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How Do Undergraduates Choose Their University? A Study of First Year University of Malaya Students

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A Study of First Year University of Malaya Students**

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Malaysia has seen explosive growth in its tertiary education sector in the last 30 years. In line with its aim of making Malaysia an educational hub at least for Asia if not the world, the Government has liberalized the education sector in stages since the 1990s so that foreign universities can participate in the education sector in a variety of ways, from offering degree programmes to twinning programmes to the setting up of branch campuses. The University of Malaya in Kuala Lumpur was set up in 1959, with its beginnings that can be traced back to the Raffles Medical College set up in Singapore in 1905, was the first university to produce graduates in Malaysia. By 2007, there were 19 other public universities in different parts of the country, 14 private universities, 4 Malaysian campuses of foreign universities, 15 private university-colleges and 690 private colleges.

The mushrooming of higher education institutions in Malaysia has increased the choice students have in selecting a university to pursue their tertiary education. Concurrently, the universities are operating in a competitive market for undergraduate students. For example, between 2000 and 2005, the number of public degree-granting institutions increased from 11 to 16, while the number of private institutions increased from 5 to 21 (Table 11-5, Malaysia, 2006). The percentage of students enrolled in first degree programmes increased by 40 per cent over the period but the percentage enrolled in public educational institutions decreased from 74.0 per cent in 2000 to 65.8 per cent in 2005 (Table 11-6, Malaysia, 2006). That is, the public educational institutions received only 45.0 per cent of the increased enrolment in first degree programmes over the 2000-2005 period.

Against this scenario, the University of Malaya is an interesting case. It sees itself as the premier university in the country, a contention borne out by, for example, by the Times Higher Education Rankings of universities in Malaysia. It emphasises its achievements in research and the achievements of its alumni. However, marketing to prospective undergraduate students is minimal especially when contrasted with its private sector competitors. In part, this is a function of the mode of entry. While foreign students apply directly to the university, Malaysians apply through a central clearing house of the Ministry of Higher Education, Malaysia. The Malaysian applicant can provide a choice of universities and programmes, but he or she will receive an offer from one university only and the offer may even be for a university and/ or programme that he or she did not apply for. Furthermore, with the designation of the University of Malaya as a Research University, the focus will be on expansion of graduate student numbers and not on undergraduate student enrolment.

This study aims to cast some light on the university selection process of a cohort of first year undergraduate students at the University of Malaya. These would be students, who had opted to do the STPM or the matriculation or a diploma after secondary school, then opted to apply to a public university and were offered the University of Malaya. The study considers the factors affecting the decision to go to university, the choice of university, the sources of information used in arriving at this choice, and the effect of socio-economic and educational background on university choice. There is no previous literature covering the university selection process of Malaysian students, although there has been some work done

on marketing issues (Hj Khayon & Alias, 2006; Singh, 2006). This paper not only fills a gap in the literature on the students' choice of university entry in Malaysia, but also considers a bigger issue. Does a premier university like the University of Malaya in a sector that has rivals such as the Malaysian campuses of Monash University (Australia) and Nottingham (United Kingdom) have to market itself among school-leavers or can it bank on its lower public fee structure and long established reputation to do the needful? The next section provides a brief discussion of the decision-making environment for the Malaysian student desirous of pursuing tertiary education and a brief literature review of the factors affecting university choice. The third section describes the survey and methods of analyses. This is followed by the findings of the study. The final section provides a discussion and concludes the paper.

Spoilt for choice

The options for further education for Malaysians manifest themselves after 11 years in primary and secondary school which culminates with the O-level equivalent *Sijil Pelajaran Malaysia* taken in the Fifth Form. The prospective higher education student can then do a matriculation programme (open mostly to *Bumiputera* students) or the A-level equivalent local examinations *Sijil Tinggi Pelajaran Malaysia* (STPM) or *Sijil Pelajaran Agama Malaysia* (STAM) taken in the Sixth Form, all of which come under the Ministry of Education, Malaysia (MOE). He or she may also do a diploma in a public institution that could serve as a university entry requirement. Alternatively the student can enrol for any other pre-university qualifying examinations such as the A-level examinations or the Canadian matriculation or an Australian matriculation examination, all of which are offered by private educational institutions. The student in these private colleges can also enter directly into a twinning programme with a foreign university or a local diploma programme that leads eventually to a degree. There are also branch campuses of foreign universities, notably Nottingham University from the U.K. and Monash University from Australia, which allow entry through any of the formal pre-university qualifying examinations.

The decision regarding the pre-university qualifying examinations made after secondary school affects future tertiary education choices. Entry into public universities for Malaysians is based on local qualifications (matriculation, STPM or diploma from a public institution). So those who opt for these options, in particular the first two, have in mind a public tertiary educational institution. Those who opt for non-MOE pre-university programmes have essentially opted for private tertiary education in Malaysia or for tertiary education abroad, as these qualifications are not accepted entry requirements for Malaysians to Malaysian public universities. Public universities also provide education largely in *Bahasa Malaysia* (there is now increasingly a gradual shift to English in some courses) while the language of instruction in private colleges and universities is English. The dichotomy between public and private education thus translates into a distinction in cost, and because of this, and further in view of the differential access to public matriculation and diploma programmes as well as the differences in medium of instruction, translates additionally into distinction, although somewhat blurred, along ethnic lines. Of course, students with an

excellent academic record may be able to secure scholarships or partial funding to support their education at either public or private educational institutions. However, for the majority not on scholarships, the government has made available loans which cover almost fully the costs of public education and partially the costs of private education..

Hossler and Gallagher (1987) identify three stages in making this choice: (a) predisposition (when students decide if they wish to continue on to tertiary education); (b) search (when students begin to investigate institutions); and (c) choice (when students decide on attending a particular institution). The decision to go to university is generally made early long before the time for application (Connor, Burton, Pearson, Pollard, & Regan, 1999). In a survey of 11000 Malaysian students in Fifth and Sixth Forms done in 1989, about 41 per cent of Fifth Formers and about 53 per cent of Sixth Formers aspired to pursue further education immediately after school (Manaf, Chew, Singaravelloo, & Mohd. Salleh, 1995). Several factors have been identified that influence students during the predisposition stage, including the socioeconomic status of the student, high school attended, family and peer attitudes toward education and student's academic ability (Hossler & Gallagher, 1987). The role of parents (Sewell & Shah, 1968) and employment prospects (Connor et al., 1999) have also been found to be strong motivators in encouraging students to proceed to tertiary education.

Once the student decides to attend university, the investigation of specific institutions begins. At this stage, students turn to a variety of sources of information from the internet to friends, parents and extended families, teachers, and counsellors to provide information (Connor et al., 1999; Hemsley-Brown, 1999; Hossler, Schmidt, & Vesper, 1999; Veloutsou, Lewis, & Paton, 2004; Veloutsou, Paton, & Lewis, 2005), also observed in the Malaysian study cited previously (Lee, Singaravelloo, & Lee, 1995). Since not every student goes about the search stage with the same degree of interest and concern, a wide variety of sources are used to different degrees by different students.

The third aspect, choice of university, is the focus of this study. A number of factors have been found to affect university choice. These may be grouped broadly into those related to the university and those related to the individual applicant. In the first group, facilities (Price, Matzdorf, Smith, & Agahi, 2003), costs (Connor et al., 1999) and reputation of institutions (Brooks, 2003; James, Baldwin, & McInnis, 1999; Veloutsou et al., 2004) appear to be factors that matter in the choice of a university. The most important information that the applicant looks for is related to the university reputation, its programmes, the facilities on campus and the cost of living. The reputation of a department is seen as more important than that of the university (Veloutsou et al., 2004), thus choice of subject at the university is an important consideration (James et al., 1999; Maringe, 2006; Scott, 2006). The second group of factors relate to the applicant. The choice process is influenced by social, economic and educational factors (Hossler et al., 1999) including gender and ethnicity (Ball & Gewirtz, 1997; Connor et al., 1999; Daly, 2005). In fact it is argued that gender is the most important factor explaining the differences in choices across applicants (James et al., 1999). With the variety of choices in the education market, applicants are essentially

consumers (Maringe, 2006). The assessment of “value for money” contrasts programmes that lead to a good career against price, placing subject interest a distinct second objective.

Methodology

This study aims to cast some light on the university selection process of a cohort of first year undergraduate students at the University of Malaya. In the Malaysian context, there is not much difference in the course fee structure among public universities, and fees are lower than in private educational institutions. It is therefore expected that other factors related to the university, including reputation and programmes, and factors related to the individual play a more important role in university choice.

The study evaluates responses from 880 valid responses from first year students who comprise all students enrolled in compulsory Statistics 1A course at the Faculty of Economics and Administration, University of Malaya (FEA) and their randomly selected first-year friends from other faculties on campus. The survey was carried out over three weeks in February 2008. The survey questionnaire was prepared in *Bahasa Malaysia* and English and the survey was carried out by the students. The University of Malaya began admitting foreign students into its undergraduate programmes in 2007, and these students from China, Maldives, Singapore and Thailand formed 3.5 per cent of the sample. In view of the effect of subject choice, it was important to select students from across faculties on campus. For purposes of analyses, the programmes were divided into “Arts’ and “Sciences” reflecting the streaming that occurs in Sixth Form and matriculation, which in turn is reflected in the entry requirements into the various programmes. Respondents were asked to rate the importance of each reason (a five-point scale, ranging from extremely important to not important at all) provided in two sets of reasons, one for furthering studies at an institution of higher learning and one for choosing to study at the University of Malaya. Respondents were also asked about the importance (again a five-point scale) of various sources of information used in making this choice.

Descriptive analyses are used to discuss findings. There are different ways used in the literature to group together items to search for a latent construct of factors affecting choice. These include factor analysis ((Veloutsou et al., 2004) and partial least squares (Raposo & Alves, 2007). Here, we use an index firstly proposed to measure the inter-business relatedness (Teece, Rumelt, Dosi, & Winter, 1994)¹ and focus on a reason cited as being extremely important. The inter-relatedness or coherence between reasons is based on the frequency of combinations of reasons being cited as extremely important. By comparing the observed number with the number of links that would emerge from random grouping, the coherence score between reason *i* and *j* indicates the propensity for reason *i* and reason *j* to be jointly cited as being

¹ The term ‘coherence’ has special meanings in business, economics and physics. Here, we use it in the sense of a state of cohering, of consistent relationship of parts.

extremely important. The score is considered to be high if the absolute value exceeds 1.96.² A high positive value of the score is evidence of strong positive coherence between reasons *i* and *j*, that is, there are more respondents than expected jointly citing these two as being extremely important. Conversely, a high negative value of the score is evidence of a strong negative coherence between reason *i* and *j*, that is, there are fewer respondents than expected jointly citing these two as being extremely important. The average coherence score for reason *i* reflects the average propensity for this reason to be jointly cited as being extremely important with all other reasons.

Findings

Table 1 provides information on the educational background of the respondents. First, we note that the percentage of female students (71%) is not very different from that for the university as a whole in 2007 (69%). However, the proportion of students are from the arts-based faculties (78.1%) is much larger than that for the university as a whole (51.3%) in 2007. This reflects the sampling design which is based on friendship: The students from faculties other than the FEA were friends of students from the FEA and would most likely have come from other arts-based faculties. Most of the students are aged between 20 and 22, although the range was from 19 – 33. Most of the students had taken the STPM, came from partially or fully funded government schools, and over a half were from urban areas.

Table 2 shows the educational and occupational attainment of the parents or guardians. About 4.9 per cent of fathers/ guardians and about 6.1 per cent of mothers had no formal education. In contrast, about 11.5 per cent of fathers/ guardians and 6.9 per cent of mothers had at least an undergraduate degree. About 43.9 per cent of fathers/ guardians and 53.5 per cent of working mothers were in professional, technical or administrative jobs, much greater than the corresponding figures of 27.5 per cent for males and 26.9 per cent for females in 2005 (Table 13-3, Malaysia, 2006).

² The score is a standardized variable from the hypergeometric distribution. We have assumed $\alpha = 0.05$. For the calculation, see the Appendix.

Table 1: Educational Background of Respondents

Characteristic	Percentage	Characteristic	Percentage
Gender		Discipline of Study	
Male	28.6%	Arts	78.1%
Female	71.4%	Sciences	21.9%
Number	880	Number	880
Age		Pre-University Qualifications	
20 or less	29.2%	STPM	62.8%
21	58.0%	STAM	0.6%
22	8.0%	Matriculation	26.9%
23 or more	4.8%	Others	10.4%
Number	877	Number	880
Citizenship		Type of secondary school attended	
Malaysian	96.5%	Fully funded government school	83.3%
China	3.0%	Partially funded government school	14.4%
Maldives	0.2%	Private school	2.3%
Singapore	0.2%	Number	880
Thailand	0.1%		
Number	880		
		Location of secondary school	
		Urban	56.9%
		Rural	43.1%
		Number	880

Table 2: Socio-economic Background of Respondents

Characteristic	Percentage	Characteristic	Percentage
Highest education attainment of father/guardian		Occupation of father/guardian	
No formal schooling	4.9%	Armed forces occupations	3.1%
Primary schooling	16.6%	Managers	29.0%
Lower secondary schooling	19.7%	Professionals	6.1%
Upper secondary schooling	30.4%	Technicians and associate professionals	8.8%
Sixth Form diploma	8.7%	Clerical support workers	5.6%
	8.3%	Service and sales workers	9.5%
Undergraduate degree	8.3%	Skilled agricultural, forestry and fish	12.0%
Masters degree	2.8%	Craft and related trades workers	7.5%
PhD degree	0.4%	Plant and machine operators, and assemblers	6.5%
Number	843	Elementary occupations	11.8%
		Number	872
Highest education attainment of mother		Occupation of mother	
No formal schooling	6.1%	Armed forces occupations	0.1%
Primary schooling	19.3%	Managers	4.7%
Lower secondary schooling	22.9%	Professionals	8.2%
Upper secondary schooling	30.9%	Technicians and associate professionals	2.1%
Sixth Form diploma	8.4%	Clerical support workers	5.7%
	5.4%	Service and sales workers	3.0%
Undergraduate degree	5.4%	Skilled agricultural, forestry and fish	1.1%
Masters degree	1.4%	Craft and related trades workers	0.4%
PhD degree	0.1%	Elementary occupations	2.7%
Number	850	unemployed/retiree/housewife	72.0%
		Number	854

Reasons for Furthering Studies at an Institution of Higher Learning

Respondents were asked to rate the importance of nine reasons for furthering their studies at an institution of higher learning, and then specify the most important one. Figure 1 displays the ratings of respondents for the various reasons. Five reasons stand out for being rated extremely important. These are to get a good job, the next step in the career path, to gain more knowledge, personal interest in the field of study and to broaden experience, in that order. Of these reasons, 60% of the students rated getting a good job as extremely important and this was ranked overall as the second most important reason by 27 per cent of the students (see Table 3).

Overall, 56 per cent of the students cited next step in career path as extremely important and for 30 per cent of the students this was ranked as the most important reason. It is also evident that 49 per cent of the students felt that gaining more knowledge was extremely important in furthering their studies while 16 per cent perceived this as the most important reason and ranked it third. About 40 per cent of the students regarded personal interest in the field of study and broadening their experience as extremely important reasons. Personal interest in the field of study was ranked fourth by 16 per cent of the students while broadening experience was ranked as the fifth most important reason but only by a small number (5%) of the students.

Other reasons for furthering their studies were parental expectation, teachers' expectation, influence of friends who are going to university and to have a good time. In terms of rankings, it was clear that parental expectation was considered more important than the rest of the reasons, though only about 4.3 per cent ranked this as most important (rank 6). In spite of the relatively large number of the students (47%) reporting that to have a good time was not very important or not important at all, this reason was ranked the seventh most important by a minority of 1.3 per cent students. The group of students surveyed were given the opportunity to add further reasons that they thought were important, but only about 44 (5%) did so. The reasons mentioned were to get a qualification, ambition, status, family reputation and expectation, seeking a boyfriend or girlfriend, girlfriends' influence, siblings' influence, to learn to be independent and religious obligations, with only a relatively small number of students (less than 0.6%) citing each of these reasons.

Figure1. Ratings of Reasons for Furthering Study at an Institution of Higher Learning

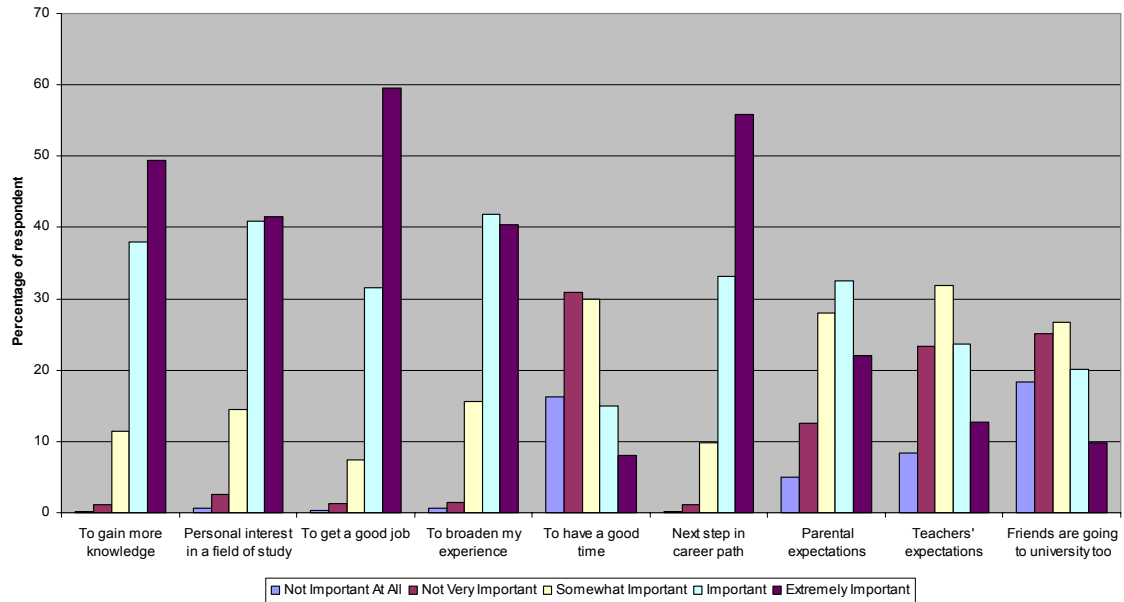


Table 3. The Most Important Reason for Furthering Study at an Institution of Higher Learning

Reason	Frequency	Percentage
Next step in career path	260	29.55
To get a good job	240	27.27
Personal interest in a field of study	141	16.02
To gain more knowledge	137	15.57
To broaden my experience	43	4.89
Parental expectations	38	4.32
To have a good time	11	1.25
Others	6	0.68
Friends are going to university too	3	0.34
Teachers' expectations	1	0.11
Total	880	100.00

Sources of information

Respondents were asked whether they had used sources in the list provided and then identify the one they thought the most important. Figure 3 presents the various sources of information students consulted when deciding which university at which to study. It is clear that not all students used the same information source and that students referred to many sources. The three main sources of information were parents, friends and university websites with a high overall figure of 76 per cent, 72 per cent and 72 per cent, respectively, of students indicating they had made use of these sources. University visits, league tables and magazines were the least used sources of information with only 27 per cent, 36 per cent and 42 per cent consulting them, respectively. The league table is found to be mainly used by mature students (24+) who find them more useful than young students. 67 per cent of the mature students as compared to 31 per cent of the young students identified it as a source of information used.

The students were also asked to cite the most important source of information used. The results are reported in Table 4. University websites, career advisors, university prospectuses and parents were all rated among the more important sources of information playing a role in their decision, than advice from parents, families and friends. The explanation may be that parents and families have a strong influence on educational ambitions and the decision to further their study at a tertiary level. However, at the point of application into the university, parents exert less influence on the actual choices of university and area of study. This may be due to the growing independence of students during the transition from school to university as well as to the fact that parents have limited knowledge on the fields of education, choices and career prospects (James, Baldwin and McInnis, 1999). Of the 72 per cent, 49 per cent and 52 per cent of the students who used the university website, professional career advisor and university prospectus respectively, a corresponding 21 per cent, 15 per cent and 18 per cent stated this was their most important source of information and the deciding factor. There was no gender difference in terms of the ranking of university website, career advisor or prospectus as the most important sources (not shown). As for the least used sources of information, i.e. university visits, leagues tables, newspapers and magazines, only 6.4 per cent, 3.2 per cent, 3.2 per cent and 1 per cent stated they were the most important source of information, in that order. Despite a good proportion of students who consulted league tables (36%), newspapers (57%) and magazines (42%) the number that ranked them as most important were still relatively low. However, it is possible that league tables, magazines and newspapers may work indirectly by influencing career advisors.

Figure 3. Percentage of Students using Various Sources of Information

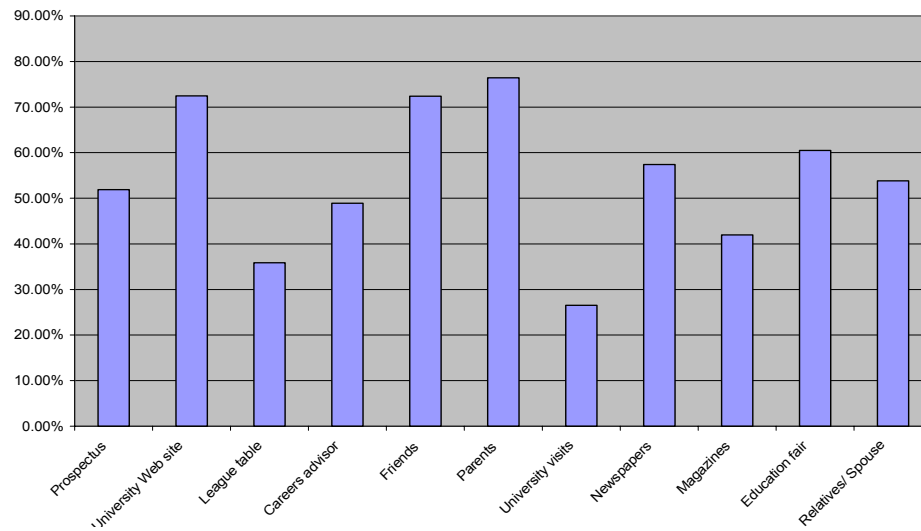


Table 4. The Most Important Source of Information

Source	Frequency	Percentage
University web site	182	20.68
Careers advisor	153	17.39
Prospectus	131	14.89
Parents	128	14.55
Education fair	89	10.11
League table	56	6.36
Friends	45	5.11
University visits	28	3.18
Newspapers	28	3.18
Others	18	2.05
Relatives/ spouse	14	1.59
Magazines	8	0.91
Total	880	100.00

Selecting the University of Malaya

The survey asked respondents where the University of Malaya ranked among the universities of choice. Table 5 shows the responses, and it is evident that the overwhelming majority thought of the University of Malaya as first choice or only choice (69.1%). On the other hand, the table shows that although few in number, there were students that ranked it very low.

Table 5: Rank of University of Malaya among Choices

Choice	Frequency	Percentage
UM is my only choice	14	1.6%
1 st choice	593	67.5%
2 nd choice	117	13.3%
3 rd choice	79	9.0%
4 th choice	40	4.6%
5 th choice	18	2.0%
6 th choice	6	0.7%
7 th choice	3	0.3%
8 th choice	6	0.7%
9 th choice	3	0.3%
Total	879	

Would having parents who were alumni make a difference? Among the 156 fathers/guardians and mothers with a degree, 42 of them are UM alumni. Table 6 shows the percentages of students placing the University of Malaya as first or only choice by whether the father, mother or guardian was an alumnus of the University. Although the percentage placing the University first was higher for alumni parents (31.4%) than for non-alumni parents (23.8%), the difference was not significantly different between the two groups ($\chi^2=.17$, $p=0.30$).

Table 7 shows the other universities listed by students as universities that they would have gone to if they had not come to the University of Malaya. These are mostly other public universities, and the ranks of the top three match the league tables. However, the 'other' category included universities from around the world, including Singapore and China.

Finally, Table 8 shows the highest academic level aspired to by whether the University of Malaya was the first choice. The two are significantly different ($\chi^2= 21.1$, $p=0.00$) and the greatest difference is observed for the category 'Bachelor's'. Although initially surprising, one reason for the higher proportion could be that these students selected the University of Malaya as first choice because they wanted a quality degree as their only degree.

Table 6: Percentage for Whom the University of Malaya was First Choice by Whether Parent(s) are Alumni

	Alumni Parent(s)/ Guardians	Non-Alumni Parents/ Guardians	Total Sample
UM is first or only choice	31.4%	23.8%	31.0%
UM is not first choice	68.6%	76.2%	69.0%
Total Number	838	42	880

Table 7: The Other University if not University of Malaya

University	Frequency	Percentage
UKM	279	34.7%
USM	147	18.3%
UPM	106	13.2%
UITM	63	7.8%
UPSI	51	6.4%
UUM	42	5.2%
UTM	32	4.0%
UIAM	26	3.2%
UMS	21	2.6%
Others	36	4.5%
Total	803	100%

Table 8: Highest academic degree Aspired by Whether the University of Malaya was First Choice

	Bachelor's	Master's	Doctoral	Professional Qualification	Total
UM is first or only choice	21.58	26.69	43	8.73	607
UM is not first choice	11.72	23.81	58.24	6.23	273
Total	18.52	25.8	47.73	7.95	880

Reasons for choosing the University of Malaya

Respondents were asked to rate the importance of nine reasons for choosing the University of Malaya then identify the one they thought the most important. The ratings are shown in Figure 5. The top four reasons that were found extremely important by the students were the good job prospects, the reputation of the university, the programme offered and the reputation of the programme. Of these, just below half the students (45%) categorized good job prospect as extremely important and this was ranked overall as the third most important factor by 21% of the students (see Table 9). 39% of the students agreed that the reputation of the university was extremely important in selecting the University of Malaya and this was ranked as the most important factor by 29% of the students. Whilst the fact that whether the programme offered met students interest was considered extremely important by 38% of the students who ranked it second (22%), the reputation of the programme, which is closely linked, was viewed as extremely important by 33% of the students who ranked it as the fourth (7.3%) influencing factor.

Considering that only about a third of the students (36%) reported having used the league tables, the extent to which reputation is derived from the league table is arguable. Students may only be using league tables as part of the picture in measuring university reputation. Many students may identify reputation with other measures such as the age of the university and the entry grades (James, Baldwin and McInnis, 1999; Brooks, 2003) though other, even less tangible, criteria such as the extent to which the name of the institution is publicly recognised also probably play a part (Scott, 2006). In the present survey, 42% of the students in the arts discipline considered reputation as extremely important compared to 32% of the students in the science discipline. One third of the students form the Faculty of Islamic Studies and just over half of the students from the Faculty of Art and Social Sciences and the Faculty of Education considered reputation to be extremely important. There was gender differences evident in the finding with 49% of the male students identifying reputation as extremely important compared to 35% of the female students, on the overall.

The fact that for so many students the reputation of the university and good job prospects are extremely important in the choice of university suggest that they chose the University of Malaya because this would enhance their job prospects and ensure the marketability of their qualification. It is conceivable that students take the pragmatist approach and view their undergraduate study as a means to an end rather than end in itself. This view is supported by the data for the primary reasons for furthering their studies at a tertiary level, where 60% of the students cited getting a good job was extremely important reason for going to university (Figure 1).

Figure 5. Ratings of Reasons for Choosing the University of Malaya

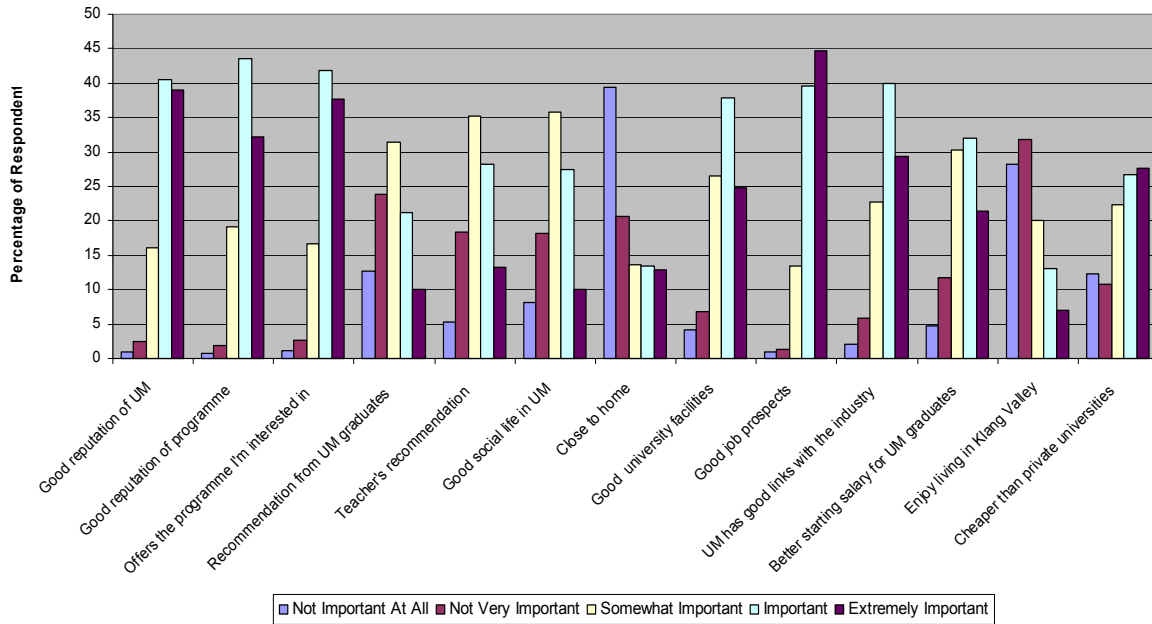


Table 9: The Most Important Reason for Choosing the University of Malaya

Reason	Frequency	Percentage
Good reputation of UM	251	28.52
Offers the programme i'm interested in	197	22.39
Good job prospect	183	20.8
Good reputation of programme	64	7.27
Close to home	39	4.43
Teacher's recommendation	29	3.3
UM has good links with industry	25	2.84
Cheaper than private universities	24	2.73
Better starting salary for UM graduates	21	2.39
Recommendation from um graduates	15	1.7
Good social life in um	12	1.36
Good university facilities	10	1.14
Others	8	0.91
Enjoy living in Klang Valley	2	0.23
Total	880	100

The University of Malaya's link with industry, perceived cost and university facilities were the other major factors in the choice of studying at UM and were rated as extremely important by 29%, 28% and 25% of the students, in that order. The link with industry and perceived cost were ranked the seventh (2.8% of students) and eighth (2.7% of students), respectively. Despite 25% of the students agreeing that university facilities are extremely important only a small number of students (1%) ranked it as the most important factor. Cost was considered extremely important amongst students whose father/guardian was holding a managerial post. This may be because they were not receiving any scholarship or study loan and have to either fund their education themselves or receive financial aid from their parents/guardians.

Although a majority of students of the students (60%) viewed the ability to live near home and living in the Klang Valley as not very important or not important at all, a minority rated it extremely important (13% and 7% respectively). They ranked living near home the fifth most important factor in deciding to study at the University of Malaya. This may be due to the fact that living at home helps to meet the cost as well as receive family support. The students also mentioned additional factors that influenced their decision to study in the University of Malaya. These were, parental choice, friends' choice, to join sisters currently studying in the University of Malaya and being offered the programme at the University of Malaya although the university was not their choice, but only one student cited each of these factors.

Coherence between Reasons

In the previous sections, we considered the degree of importance of various reasons for furthering studies at an institution of higher learning, and for choosing to study at the University of Malaya. We found that a good job, the next step in the career path, to gain more knowledge, personal interest in the field of study and to broaden experience were the most important reasons for furthering studies at a higher level. Good job prospects, the reputation of the university, the programme offered and the reputation of the programme were the most important reasons for choosing the University of Malaya. While this indicates the importance of individual reasons, it is also interesting to consider how reasons combined together or cohere together. In this respect, we focus on any two reasons being jointly cited as extremely important. The numbers are compared against the count under random grouping.

The coherence scores for reasons for furthering studies at an institution of higher learning are shown in Appendix Table 1. Other than for three combinations (gain more knowledge, have a good time; personal interest in a field of study, friends are going to university, too; to have a good time, teacher's expectation), all the scores exceed the significance value of 1.96 and most are very high showing that the proportion jointly citing the two reasons as being extremely important are much more than expected under random grouping. Table 10 reports the means for each reason. This is a measure of the average propensity of a reason to be combined with others. 'To broaden experience' has the greatest average propensity to be jointly cited as extremely important with others while 'to have a good time' has the lowest average propensity to be jointly cited as extremely important with others. The average propensity of being jointly

cited is next highest for ‘teachers’ expectations’, ‘next step on career path’ and parents’ expectations’. Based on the scores in Appendix Table 1 and the means in Table 10, the following inter-related groups of extremely important reasons can be broadly identified:

1. Personal development, which combines ‘gain more knowledge’, ‘personal interest in a field of study’ and ‘to broaden experience’.
2. Career prospects which combines ‘get a good job’ with ‘next step in career path’, and which combines as well with personal development
3. Significant others (family, teachers and peers) which combines ‘parental expectations’, ‘teachers’ expectations and ‘friends going to university too’, and which combines as well with personal development and career prospects

Table 10: Average Coherence Scores for Reasons for Furthering Studies at an Institution of Higher Learning

Reason	Average Score
To broaden my experience	8.090821
Teachers' expectations	7.463827
Next step in career path	7.265571
Parental expectations	7.244001
To gain more knowledge	6.980966
To get a good job	6.967445
Personal interest in a field of study	5.925033
Friends are going to university too	4.910562
To have a good time	2.476818

The coherence scores for reasons for choosing the University of Malaya are shown in Appendix Table 2. Most of the scores are high compared to the significance level of 1.96 except for the combinations of ‘close to home’ and ‘good reputation of the University’, ‘good reputation of the programme’, ‘offers programme of interest’, ‘good links with industry’. Table 11 reports the means for each reason. ‘Good reputation’ has the greatest average propensity to be jointly cited with as being extremely important with other reasons, while ‘close to home’ has the least average propensity to be jointly cited with others as being extremely important. The average propensity of being jointly cited exceeds 7 for almost all reasons except the last three. Based on the scores in Appendix Table 2 and the means in Table 11, the following inter-related groups of reasons can be broadly identified:

1. Perceived reputation of quality of programme which combines ‘good reputation of University’, ‘offers programme I am interested in’ and good reputation of programme’
2. Perceived reputation of the graduate (and his or her skills) in the workplace which combines ‘good links with industry’, ‘good university facilities’, good job prospects’ and ‘better starting salary’, and which combines as well with perceived reputation of quality of programme
3. Recommendations about university life which combines ‘recommendations from University graduates’, ‘teacher’s recommendations’, ‘good social life’, and which combines as well with perceived reputation of quality of programme
4. General costs which combines ‘cheaper than private universities’ with ‘living in Klang Valley’ and ‘close to home’, as well as with all other reasons

Table 11: Average Coherence Scores for Reasons for Choosing the University of Malaya

Reason	Average Score
Good reputation of UM	8.643621
Good reputation of programme	8.311077
UM has good links with the industry	8.295206
Teacher's recommendation	8.238701
Good job prospects	7.91946
Offers the programme I'm interested in	7.792728
Good university facilities	7.753804
Recommendation from UM graduates	7.632726
Better starting salary for UM graduates	7.345518
Good social life in UM	7.287126
Cheaper than private universities	4.627144
Enjoy living in Klang Valley	4.003508
Close to home	2.704072

Finally, we consider how each reason for choosing the University of Malaya coheres with the reasons for furthering studies at an institution of higher learning. That is, we examine the numbers of respondents who scored the pair of reasons jointly as being extremely important. The scores are shown in Appendix Table 3 All the scores are very high and exceed the significance level of 1.96. Interesting two scores are negative. That is, for these combinations of reasons, there are significantly fewer respondents than expected jointly citing them as being extremely important. These are ‘close to home’ and ‘gain more knowledge’ and ‘personal interest in field of study’. The mean scores are shown in Table 12 and indicate

that there is a great amount of inter-related between reasons for furthering studies and coming to the University of Malaya. The greatest average score is observed for good job prospects, followed by the three reasons that we have suggested previously combine as the quality of the programme.

Table 12: Average Coherence Scores of each Reason for Choosing the University of Malaya with the Reasons for Furthering Studies at an Institution of Higher Learning

Reason	Average Score
Good job prospects	80.37
Good reputation of UM	74.47
Offers the programme I'm interested in	72.19
Good reputation of programme	56.09
UM has good links with the industry	52.54
Good university facilities	41.41
Teacher's recommendation	37.64
Better starting salary for UM graduates	33.87
Recommendation from UM graduates	27.73
Cheaper than private universities	27.45
Good social life in UM	24.73
Close to home	9.03
Enjoy living in Klang Valley	8.59

Factors Affecting Perceived Reputation of Quality of Programme

The previous discussion shows that the majority of the respondents placed the University of Malaya as first choice, and that the most important sources of information in making their decision were university websites, career advisors, prospectuses and parents. The perceived reputation of programme quality and of the graduates in the workplace, recommendations from family and peers, and general costs are extremely important for choosing the University of Malaya. The most important is the reputation of the programme. An evaluation of the reasons for furthering education at a higher level suggests. that personal development, career prospects and the support of significant others in the life of the student are extremely important reasons The most important reason is career prospects. In relating the choice of University of Malaya to the reasons for pursuing higher education, job prospects and reputation are the most likely to be cited as extremely important.

In this section, we consider the factors affecting the perceived views on reputation of the programme. The definitions of the variables are based on the findings of the coherence analyses.

ReputationP is the dependent variables, while Relative Cost is an independent variable measuring relative costs at the University, one of the reasons assessed in the choice of University of Malaya. Personal, Career and Significant Others are dependent variables formed from responses to reasons for pursuing a higher level of education. Table 12 shows the definitions of the variables based on extremely important reasons, while Table 13 shows the other variables entering the regression analysis. Both tables also show the results of univariate analyses against the dependent variable. Relative Cost, Personal, Career, Significant Others, Male and EducF are all significantly different across the two values of Reputation. The proportions of Reputation=1 are all higher than for Reputation=0 (not shown) for each of these variables. However, Rural, CGPA and Age are not significantly different across the two values of Reputation.

Table 12: Variables Based on Extremely Important Reasons Entering the Regression Analyses

Variable name	=1 if the following are jointly cited as being extremely important	Percentage=1 out of 880 respondents	Results of Significance Tests with ReputationP
ReputationP	'good reputation of University', 'offers programme I am interested in' and 'good reputation of programme'	17.5	
Relative Cost	'cheaper than private universities'	27.6	$\chi^2=16.5, p=0.00$
Personal Development	'gain more knowledge', 'personal interest in a field of study' and 'to broaden experience'	21.8	$\chi^2=112.6, p=0.00$
Career	'get a good job' with 'next step in career path'	45.5	$\chi^2=34.6, p=0.00$
Significant Others	'parental expectations', 'teachers' expectations and 'friends going to university too'	3.6	$\chi^2=36.1, p=0.00$

Table 13: Other Variables Entering the Regression Analyses

Variable Name	Description	Summary Information	
Male	=1 if gender is male	Percentage 1 = 28.6	$\chi^2=6.4, p=0.01$
Rural	=1 if secondary school was in a rural area	Percentage 1 = 43.1	$\chi^2=0.1, p=0.76$
EducF	=1 if father's highest educational level>Form Five	Percentage 1 = 27.3	$\chi^2=4.0, p=0.05$
CGPA	CGPA of previous semester	Mean: 3.0 S.D.=0.5	F=2.42, p=0.12
Age	Age of respondent	Mean: 20.9 S.D.=1.0	F=1.42, p=0.23

The results of the logistic regression are reported in Table 14. Relative Cost and CGPA are significant at the 10 per cent level, while Personal, Career, Significant Others, Male are all highly significant. EducF is no longer significant, and neither are Rural and Age. The results show that the odds ratio that reputation is 1 is 4.5 times greater when Personal is 1 than when Personal is 0. That is, the student who is pursuing a higher level educational programme because he or she believes personal development to be extremely important is 4.5 times more likely to choose the University of Malaya for its reputation than a student who does not believe personal development to be extremely important. A similar interpretation applies for the other significant variables. Significant Others has as strong an effect as Personal development. Relative Cost, Career, being male and CGPA have strong effects with the odds ratio exceeding 1.5. That is, those who said the University was cheaper than private universities, those who said career prospects were an extremely important for pursuing higher education, those who were better students academically and those who were males had a greater likelihood of finding reputation to be extremely important.

Table 14: Estimates of Log Odds ratios for Reputation

Variable name	Log Odds Ratio	Standard Error	P-Value
Relative Cost	1.420	0.311	0.109
Personal Development	4.529	1.009	0.000
Career	1.521	0.337	0.059
Significant Others	4.107	1.725	0.001
Male	1.643	0.357	0.022
Rural	1.002	0.213	0.991
EducF	1.394	0.320	0.149
CGPA	1.504	0.339	0.070
Age	1.128	0.132	0.304
Chi-sqed=105.78, Pseudo R ² =0.14, p-value=0.00			

Conclusion

This study has shown that the most important reason for pursuing higher education and entering the University of Malaya is career prospects. The reputation of the University of Malaya, both as a provider of content as well as a brand that obtains a premium in the workplace for its graduates, plays an extremely important role in the student's choice of university. Significant others in the life of the student, especially parents, as well as the student's own desire for personal development are strong influences that lead the student to consider reputation of the University. Career prospects, academic ability and gender also play a role in directing the student to consider reputation. Students tend to look to universities and schools for much of the information needed to make the choice of university. By large, the most used and the most important source of information is the university website. Therefore it is clear that universities should not ignore the importance of their website as well as the prospectus in informing and shaping students' choice.

Perhaps it is not that surprising that reputation both of the programme and the employability of graduates is very important. The University of Malaya is oldest University and for a very long time was the only University in the country. The expansion in the tertiary education sector has been remarkable only from the late 1990s, and reputations of younger universities will take time to be built. The reputation of the University should be matched against the cost of its undergraduate education. With the government's education loan which covers fees and cost of living in a public university but covers only partially the fees in a private institution, education at the University of Malaya is certainly "value for money".

However, if its reputation declines or the cost of education rises, then the University will look much less attractive. Furthermore, the University will have to be pro-active in attracting the best students who will be considering alternatives with good reputation (and funding) like Monash University and Nottingham University. If the University of Malaya is to remain the University of First Choice in a expanding competitive education sector, it needs to maintain and enhance its prestige amongst the stakeholders of the education process, which include prospective students, their parents, teachers, career advisors, schools as well as employers.

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Appendix Table 1. Coherence Scores for 36 pairs of Reasons for Furthering Studies at an Institution of Higher Learning

		1	2	3	4	5	6	7	8
1	To gain more knowledge								
2	Personal interest in a field of study	9.51							
3	To get a good job	8.32	7.14						
4	To broaden my experience	13.59	10.20	8.34					
5	To have a good time	0.74	2.92	0.94	4.88				
6	Next step in career path	8.86	7.48	14.96	9.17	2.11			
7	Parental expectations	5.58	3.75	6.54	6.75	2.19	5.89		
8	Teachers' expectations	6.62	4.45	5.62	7.79	1.84	6.44	17.39	
9	Friends are going to university too	2.63	1.94	3.88	4.00	4.19	3.22	9.86	9.55

Appendix Table 2. Coherence Scores for 91 pairs of Reasons for Choosing to Study at the University of Malaya

		1	2	3	4	5	6	7	8	9	10	11	12
1	Good reputation of UM												
2	Good reputation of programme	13.59											
3	Offers the programme I'm interested in	11.27	13.09										
4	Recommendation from UM graduates	7.45	7.41	6.02									
5	Teacher's recommendation	7.62	8.54	7.29	13.41								
6	Good social life in UM	6.49	6.29	6.96	11.64	10.39							
7	Close to home	1.95	0.94	1.35	3.92	3.89	1.88						
8	Good university facilities	9.15	8.19	6.31	6.30	7.90	7.64	5.58					
9	Good job prospects	11.62	8.44	10.04	4.92	6.87	7.01	2.13	10.96				
10	UM has good links with the industry	10.62	9.35	7.75	5.94	6.96	7.17	1.91	10.59	15.84			
11	Better starting salary for UM graduates	8.76	7.34	4.99	6.36	5.40	6.87	2.94	8.46	10.94	14.55		
12	Enjoy living in Klang Valley	3.13	3.76	2.10	2.55	3.05	4.28	8.26	3.55	1.95	3.97	5.06	
13	Cheaper than private universities	4.85	3.38	3.70	3.50	3.83	3.72	3.32	7.14	4.33	4.88	6.48	6.38

Appendix Table 3: Coherence Scores for the 117 Pairs of Each Reason for Choosing the University of Malaya with Each Reason for Furthering Studies at an Institution of Higher Learning

Reason for Choosing the University of Malaya	Reason for Furthering Studies at an Institution of Higher Learning								
	To gain more knowledge	Personal interest in a field of study	To get a good job	To broaden my experience	To have a good time	Next step in career path	Parental expectations	Teachers' expectations	Friends are going to university too
Good reputation of UM	115.99	88.60	108.87	95.38	9.48	116.29	56.27	49.39	29.97
Good reputation of programme	92.83	91.03	67.52	74.55	3.71	75.83	41.54	42.38	15.39
Offers the programme I'm interested in	96.09	148.09	94.08	91.27	8.37	112.24	46.08	43.26	10.27
Recommendation from UM graduates	34.92	32.47	30.81	40.24	9.78	31.65	26.97	24.58	18.19
Teacher's recommendation	43.38	40.65	45.41	54.44	8.55	44.16	40.61	42.75	18.82
Good social life in UM	30.72	32.41	25.93	40.09	13.05	25.30	22.21	21.25	11.60
Close to home	(2.80)	(5.38)	11.06	10.14	5.43	20.84	23.23	7.55	11.20
Good university facilities	60.68	53.91	43.83	55.28	4.10	77.22	29.94	31.15	16.61
Good job prospects	108.42	95.90	164.07	72.49	6.07	170.51	44.84	37.45	23.53
UM has good links with the industry	73.98	66.60	102.46	54.71	6.33	92.55	33.56	26.79	15.89
Better starting salary for UM graduates	46.36	37.14	58.57	25.04	11.56	58.10	31.34	19.39	17.36
Enjoy living in Klang Valley	6.44	5.89	5.02	13.41	8.65	6.97	13.30	6.78	10.85
Cheaper than private universities	30.20	46.71	35.78	38.69	26.47	47.27	12.68	4.08	5.16

Appendix 1: The Coherence Score

Consider a population of K different respondents and define the following variables:

$C_{ik}=1$ if respondent k finds reason i to be extremely important and 0 otherwise.

$n_i = \sum_k C_{ik}$ and $n_j = \sum_k C_{jk}$ are numbers of respondents finding reason i to be extremely important and reason j to be extremely important, respectively;

$J_{ij} = \sum_k C_{ik} C_{jk}$ is the number of respondents simultaneously finding reasons i and j to be extremely important, $0 < J_{ij} < \min(n_i, n_j)$

A measure of inter-obstacle complementarities is obtained for each cell (reason i , reason j) by comparing the observed number with the number of links that would emerge from random grouping. The latter can be calculated through the hyper-geometric random variable, X_{ij} . After having extracted without replacement from a population of K respondents two samples n_i and n_j , the probability to find x respondents finding both reasons i and j extremely important is the following

$$\Pr(X_{ij} = x) = \frac{\binom{n_i}{x} \binom{K - n_i}{n_j - x}}{\binom{K}{n_j}}$$

The mean and variance of X_{ij} are respectively:

$$\mu_{ij} = E(X_{ij}) = \frac{n_i n_j}{K}$$

$$\sigma_{ij}^2 = \mu_{ij} \left(1 - \frac{n_i}{K} \right) \left(\frac{K - n_i}{K - 1} \right)$$

The index of complementarities is constructed by comparing the observed value of J_{ij} and μ_{ij} , and scaling the difference with the standard deviation of X_{ij} ,

$$SR_{ij} = \frac{J_{ij} - \mu_{ij}}{\sigma_{ij}}$$

Appendix 2: questionnaire

1. The following statements are concerned with your reasons for furthering your studies at an institution of higher learning. Circle the number that corresponds to your opinion on the degree of importance for each statement.

No.	Reasons	1 Not important at all	2 Not very important	3 Somewhat important	4 Important	5 Extremely Important
1a.	To gain more knowledge	1	2	3	4	5
1b.	Personal interest in a field of study	1	2	3	4	5
1c.	To get a good job	1	2	3	4	5
1d.	To broaden my experience	1	2	3	4	5
1e.	To have a good time	1	2	3	4	5
1f.	Next step in career path	1	2	3	4	5
1g.	Parental expectations	1	2	3	4	5
1h.	Teachers' expectations	1	2	3	4	5
1i.	Friends are going to university too	1	2	3	4	5
1j.	Others (Please State)	1	2	3	4	5

2. Please tick **ONE** among the listed items below that best reflects the most **important reason** in your decision to go to university.

- 1. To gain more knowledge
- 2. Personal interest in a field of study
- 3. To get a good job
- 4. To broaden my experience
- 5. To have a good time
- 6. Next step in career path
- 7. Parental expectations
- 8. Teachers' expectations
- 9. Friends are going to university too
- 10. Others (Please State)

3. Please indicate whether you had consulted the following different sources of information in making your decision.

No.	Attributes	1 Yes	2 No
3a.	Prospectus	1	2
3b.	University Web site	1	2
3c.	League table	1	2
3d.	Careers advisor	1	2
3e.	Friends	1	2
3f.	Parents	1	2
3g.	University visits	1	2
3h.	Newspapers	1	2
3i.	Magazines	1	2
3j.	Education fair	1	2
3k.	Relatives/ Spouse	1	2
3l.	Others (Please State.....)	1	2

4. Which among the listed source of information you identified in question 3 is the **most important** source of information? Please mark **ONE** only.

- 1. Prospectus
- 2. University Web site
- 3. League table
- 4. Careers advisor
- 5. Friends
- 6. Parents
- 7. University visits
- 8. Newspapers
- 9. Magazines
- 10. Education fair
- 11. Relatives/ Spouse
- 12. Others (Please state.....)

5. What is the highest academic degree that you aspire to?

- 1. Bachelor's Degree
- 2. Master's Degree
- 3. Doctoral Degree
- 4. Professional Qualification
(Please state.....)

6. What job do you aspire to upon completion of your education?

.....

7. The following statements are concerned with your decision to study at the University of Malaya. Circle the number that corresponds to your opinion on the degree of importance for each statement.

No.	Reasons	1 Not important at all	2 Not very important	3 Somewhat important	4 Important	5 Extremely Important
7a.	Good reputation of UM	1	2	3	4	5
7b.	Good reputation of programme					
7c.	Offers the programme I'm interested in	1	2	3	4	5
7d.	Recommendation from UM graduates	1	2	3	4	5
7e.	Teacher's recommendation	1	2	3	4	5
7f.	Good social life in UM	1	2	3	4	5
7g.	Close to home	1	2	3	4	5
7h.	Good university facilities	1	2	3	4	5
7i.	Good job prospects	1	2	3	4	5
7j.	UM has good links with the industry	1	2	3	4	5
7k.	Better starting salary for UM graduates	1	2	3	4	5
7l.	Enjoy living in Klang Valley	1	2	3	4	5
7m.	Cheaper than private universities	1	2	3	4	5
7n.	Others (Please State)	1	2	3	4	5

8. Among the items listed in question 5, which is the most **important** reason for selecting the University of Malaya. Please mark **ONE** only.

- 1. Good reputation of UM
- 2. Good reputation of programme
- 3. Offers the programme I'm interested in
- 4. Recommendation from UM graduates
- 5. Teacher's recommendation
- 6. Good social life in UM
- 7. Close to home
- 8. Good university facilities
- 9. Good job prospect
- 10. UM has good links with industry

- 11. Better starting salary for UM graduates
- 12. Enjoy living in Klang Valley
- 13. Cheaper than private universities
- 14. Others (Please State)

9. Where did UM rank among your university options?

- a. 1. First choice
- b. 2. 2nd choice
- c. 3. 3rd choice
- d. 4. Others. Please specify:.....
- e. 5. UM was my only choice

10. Please name the university you would have attended if you had not selected UM.
(Enter 'none' if UM is your only choice)

.....

11. If your parents or guardians have a degree, are they UM alumni?

	Are they UM alumni?		
a.Mother	<input type="checkbox"/> 1. Yes	<input type="checkbox"/> 2. No	<input type="checkbox"/> 3. Don't know
b.Father	<input type="checkbox"/> 1. Yes	<input type="checkbox"/> 2. No	<input type="checkbox"/> 3. Don't know
c. Guardian	<input type="checkbox"/> 1. Yes	<input type="checkbox"/> 2. No	<input type="checkbox"/> 3. Don't know

12. Your student matric number :.....

13. Which faculty are you in?

- | | |
|--|---|
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| <input type="checkbox"/> 2. Academy Of Malay Studies | <input type="checkbox"/> 12. Faculty of Law |
| <input type="checkbox"/> 3. Faculty of Arts and Social Sciences | <input type="checkbox"/> 13. Faculty of Medicine |
| <input type="checkbox"/> 4. Faculty of Build Environment | <input type="checkbox"/> 14. Faculty of Science |
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| <input type="checkbox"/> 7. Faculty of Dentistry | <input type="checkbox"/> 17. Centre for Foundation Studies |
| <input type="checkbox"/> 8. Faculty of Economics and Administration | |
| <input type="checkbox"/> 9. Faculty of Education | |
| <input type="checkbox"/> 10. Faculty of Engineering | |

14. Your CGPA on first semester 2007/2008 :

15. Date of Birth :(dd/mm/yyyy)

16. Gender

0. Male

1. Female

17. Citizenship

0. Malaysian

1. Non-Malaysian

(Please Specify your nationality :.....)

18. Your highest Level of Education

1. STPM

2. Matriculation

3. Diploma

4. Others (Please Specify

19. Year of study at University Malaya

1. 1st year

2. 2nd year

3. 3rd year

4. Others (Please Specify :.....)

20. Which one of the following best describes the type of secondary school you attended?

1. Fully funded government school

2. Partially funded government school

3. Private school

21. Was your secondary schooling in an urban or a rural area?

0. Urban

1. Rural

22. What are the occupations of your parents/guardians (if they are unemployed, retired or deceased, state the occupation in which they were last employed). Please be specific, e.g, lawyer, doctor, housewife. If 'businessman', state whether shop owner, salesman, hawker, etc.

- a. Father:.....
- b. Mother:.....
- c. Guardian:.....

23. Your parents/guardian's Highest Level of Education. Please mark (√)

	a. Father	b. Mother	c. Guardian
1. No formal schooling			
2. Primary schooling			
3. Lower secondary schooling			
4. Upper secondary schooling			
5. Sixth Form			
6. Diploma			
7. Undergraduate degree			
8. Masters degree			
9. PhD degree			
10. Don't know			

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