: Brand awareness has influenced student's enrolment intention.
H2: Brand association has positive effect on student's enrolment intention.
H3: Perceived quality has influenced student's enrolment intention.
H4: University ranking has positive effect on student's enrolment intention.

7. Conclusion

The study indicates two of brand equity dimensions (brand association and perceived quality) and university ranking have influenced the students' enrolment intention. Although business and educational services seem to be similar, their challenges might vary. Thus, to compete against competitors, The National Energy University may need to be smarter and more observant in terms of marketing and branding. Nowadays, students from top universities value branding to some extent. They believe that the university brand will help them to get a better job. Hence, the university's management should emphasis of using various sources to promote their universities. Branding in higher educational institution is not only to improve the enrolment and recruitment but will also effects the university to receive funds, merchandise and academic reputation. More importantly, overall branding strategy of higher educational institution will create a distinctive proposition and sustain the institution.

The future research needs to examine a wider sample of students and to compare the enrolment intention among public and private universities in Malaysia. Besides, adding more exogenous factors like brand love, brand image, institution reputation, brand preference, brand loyalty and others will give better insights of enrolment intention among tertiary students in Malaysian HEIs and in particular to The National Energy University.

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