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Recommendation For Higher Education Destination: What Matters?

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Abstract

The internationalisation of higher education seems to preoccupy the agenda for globalisation with free mobilisation of students across borders. 'Student hub' is now becoming a common term to many and there are increasing numbers of emerging economies competing for international students focusing on income generation. The ability of a host country to attract the international students depends on many factors, and recommendations or reviews by friends or families who are currently study or had experience studied in a particular host country found to be an effective marketing tool. Based on the data of 753 international students, gathered from a sample of few universities in Malaysia, this particular study employs a Logit Model in an attempt to identify the factors that affect the decision of the currently enrolled international students to recommend Malaysia as a study destination to their friends and families. The result shows that the university environment, university service, academic quality and social factor affect the decision of the international students to recommend Malaysia. This outcome is consistent with other previous studies who found that the quality of services provided by the host country in general and university in particular, level of discrimination and education cost influence individuals willingness to recommend the host nation to their peers. Interestingly, while education cost matters, it however shows the positive relationship between cost and the tendency to recommend Malaysia as higher education destination, thus signifies that higher cost reflect quality.

Keywords: Internationalisation, Higher Education, Recommendation

1. INTRODUCTION

The National Higher Education Strategic Plan (NHESP) which was launched in 2007 stressed on the importance of transforming Malaysia higher education into a global higher education hub (Ministry of Education, 2007). It is in line with the objective of spearheading Malaysia's goal in becoming a high income nation. Following the NHESP which ended in 2015, the Malaysia Education Blueprint (Higher Education), (MEB) (HE) for 2015-2025 was launched in April 2015. The Blueprint further emphasized the importance of positioning Malaysia as a global prominence in the service of higher education. The Malaysian government aims to achieve its target to attract around 250,000 international students to study in Malaysia by year 2025 (Ministry of Education Malaysia, 2015). Considering the significance of developing a talent hub and ensuring the competitiveness of the Malaysian higher education sector, the need for providing quality education is further reiterated in the MEB (HE);

'Increasing competition from other education hubs will, however, require the strengthening of Malaysia's higher education value proposition, capacity, and capabilities, in order to enhance the appeal and competitiveness in the region and beyond. Malaysia needs to raise the nation's higher education brand even further, from an attractive destination known for good value for money and quality of life, to one that is also recognized, referred to, and respected internationally for its academic and research expertise'.

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A competitive global higher education sector thus requires comprehensive and well planned strategies that capable of continuously attract and retain best brains to study in the country. In this regard, one of the important factors that are found to significantly influence individual choice of higher education destination and host institution is the recommendation and opinion from family and friends (Bourke, 2000). Based on this fact, it is therefore vital for Malaysia to take the opportunity to benefit from the currently enrolled international students through their positive recommendations and feedbacks regarding Malaysia's higher education.

By and large, the influence of family and friends reflects the importance of word-of mouth communication which is seen as objective, reliable and not commercially oriented. Furthermore, Buttle (1998) in his study explained that the willingness of a consumer to recommend the product or service used to other consumer is largely influence by whether or not the consumers' experience met the expectation. This is agreed by Yang et al., (2012) who stated that consumer experience from consuming a product or service tend to increase their tendency to recommend the product or service to other consumers. Moreover, the recommendation is believed to have an impact towards the future prospective international students who might potentially choose certain countries as their higher education destination (Wu, 2014; Yasvari, Ghassemi, & Rahrovy, 2012). Against this backdrop this paper attempts to analyse the factors that affect the tendency of the currently enrolled international students to recommend Malaysia as the higher education destination to their friends and families.

2. DATA AND METHOD

This study uses primary data obtained through structured questionnaires. The data were collected during May 2013 to November 2013. Specifically, the questionnaire is divided into four sections. Section A is designed with the purpose of obtaining the information on respondents' demographic and education background, Section B solicits information on the respondents' choice to further their higher level of studies and destinations. Section C focuses on respondents' self-perception related to the improvement of their soft skills after going through their education experience in Malaysia and finally Section D probes on the factors influencing respondents' choice of higher education destination; students satisfaction towards various factors identified and also their willingness to recommend Malaysia to their family and friends. Most of the instruments used in this study were modified according to the previous studies such as Baharun et al. (2011); Lim et al. (2011); Mpinganjira (2011); Pereda et al. (2007) and Mazzarol & Soutar (2002).

The targeted population for this study is the international students who were studying in Malaysian universities during the time of the survey. In order to incorporate randomness (also the representativeness and generalizability) into the sampling design, a combination of different sampling methods are used in this study. First, the stratified random sampling is applied. The targeted populations are divided into five strata – public universities that are classified as Research Universities, Comprehensive Universities and Focus Universities, and the private universities which are classified into private universities/university colleges and foreign universities branch (Ministry of Education , 2011). These five strata fulfill the characteristic of homogeneous within stratum and heterogeneous across stratum and thus one university is selected randomly from each stratum. Secondly, a quota sampling is applied where students are grouped by level of studies *i.e.* Master degree, Bachelor degree and Diploma.

A pre-determined number of international students (quota) are then selected from each stratum. The targeted sample size of each group are determined based on the size of the group, using the table of sample size determination for a given population size from Sekaran & Bougie (2010). Out of the 1000 targeted samples, only 753 returned questionnaires are useable to be analyzed.

A logit model is employed to estimate the tendency of the currently enrolled international students in recommending Malaysia to their friends or not, thus involves binary categorical dependent variable. The influence of the independent variables to the dependent variable will be shown by the coefficients (βs). The marginal effects of the independent variables will be calculated holding the other independent variables at their mean values respectively. Logit model is suitable to use to model a binary categorical dependent variable which enables the use of the estimated regression models to predict the probability of a particular categorical response

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for a given set of explanatory variables (Gujarati & Porter, 2009).

Assume that there is a latent variable which represents an international student's underlying tendency to recommend Malaysia as higher education destination. This latent variable is associated with individual characteristics *(X)*. Let Y^* represent this latent variable and assume that Y^* is a linear function of X_i, then,

$$Y_i^* = \beta X_i + \varepsilon_i \qquad (1)$$

where,

Y_i^* = the underlying tendency to recommend Malaysia as higher education destination

X_i = the independent variables (as the explanatory and control variables)

ε_i = the error term

The model assumes that the observed international student's choice to recommend (Y) is related to the Y^* (which is unobservable). The observed currently enrolled international students' choice to recommend (Y) take the nominal category of 0 (being not recommend) and 1 (being recommend). Then, the value of Y is observed as:

$$Y_i = \begin{cases} 1 & if\ Y_i^* > 0 \\ 0 & if\ Y_i^* \leq 0 \end{cases} \qquad (2)$$

Assuming that the error term in the latent equation (1) is logistically distributed, the probability that the international students will recommend Malaysia as higher education destination is given as below:

$$\begin{aligned} \Pr(Y=1 \mid X) &= \Pr(Y^*>0 \mid X) \\ &= \Pr(X'\beta + \varepsilon > 0 \mid X) \\ &= \Pr(\varepsilon > -X'\beta \mid X) \\ &= \Pr(\varepsilon < X'\beta \mid X) \\ &= F(X\beta) \end{aligned}$$

The $F(.)$ is the logistic cumulative density function (cdf) for the logit model. The maximum likelihood estimation is used to obtain the probability, thus the value of X_i and β need to be identified. The probability of observing the value of Y is specified as follow:

$$P_i = \begin{cases} \Pr(Y_i = 1|X_i)\ if\ Y_i = 1\ is\ observed \\ 1 - \Pr(Y_i = 1|X_i)\ if\ Y_i = 0\ is\ observed \end{cases} \qquad (3)$$

If the observations are independent, the Likelihood equation is shown as:

$$L(\beta|Y,X) = \prod_{i=1}^{N} P_i$$

By substituting P_i into the function of $L(\beta|Y,X)$, we obtain:

$$L(\beta|Y,X) = \prod_{y=1} \Pr(Y_i = 1|X_i) \prod_{y=0} [1 - \Pr(Y_i = 1|X_i]$$

By replacing the probability of observing the Y in the likelihood function with cdf function the following equation is obtained:

$$L(\beta|Y,X) = \prod_{y=1} F(X_i\beta) \prod_{y=0} [1 - F(X_i\beta)$$

The log is being incorporated to obtain the log likelihood equation:

$$lnL(\beta|Y,X) = \sum_{y=1} lnF(X_i\beta) + \sum_{y=0} \ln[1 - F(X_i\beta]$$

The matrix of X_i are denoted as below:

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X_1 = University Environment
X_2 = University Service
X_3 = Academic Quality
X_4 = Education Cost
X_5 = Information Guidance
X_6 = Social
X_7 = Regulation

The model is estimated using the robust variance estimates (Huber/White/sandwich estimator of variance).

3. FINDINGS AND DISCUSSION

From Table 1, the overall fit test shows that the model is fit at 1% significant level. The Pseudo R^2 recorded a value of 0.1515 which shows the high explanatory power of the independent variables. The Cameron and Trivedi's heteroscedasticity test shows a p-value of 0.0147 which suggests a heteroscedasticity problem. However, this problem can be encountered when the estimation was conducted with robust standard error.
Furthermore, multicollinearity problem occurred when there are highly inter-correlated among the measured variable. The measurement of multicollinearity in this research is based on the Variance Inflation Factor (VIF). VIF is based on the proportion of variance that shared by one independent variable with the other independent variables in the model (O'brien, 2007). The VIF value in this research is ranging from 1.05 to 3.78, hence, this can be concluded that there is no multicollinearity problem in the model (based on the rule of 5).

The percentage correctly predicted (PCP) statistic is also presented. The PCP is used to measure on how well the estimated model in predicting the actual outcomes of the observations. In a binary category model, it is practicable to correctly predicted at least 50% of the outcome by the model without knowledge about the independent variables (Long, 1997). The PCP in this research is 76%, which means that the estimated model correctly predicted 76% of the outcomes.

Table 1. Goodness of Fit Test

	Results
Prob > chi2 (Overall fit test)	0.0000
Pseudo R2	0.1515
Heteroscedasticity* (Cameron & Trivedi's test)	P-value = 0.0147
Multicollinearity	1.05 to 3.78
Percentage correctly predicted (PCP)	76.00%

Note: * this test is performed based on a linear probability model, to serve as an indicator to potential heteroscedasticity

Table 2 shows the estimation result of the binary logit model of the currently enrolled international students' choice to recommend Malaysia as higher education destination to their friends and family. The education cost and university service are positively significant at 5% level whereas, university environment, academic quality and social environment in Malaysia, are positively significant at 1%. This outcome is consistent with Lee (2010) who found that the quality of service in the campus, level of discrimination (treatment of the international students as compared to locals) and also the financial constraint with regard to their living cost and tuition fees have an influence on their tendency to recommend the host nation to their peers and families. Furthermore, in terms of social demographic, the only variable that has positive significant effect on the international student's choice to recommend Malaysia is the country of origin. It is found that students from South East Asia are positively recommending Malaysia to their friends and families which are significant at 5% level.

In order to provide a much better understanding, the marginal effect analysis is carried out. The marginal effect which measures the discrete change in probabilities is an effective method to interpret the continuous and dummy variables (Long, 1997). The result is presented in Table 3. The result shows that when the education cost increases by one unit the probability that the currently enrolled international students will recommend Malaysia will increased by 4.15%. This result might be counterintuitive as it contradicts to the cost-benefit theory. Nonetheless it holds true in the case where price signals quality as cited by Bouwel & Veugelers (2009).

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Table 2. Results of Binary Logit: Recommendation to Study in Malaysia

	Coefficient	P-value
Education cost	0.2270	0.021**
University environment	0.4799	0.000***
University service	0.2016	0.033**
Academic quality	0.3150	0.001***
Information guidance	0.1535	0.106
Social	0.5183	0.000***
Regulation	0.1575	0.137
General Background:		
Male	-0.0584	0.795
Age	0.0366	0.274
East Asia	-0.3896	0.354
South East Asia	0.7721	0.023**
Middle East	-0.1827	0.500
India Subcontinent	0.1159	0.737
Years been in Malaysia	-0.0021	0.714
Education Background:		
Master	0.1239	0.646
Social Sciences (Social Sciences, Business & Law)	-0.0134	0.974
Information Technology & Communication	-0.3620	0.425
Engineering (Engineering, Manufacturing, Architecture & Construction)	0.0342	0.942
Health sciences & Medicine	0.7307	0.621
CGPA	-0.0929	0.733
Focus university	-0.2386	0.524
Comprehensive university	-0.0294	0.937
Private university	-0.4286	0.239
Financial Background:		
Part-time jobs	-0.2363	0.409
Self/Parent support	-0.2070	0.524
Scholarship (from Malaysia)	-0.2489	0.683
Loan	-0.3701	0.587
Spend below USD5,000	-0.3693	0.169
Spend between USD 5,001 –10,000	0.0459	0.870
Spend between USD10,001 –15,000	0.1233	0.636

Note: *** = significant at 1%, ** = significant at 5% & * = significant at 10%.

Furthermore, as the quality of university environment increases by one unit, the probability that the currently enrolled international students will choose to recommend Malaysia as their higher education destination increases by 8.97%. Similarly, when the services provided by the university increases by one unit, the probability that they will choose to recommend Malaysia increased by 3.69%. In terms of academic quality the probability will increase by 5.77% and social factors by 9.4%. Lastly, international students from South East Asia have 12.72% higher probability as compared to students from African Nation to recommend Malaysia to their friends and families

Table 3. Marginal Effect

	dy/dx
Education cost	0.0415
University environment	0.0879
University service	0.0369
Academic quality	0.0577
Social	0.0940
General Background:	
South East Asia	0.1272

4. CONCLUSION

As Malaysia is positioning herself to become a global prominence in higher education services, the ability to attract the best brain into the country is critical. The experience of other countries has shown that the word-of-mouth or family and friends recommendation is an influential marketing tool. In this regards, the currently

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enrolled international students would be the right ambassadors to promote and persuade the future potential students to come and pursue their education in Malaysia. Following this, it is therefore important for the country to correctly identify the factors that influence the tendency of the currently enrolled international students to recommend Malaysia to their friends and families. The result indicates that the university environment and services that the university provides, academic quality and social environment in Malaysia do matter. Cost, even it has an effect on the tendency to recommend, the effect is positive. This counterintuitive outcome somehow reflects the role of price as a signal in which high cost is associated with quality. Some of the policy implications from these findings are i) universities or the higher education institutions in Malaysia should invest more in infrastructure and services which includes teaching and learning facilities, and other facilities such as comfortable hostels, library and sports facilities, ii) enhancing academic quality through high-quality course offerings and teaching excellence and enhancing the visibility and profile of the university through teaching, research, publications and extra-curricular activities iii) price-setting that reflects quality as international students are searching for education that have value for money.

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