Full Length Research Paper

Factors influencing international students' choice towards universities in Malaysia

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This paper is aimed to determine factors influencing international postgraduate students in choosing university in Malaysia. Factors such as programs offered, fees, promotion, facilities, prominence, environment, convenience, and scholarship were utilized. A total of 135 international postgraduate students were involved in this study through a direct survey. The percentage technique to extract the information of respondents' demography was used. Then, the analytic hierarchy process was employed to evaluate the level of importance of each factor. The study found that "programs offered" is the number one factor which influences overall international students' choice to opt for a postgraduate study in Malaysia universities. There were some differences between students from Asian and Western countries in ranking the importance of those factors. Overall categories of respondents selected "tuition prices", "facilities", and the "academic staff prominence" as the preceding factors to follow the "programs offered" factor in a sequential level of importance. In general, the result reflects the awareness of prospective students towards the expected standard of education required from the higher education industry.

Key words: Analytic hierarchy process, international students, postgraduate study, Malaysia.

INTRODUCTION

Nowadays, Malaysia is among the most preferred countries for educational purposes in the world. According to the Ministry of Higher Education (MOHE) of Malaysia, there are approximately ninety thousand students from more than 175 countries spreading from southern part (Universiti Teknologi Malaysia) to northern part (Universiti Utara Malaysia) of Malaysia. The highest variation is in International Islamic University Malaysia (IIUM), which was built in 1983 and according to its 2008 annual report; IIUM has been accommodating students from over 100 countries.

However, international students are not coming to Malaysia only to continue their study in undergraduate level, but also in postgraduate level such as Master and Doctoral degrees. Consequently, this will require tuition providers to improve their overall performance so that they can attract prospective students to continue Master and Doctoral level studies at their institutions.

Postgraduate students are very important to a university because of their independence in study, indirect promotion for other prospective students, and most especially to promote the university as a renowned research university in the world. Therefore, in order to attract prospective postgraduate students to enroll in a university, especially international students, the management should know what are the elements required as such factors determine students' choice of enrollment in a university and how these factors are sequentially arranged from the very important to less important. This way, measures can be taken so that the applications of postgraduate study can be increased.

This study is, however, the extension of what has been done in previous research works. It summarizes the

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determinant factors that explain the choice of students' enrollment in a new program of study, from various studies conducted in many countries. This is then applied to the case of international students' choice to study in Malaysia. Using analytic hierarchy process (AHP) method, the study attempts to rank factors influencing international students' choice based on the perception of the first year postgraduate (PG) students in IIUM.

UNIVERSITY SELECTION CRITERIA

Among the seminal work in the field of university-selection criteria is a study done by Mansky and Wise (1983), which examined the choices from individuals on which higher institution to attend. They found that individual application decisions are much more important than university admission decisions in the determination of attendance. Montgomery (2002) and Avery and Hoxby (2004) studied choice among graduate business schools and found significant effects of prominence and program quality, cost, and convenience. However, Long (2004), using data from 1972, 1982, and 1992, found that the level of importance of cost becomes lesser and lesser throughout the year.

Chen and Zimitat (2006) studied the behavioral motivations of Taiwanese students intending to undertake higher education in Australia and the USA found that perceptions towards higher education in the destination country such as program's price, teaching methods, and environment, and the influence of family and friends are the most important factors. Similarly, Ivy (2008) found that if a university offer qualifications that satisfy students requirement, engage the teaching methods that match student expectations, provide the data on which they can make informed decisions about qualification choices and price those programs at a level that students see as providing value, courses are more likely to be filled.

Price

Price is very important matter for students enrolling in a new program. Empirically, many researchers have found evidences that demand for education is negatively related to the price of attendance (Mansky and Wise, 1983; Montgomery, 2002; Avery and Hoxby, 2004; Ivy, 2008; Hsieh, 2010). In this regard, Jackson (1982) has proposed a model on students' choice of university and concluded that tuition fees is among the most influential factors for them to pursue their next level of study.

Programs and prominence

Nowadays, tuition providers are trying to distinguish themselves from others by offering unique programs.

Paulsen (1990), Montgomery (2002), Avery and Hoxby (2004), and Hsieh (2010) revealed from their study that programs offered is among the significant factors influencing prospective students to enroll in a university. However, after one program is proven to be a desired program by the industry and by many prospective students, other universities will start to offer similar program at their institution. In this level, prominent academic staff in that specific field will determine students' choice of university to enroll. This is among the main reasons why many universities try to invite many professors as visiting professors to give lectures at various universities. The program offered prominence of academic staff and number of international publications by those staff are among the factors influencing students to enroll at a university.

Promotion

Marketing is very important in every aspect of business. Promotion encompasses all the tools that universities can use to provide the market with information on its offerings, advertising, publicity, public relations and sales promotional efforts (Ivy, 2008). Open days and higher education exhibitions are among the places where prospective students are being attracted by the universities marketer.

Facilities, environment, and convenience

Physical evidence is the tangible component of the service offering. Ivy (2008) argues that varieties of tangible aspects are evaluated by university's target markets, ranging from the teaching materials to the appearance of the buildings and lecture facilities at the university. Similarly, international and comfortable living environment as well as convenience in parking area, sport complex, and hostels is also significant factors (Hsieh, 2010).

Scholarship

Drewes and Michael (2006) studied how Canadians choose a university and found that applicants prefer universities that spend more on scholarships and teaching. Hsieh (2010) reveals that generous numbers of scholarships provided give a significant impact on the decision making of applicants in Taiwan.

Referring to the literature above, this paper focuses on ranking eight selected factors (price, programs offered, prominence of academic staff, promotion, facilities, environment, convenience, and scholarship) as the framework of its empirical study on students' decision making to pursue their PG level study (Figure 1).
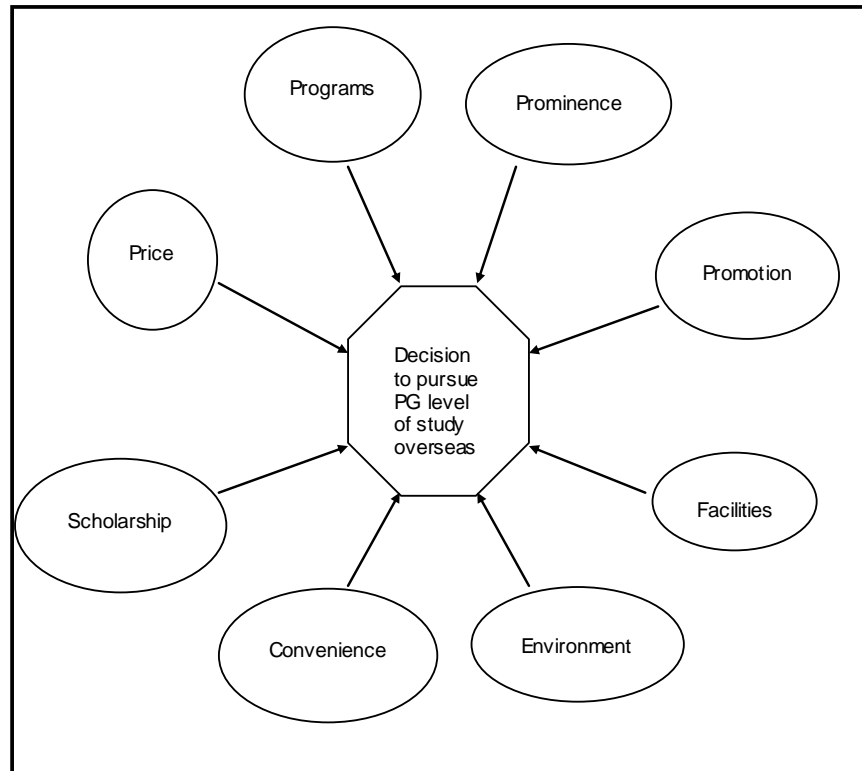
Figure 1. Framework for the empirical survey of students' decision making to pursue PG of study.

Table 1. Pairwise matrix for campus selection criteria.

	Prog.	Price	Promo	Facil.	Promin.	Env.	Conv.	Scholar
Prog.	1							
Price		1						
Promo			1					
Facil.				1				
Promin.					1			
Env.						1		
Conv.							1	
Scholar								1

DATA AND METHODOLOGY

Data is collected from first year postgraduate students of IIUM, which is located in Gombak, Selangor. As many as 135 students were requested to compare the importance of all criteria in Table 1, after briefing the students about the objectives of the research and how to fill the blank cell at the pair wise matrix. The criteria used in this study were adopted from all the literature above which are program, promotion, price, prominence, facilities, environment, convenience, and scholarship.

The AHP was selected for this study due to its suitability in evaluating multiple-criteria decision-making problems (Saad, 2001; Udo, 2000; Yang and Lee, 2002). The AHP is a theory of measurement, which deals with quantifiable and/or intangible criteria. It is a multi-criteria decision-making approach that employs pair wise comparisons to arrive at a scale of preferences among a set of alternatives (Saaty and Kearns, 1985). It is well-known that

the AHP is a tool used to rank the importance of alternatives based on some defined criteria.

Zahedi (1986) suggests that if a researcher wants to utilize AHP as a tool of analysis in a decision problem, it should involve at least four steps:

1. Structuring the decision hierarchy by breaking down the decision problem into a hierarchy of interrelated decision elements (criteria, decision alternatives),
2. Collecting input data, depicted by matrices of pair wise comparisons, of decision elements,
3. Using the eigenvalue method to estimate the relative weights of the decision elements,
4. Aggregating the relative weights of decision elements to arrive at a set of ratings for the decision alternatives.

The judgments given by the students towards the pair wise

Table 2. Pair wise comparison scale for AHP preferences.

Numerical rating	Verbal judgement of preferences
1	Equally preferred
3	Moderately preferred
5	Strongly preferred
7	Very strongly preferred
9	Extremely preferred
2, 4, 6, 8	Intermediate values between the two adjacent judgements
Reciprocals	When activity *I* compared to *j* is assigned one of the above numbers, then activity *j* compared to *I* is assigned its reciprocal

matrix was based on the rating scale presented in Table 2. Using the scale mentioned in Table 2, the respondents' judgments were first obtained. For example, if a respondent compares two attributes, programs (A1) in row part and prices (A2) in column part, and indicates that A1 is strongly preferred than A2, then a value of $a_{12} = 5$ is assigned to this pair wise comparison. The comparison is always row-column basis.

Another important consideration in the AHP is the notion of consistency. Consistency is the degree to which the perceived relationship between elements in the pair wise comparisons is maintained. It is important because comparisons lacking consistency may indicate that the respondents did not understand the differences in the choices presented or were unable to assess accurately the relative importance of the elements compared. On the other hand, a lack of information about the criteria being compared or a lack of concentration during the judgment process can also cause inconsistency (Ta and Har, 2000). The rule of thumb given by Saaty and Vargas (2001) is that if the value of consistency ratio (CR) is smaller or equal to 10% or 0.1, the inconsistency is acceptable. If the CR is greater than 10%, there is a need to revise the subjective judgment.

RESULTS AND DISCUSSION

Profile of respondents

Respondents are 135 PG students from the Kulliyah of Economics and Management Sciences (37.04%), Ahmad Ibrahim Kulliyah of Law (28.15%) and Kulliyah Human Sciences (34.81%) of IIUM. These 3 faculties are the biggest faculties in terms of the number of foreign students studying in IIUM. Therefore, based on the respondents involved in this study, it is believed that this study would have a robust result and the information provided here could be utilized by other universities in Malaysia to improve their performance accordingly.

There are 78 (57.78%) male and 57 (42.22%) female students involved in this study. As many as 60 (44.44%) respondents are originated from southeast Asia (SA) such as Thailand, Indonesia, and Singapore while 55 (40.74%) respondents came from the middle east (ME) such as Saudi Arabia, Egypt, Bahrain, Algeria, Jordan, UAE and Palestine. Another 20 respondents are citizens of western countries, which includes United Kingdom, France, Germany and United States of America (Table 3).

Priorities of criteria

To find more information about the university selection criteria by international students in Malaysia, the analysis of AHP will be classified into six categories i.e. category of male, female, SA, ME, western countries (WC), and overall. Hence, the AHP method was run six times using Expert Choice 2000 (EC2000) software, for overall students and all categories exist. Based on the output resulted from EC2000 and displayed in Table 4, overall students have selected "program offered" and "tuition price" as the first and second highest factors to be considered before they enroll in one university. The third determinant is facilities provided by the university while the fourth factor is the prominence of the academic staff of the university. As regards the "university environment" and "scholarship", international students ranked the former in the last and the latter as the second last, to be factors that influence international students' choice of an overseas university.

Interestingly, "programs offered" and "tuition price" are always on the top of international students' consideration before enrolling in a new PG level of study except for students from WC Instead of putting tuition price as the second highest factor to be considered before enrolling at a new university, students from WC choose the prominence of academic staff in that university. This, somehow, has shown that students from WC are better off in wealth and more knowledge oriented than international students from other parts of the world.

The "scholarships provided", the "environment built", and "convenience of the physical appearance" of the university are ranked lowest in most of categories of respondents. This is considerable evidence that prospective international postgraduate students are aware of the standard of education and therefore, willing to choose universities that have unique programs with reasonable price and have enough number of professors and international publications. However, although, a university with a good physical appearance offers scholarship to the students, they will prefer to choose a university which provides them with their programs of interest or university which hires well known professors in their area of interest. This results support the conclusion

Table 3. Profile of respondents.

Variable	Detail	Frequency	Percentage
Gender	Male	78	57.78
	Female	57	42.22
	Total	135	
Origin	Southeast Asia (SA)	60	44.44
	Middle East (ME)	55	40.74
	Western Countries (WC)	20	14.81%
	Total	135	
Faculty	Economics and Management	50	37.04
	Law	38	28.15
	Human Sciences	47	34.81
	Total	135	

Table 4. Priorities resulted from AHP method for five categories and inconsistency ratio.

Variable	All	Male	Female	SA	ME	WC
Program	0.245 (1)	0.229 (1)	0.273 (1)	0.321 (1)	0.220 (1)	0.221 (1)
Price	0.190 (2)	0.145 (2)	0.153 (2)	0.172 (2)	0.135 (2)	0.060 (8)
Prominence	0.100 (4)	0.127 (3)	0.097 (6)	0.099 (5)	0.113 (5)	0.211 (2)
Scholarship	0.087 (7)	0.090 (7)	0.066 (8)	0.047 (8)	0.094 (8)	0.080 (6)
Facilities	0.108 (3)	0.114 (5)	0.128 (3)	0.131 (3)	0.116 (3)	0.071 (7)
Promotion	0.099 (5)	0.115 (4)	0.109 (4)	0.100 (4)	0.115 (4)	0.115 (4)
Environment	0.081 (8)	0.102 (6)	0.100 (5)	0.079 (6)	0.113 (6)	0.113 (5)
Convenience	0.089 (6)	0.079 (8)	0.075 (8)	0.051 (7)	.094 (7)	0.129 (3)
Inconsistency Ratio	0.06	0.04	0.06	0.08	0.04	0.07

() is rank given by the EC2000.

derived by Paulsen (1990), Montgomery (2002), Avery and Hoxby (2004), and Hsieh (2010).

The inconsistency values are 0.06, 0.04, 0.06, 0.08, 0.04 and 0.07 for category of all respondents, male students, female students, SA students, ME students and WC students, respectively. This suggests that the judgments given by respondents are acceptable for all categories. Therefore, the subjective judgments need no refinement.

CONCLUSION AND FUTURE RESEARCH

Nowadays, Malaysia is among the most preferred countries for educational purposes in the world with more than fifty thousand students from more than 175 countries of origin. This makes the education industry in Malaysia to grow rapidly, not only for undergraduate level study but also for PG level study. In order to attract more international PG students to enroll at a university, the management should consider a precise marketing strategy. One of which is to find the most important dimensions considered by the prospective students to enroll at a university and strategize accordingly.

This study reveals that programs offered and tuition prices are two most important dimensions, followed by the facilities provided by the university and the academic staff prominence. It is clearly reflecting the awareness of prospective students towards standard education required from the industry. Therefore, as the marketing implication of this study, Malaysian universities are suggested to focus on how to set and offer unique programs, engage renowned scholars in their various fields of specializations and also provide reasonable tuition price for students.

To the best of the authors' knowledge, there is no sufficient research works conducted under university marketing strategy for international postgraduate students in Malaysia. Therefore, further research are suggested to be conducted to enhance this field of knowledge either by applying the same framework in different areas br universities, or utilizing more

sophisticated techniques in analysis. Some suggested topics that can be addressed in a future research are, for instance, how muslim and non-muslim students choose their universities, and factors that determine local and international students to continue PG level of study in Malaysia.

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