

HIGHER EDUCATION IN PRIVATE UNIVERSITIES OF BANGLADESH: A STUDY ON FEMALE STUDENTS' ENROLLMENT BEHAVIOR

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ABSTRACT

This paper investigates the enrollment behavior of the female students of private universities in Bangladesh. By collecting data from a sample of 900 female students of twelve private universities classified into two strata, researchers conducted reliability test, descriptive analysis, chi-square and ANOVA tests and identified a number of key findings as to the enrollment behavior of female students. The research shows that the female students mostly prefer BBA program followed by BA in English. In the Faculty of Science and Engineering, BS in Pharmacy gets the highest preference. In Post Graduate level MBA and MA in English programs are the preferred subjects. The most important factor for the female students of one strata (top ranked private universities) during admission is the quality of teaching of the university, followed by the image of that university. On the contrary, the female students of other private universities look for lower tuition fees of their preferred program. For the both strata, parents' decision has a significant influence. Finally, the female students of top ranked universities are highly satisfied with the image of their universities while the female students of other universities are dissatisfied with the overall performance of their universities.

Key words: Female students, private universities, descriptive analysis, chi-square and ANOVA tests.

I. INTRODUCTION

Higher educational attainment in Bangladesh is, in general, very low. The expansion of tertiary education in this country has largely been due to the rapid growth of the private sector in recent years. Till mid nineties the conventional education system has been supported by massively subsidized education through a very small number of state-run institutions to a very narrow spectrum of students chosen out of fierce competition. In course of time, to fulfill the ever-growing demand of institutions for higher studies, a large number of private universities emerged. According to Bangladesh Bureau of Educational Information and Statistics (BANBEIS, 2006), there are 27 public universities (excluding National University-NU & Open University) and 54 private universities now in Bangladesh and enrolment in these universities has continued to increase during the last decade [1]. The enrollment of total students increased from 119807 in 2001 to 277516 in 2006 [1]. It also

shows that although the number of students enrolled in public universities remains higher, the pace of increase for enrollment in private universities seems to have accelerated. In 2001, the number of enrollment in private universities was 27245 which stood at 124267 in 2006. Deabnath (2007) mentions that almost 100,000 students get themselves admitted into the private universities each year [2]. Among which about one fourth of the total number of students of private universities have been reported to be girl students (Kitamura, 2006) [3]. Global monitoring report by UNESCO (2003/4) shows that women continued to progress towards achieving parity with men. It reveals that their share in tertiary enrolment rose from 46% to 46.8% at the world level [4]. Bangladesh is not an exception. Female enrolments at various levels of education registered marked improvement over time. Tisdell and Hossain (2005), in an article mentions that between 1974 and 1998, the number of girls enrolled per 100 boys rose from 56 to 90 at the primary level, from 27 to 82 at the secondary

level, from 11.5 to 51 in the colleges and from 19 to 32 in the universities [5]. He shows that female-male enrolment ratios (FMERs) at the primary and secondary levels consistently rose over time. FMERs in the colleges remained steady at about 0.14 until 1981 but rose on a progressive scale thereafter. Finally, the FMER at the university level remained constant in the 0.22-0.23 range until 1984 but depicted a steady increase since 1985. Given these trends, female and male enrolments at the primary, secondary, college and university levels will be equalized, respectively, by the years 2009, 2012, 2021 and 2148 [5]. So the female students' market will be an attractive segment for private universities to focus on. But very few studies have been undertaken particularly on female students. Most of the studies in the context of private universities in Bangladesh have so far focused on the quality of education, high tuition fees, confinement of these universities into limited number of disciplines, debate on public versus private universities and the reasons for which students get enrolled into these universities. Behavior of female segment at tertiary level of education has been an area of less concentration by the researchers. At the backdrop the circumstances described above, this study investigates the enrollment behavior of the female students of private universities in Bangladesh, so that the concerned authorities in private sector can take necessary steps to attract the potential female market segment. Specifically the objectives of this study are:

- To determine the market share of female students in private universities
- To identify the demographic profile of the female students of private universities
- To identify the distribution of enrollment of female students in different fields of study
- To study if the demographic factors have any relationship with the selection of the university
- To study if the demographic factors have any relationship with the selection of fields of study
- To find out the university selection criteria of the female students
- To study if the university selection criteria differs among the female students of different strata
- To measure the level of satisfaction of the female students with their preferred selection criteria

- To study if the level of satisfaction of the female students differs between different strata

II. LITERATURE REVIEW

II.1 Demographic Profile

Researchers have identified demography as a very important tool for market segmentation to identify target customers and their needs. Stafford (1996) mentions that the importance of various quality improvements differ among customer segments [6]. Students can be considered as the customers of a university. Consequently, it is very important for a university to focus first on those students who can be their target customers and what qualities the students expect from their universities. One possible method of determining those target customers is by utilizing customer demographics. Hansman and Schutjens (1993) proposed a "rational assumption" that age is a strong predictor of changes in attitudes and behavior [7]. And this study thus considered age as one of the factors to determine demographic profile of the female students.

Tisdell and Hossain (2005) say that poverty has remained the most significant economic factor behind the low literacy rate in Bangladesh [5]. Schofield (1996) identified tuition fees as the main factor affecting a student's choice of a private university in Bangladesh as the tuition fees of these universities vary widely here [8]. In another study, Salahuddin et al. (2008) stated that it is obvious that students do consider cost and cost-related factors more than anything else because private university education is still very expensive from an economic perspective and a significant number of students are from middle-class families [9]. Mostly the source of tuition fees of the students is the monthly income of the guardians of the students. So the current study considers the monthly income of the guardians of the students as one of the demographic factors. Here the guardian income refers to the income level of the person who bears the educational expenses of the students.

The distribution of enrollment in different fields of study and the level of female participation in each field change across countries. Generally, the broad field of 'social sciences, business and law' attracts the largest number of female enrollments (often more than one-third of the total) in almost all countries [4]. It is generally followed by

'education' in sub-Saharan Africa and by 'humanities and arts' in many countries of the Asia and Pacific region, while 'engineering, manufacturing and construction' programmes come second in most countries of Latin America and the Caribbean, North America and Europe. The fields 'health and welfare' and 'science' follow, in this order, for most countries, while the lowest enrolments are reported in 'agriculture' and 'services' programmes (accounting for less than 5% of the total in most countries) [4]. This study considers 'field of study' in higher secondary education as one demographic factor to identify whether it has any impact on the selection of programs in higher education.

Tisdell and Hossain (2005) stated that early marriage, cultural norms and religious orthodoxy have also been responsible for the low educational attainments of women in Bangladesh [5]. So, religious principles as an influencing factor of customers' attitude has been considered as a demographic factor that form female students' profile.

However, 'Sex' as a demographic factor has been excluded from this study as the population of this study consists of only female students.

II.2 University Selection Criteria: Female Students' Preference during Enrollment

Hopper (1996) identified that the credit transfer facilities to the foreign universities and the market orientated subjects (such as business administration, computer science, engineering and medicine) as the key factors of students' choice of private universities [10]. Mamun and Das (1999) undertook a study and pointed towards some other attracting factors such as library facilities, laboratory facilities and internship assistance for students [11]. Rahman (2000) pointed out that fee structure, faculty strength and job security were key attractions for the students in choosing a private institution [12]. He also identified the nature of the curriculum (i.e., discipline-based versus skilled-based program), the location and aesthetic of the campus, and the number of full-time faculty members as factors attracting students to private institutions. Zahid, Chowdhury and Sogra (2000) undertook an extensive qualitative study of performance of business education in Bangladesh and identified the course system (year-end or semester-end examination), quality of

teaching, medium of instruction, campus size and location, accommodation for the students, campus facilities (such as auditorium, parking, canteen, indoor and outdoor parking facilities) as the factors of selecting private universities [13]. Majid, Mamun and Siddique (2000) at one study found the similar factors mentioned above and identified teaching quality, teaching learning methodology, teaching aids and support facilities as the basic selection factors of business education in private institutions [14]. Ahmed, Ahmed and Anwar (2000) found that skill-based curriculum and teaching quality are the major attracting factors for the students in choosing private institutions for business study [15]. Thornton (2006) studied the performance of educational institutions in Bangladesh and identified that teaching quality is the most important factor in judging overall performance [16]. In another study, Ancheh (2006) found that the reputation of the institution and the job prospects of future graduates are the prime factors attracting students to study in Malaysian private universities and colleges [17]. Salahuddin et al. (2008) identified mode of payment, quality of teaching, cost and environment as the key influencing factors for the students to get admitted into a university [9]. Tisdell and Hossain (2005) mentioned that traditionally the role of girls in Bangladesh has been linked to the households. Given the financial constraints and the lack of earning opportunities, it seems rational that a family would have a preference for educating a boy rather than a girl [5]. Considering the factor, parents' decision has been considered as another selection criteria in this study. Gulsan and Paul (2005) stated students' freedom to choose major subjects is a key factor for attracting students in private universities of Bangladesh [18].

Thus, the selection criteria found in the literature and the criteria found in qualitative survey have been considered as few factors that may motivate female students in choosing university. In this case the researchers focused on quality of education, credit transfer facility, market oriented subjects, image of the university, number of full time qualified faculty, low tuition fee, library and laboratory facilities, performance of the graduates, hostel facility for female students, parents decision, congenial environment, infrastructure of the university, satisfaction of the existing students, location of the university, advertisement, availability of concession, brand value of the

university, position of the university in UGC ranking and peer influence.

II.3 Program Selection Criteria: Students' Preference during Enrollment

Dusuki and Abdullah (2007) mention that to determine the customer behavior in any institution, it is important to investigate its customers' awareness and usage of its products/services [19]. For an academic institution, as well, it is very important to study the enrollment pattern of the students in several programs they offer. Global monitoring report 2003/4 by UNESCO shows that the enrollment of females in higher education has increased by a large percentage in almost every country [4]. It also shows that female presence is weakest in engineering, manufacturing and construction courses and in science and agriculture social sciences, business and law attracts the largest number of enrollments in almost all countries. So, this study will identify the distribution of enrollment of female students in different fields of study in private universities of Bangladesh which in turn can be viewed as an opportunity for the university authorities to offer their programs to attract a large pool of female students.

II.4 Satisfaction of the Students

Metawa and Almosawi (1998) state that customer satisfaction is the feeling or attitude of a consumer toward a product/service after it has been used [20]. In the context of services, according to Naser, Jamal, and Al-Khatib (1999) customer satisfaction is often related to factors such as service quality and service features (for example, convenience, competitiveness, and location of service provider) [21]. For the academic institutions, to improve their performance, satisfaction of the students need to be measured against their expectation. As the students are attracted by some key factors like tuition fees, market-oriented subjects, job prospects, leadership quality, quality of teaching, the number of full-time faculty members, location, infrastructure of the university, library and laboratory facilities, government approval, this study will find out the performance of the universities regarding these factors in the female students' perspective.

III. METHODOLOGY

The population of interest of this study was the female students of the private universities in

Bangladesh. To get data from the students of these universities institutional method was applied. The study was a cross sectional study as segments of the population were sampled at a single point in time.

A multistage non probability sampling method has been employed in this study. To ensure that the opinions of the students of the sampled universities represent those of the entire female students' market, a quota sampling technique has been applied. In deciding the strata for the quota, a UGC evaluation report on private universities published at The Daily Star (2004) has been obtained. This report suggested that the performance of only 9 of the 54 private universities operating then were satisfactory, others had been asked to improve their performance on some certain issues [22]. At the first stage, based on judgment four from the top (satisfactory performance) ranked nine private universities, eight from the rest of the universities have been considered as two strata for this study. At the second stage, random sampling technique has been adapted. A sample of 75 students was drawn from each of the 12 universities to yield a sample size of 900. In mid 2008, university campuses were visited and questionnaire was filled up by the female students of the sampled universities.

A single set of questionnaires in English had been developed for the respondent group. To identify the female students' preference of programs, demographic profile of the female students' and if the demographic factors have any relationship with the selection of a program and that of a university, a set of multiple choice questions had been developed. Options of the questions varied from 2 to 7, where the respondents could select only one option having a coding value from 1 to 7. To find out the university selection criteria of female students, a set of factors (24) had been identified from primary qualitative research which plays key role to the students during admission in an institution. KII approach had been followed to conduct the qualitative research. At least one administrative person, one faculty members and several students from each selected private universities had been interviewed. In the questionnaire for each of those factors a statement had been provided to the respondents. A seven-point Likert scale was used, where the respondents had to score each factor on the basis of their level of agreement with the statements. The seven-point

scale indicated 1 as highly disagree while 7 meant highly agree. It was also mentioned that the gaps between the scores are uniformly distributed.

To measure the level of satisfaction of the female students, a five-point Likert scale was used against the factors identified. The respondents had to score 5 when their satisfaction level was high and had to indicate 1 for their high dissatisfaction with the respective criteria. To compare the satisfaction level of the female students of one strata (top ranked universities) with that of another strata (other universities), the five-point likert scale had been used. An open-ended question also had been asked to the respondents to explore any other factor that had not been identified at the qualitative study but the female students consider during their admission into a university. As the questionnaires mainly comprised continuous scales and a categorical scale, for both categorical and continuous scales multiple coding was used. Open ended questions were not coded and their analyses have been carried out through subjective judgment.

Data analyses were done using reliability test, frequency distribution, descriptive analysis, chi-square test and ANOVA.

III.1 Limitation of the Study

The subjective choice of private universities in this study may not be free from bias and thus the findings do not represent all private universities; only those selected universities. However, this is not considered a significant weakness of the study since the private universities considered will represent all types of universities and a large percentage of the total female students studying in private universities in Bangladesh were enrolled into these 12 universities.

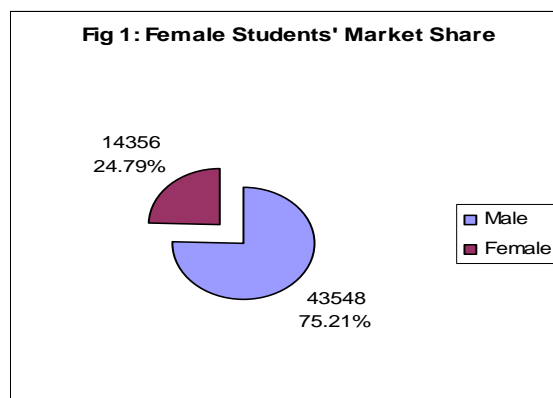
IV. FINDINGS AND INTERPRETATIONS

Pallant (2000) says that the most commonly used indicator of internal consistency is Cronbach's alpha coefficient. Ideally, this coefficient should be above 0.7 [23]. In this study, the attributes/features considered to brand Bangladesh have strong internal consistency, with a Cronbach's alpha coefficient estimated at 0.816.

IV.1 Market Share

The study reveals that the market share of female students in private universities is 24.79%, which

resembles with the findings of the study by Kitamura [3]. Fig. 1 shows the summary of the findings on market share of female students.



Source: Data inventory of the universities, 2008

IV.2 Female Students' profile

A summary of findings on female students' profile along four variables: religion, age, level of guardian income, area of study in HSC has been presented in Table 1. It has been found that the majority of the female students (93.4%) are Muslim while only 6.6% of the students are non Muslim. The reason for extremely low concentration of non-Muslim female students may be attributed to their enrollment success in public universities, their lack of interest to continue higher education in Bangladesh or the religious composition of the population of our country. The findings of guardians' income show that more than 46% of the students' guardian have an average monthly income more than BDT 40000 which represents that a major portion of the female students in private universities are from the upper class or upper middle class of the society.

Table 1: Profile of the respondents

Variable	Categories	Percent
Religion	Islam	93.4
	Hindu	6.1
	Christian	.5
	Buddhist	0
	Other	0
Guardians' Average Income*	Below 20000	5.0
	BDT 20000 to 30000	24.8
	BDT 30000 to 40000	24.1
	BDT 40000 to 50000	29.6
	Above 50000	16.5

Variable	Categories	Percent
Respondent Age	Below 18 years	.2
	18 to 22 years	70.6
	23 to 27 years	26.5
	28to 32 years	2.1
	Above 32 years	.5
Group in HSC	Science	44.2
	Commerce	31.7
	Arts	19.7
	Others	4.4

Source: Field survey, 2008

Note:* 1 US Dollar = Bangladeshi Taka (BDT) 68.15 (as of November 10, 2008 as in <http://www.xe.com>)

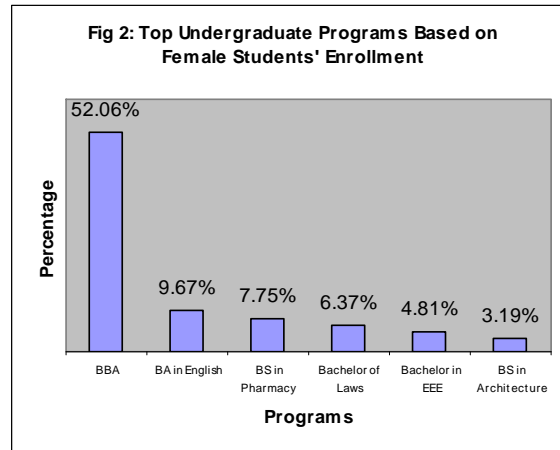
Again, almost 49% students’ response to monthly average guardians’ income less than BDT 40000 may be explained by the fact that some of the private universities are now charging comparatively lower tuition fees or providing financial support in terms of course waiver or scholarships which attract the students of other classes.

The findings on the “respondent age” variable demonstrate that almost 71% female students range between 18 years to 22 years and 26.5% of the female students are in the age category 23 to 27 years. The concentration in the age between 18 years to 22 years may be attributed that most of the female students in private universities are undergraduate students.

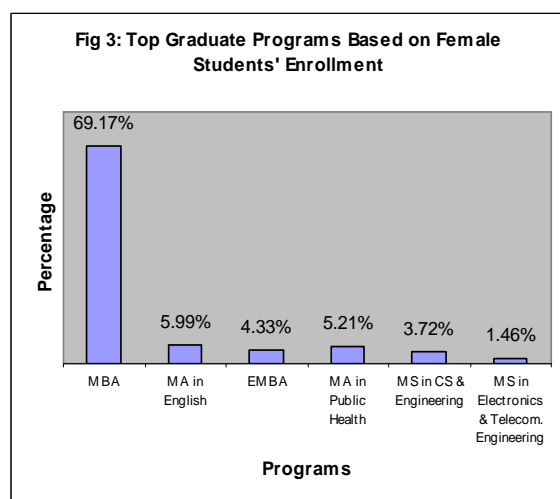
The study shows that majority (44.2%) of the female students studying in private universities had science in HSC level. The high pass rate in HSC from science group and few numbers of seats in the preferred program in public universities may be the reasons for concentration of science students in private universities. Table 1 shows that 31.7% female students is from Commerce, 19.7% is from Arts & 4.4% of female students are from other background like having A level and Madrasa education.

IV.3 Distribution of Enrollment at Different Fields of Study

Fig. 2 and Fig. 3 present the findings on the enrollment pattern of female students in several programs.



The study shows (Fig. 2) that in undergraduate level majority of the female students (52.06%) have been studying in Bachelor of Business Administration (BBA) program followed by Bachelor of Arts in English (9.67%) and Bachelor of Law (6.37%) program. In the Faculty of Science and Engineering, Bachelor of Science in Pharmacy tops the list having a percentage of 9.67 which is less significant compared to BBA. Bachelor in Electrical and Electronic Engineering has 4.81% and BS in Architecture has a market share of 3.19% among the female students. Fig. 3 shows that in Graduate level the majority of the female students are in MBA (69.17%) program followed by MA in English (5.99%) program. Among other programs Masters in Public Health (5.21%), MS in Computer Science and Engineering (3.72%) and MS in Electronics and Telecommunication Engineering (1.46%) have a mentionable share in the female market.



IV.4 Selection of Program and University: Role of Demographic Factors

Results of Chi-square test (Table* at appendix) on relationship between program selection and demographic factors show program selection is dependent on guardians' income level (at 10% significance level) and group of study in HSC (at 5% significance level). It indicates that the tuition fee of a program has a relationship with choice of preference to that program. It also shows that field of study in HSC (science, commerce, arts, madrasa education) has an impact on the program of study.

The study reveals that Bachelor of Business administration program in private universities has 57.54% of female students who passed HSC from science group and lion share of the rest portion of this group study in several science and engineering programs. 84.21% of the female Students in private universities having commerce background in HSC study BBA and 11% gets enrolled in BA in English while 70% of the Arts students study English in their undergraduate level. 90% of the students from A level and other backgrounds (Madrasa) get enrolled in BBA program giving BBA the lion market share of the female market.

The p-value derived from the Chi-square test (Table* at appendix) shows that female students' selection of university does not depend on age or religion. Rather the university selection has association with the guardians' income level (at 5% significance level) and group of study in HSC (at 10% significance level). It reflects that university which charges higher tuition fee has a particular segment of students having their guardians' average monthly income more than BDT 40000 while some other universities providing flexibility in tuition fees either in the form of course waiver or scholarship have female students mostly having their guardians level of income "between 20000 to 40000". It can also be mentioned here that as the program of study has a relationship with the field of study in HSC, the availability of the preferred program in a university has an association with the selection of the university with the field of study in HSC.

IV.5 University Selection Criteria: Does Female Students' Preferences Differ between the Two Strata?

The study reveals that the selection criteria vary significantly among the female students who study in the top ranked universities and those of others universities. The results of the descriptive statistical analysis presented in Table 2 shows that the most important criteria for the students of the top ranked universities, according to mean score, is the quality of teaching of the university. It is followed by image of the university, number of full time qualified faculty members, demand of their preferred program and library facilities. It also shows that parents' decision has a significant influence on the female students' enrollment. Along with these factors, they agree that credit transfer facility to foreign universities, UGC ranking and performance of the graduating students influence their decision. They highly disagree that the course system (year-end/semester end examination), freedom to choose major subject and medium of instruction have strong influence on their enrollment decision.

Table 2: Descriptive Statistics (Selection Criteria: Female Students of Top Ranked Universities)

Criteria	Mean	Std. Deviation
Quality of teaching	6.28	1.223
Image of the university	6.07	1.064
No. of qualified faculty members	5.96	1.114
Demand of preferred program	5.91	1.517
Library facilities	5.61	1.645
Parents decision	5.26	1.351
Performance of graduate students	5.10	1.344
Credit transfer facility	4.96	1.751
UGC ranking	4.05	1.631
Peer influence (other than parents)	3.13	1.753
Congenial env. (cls &cmn_rm, cntn)	3.06	.952
Availability of Concession/scholarship	2.85	2.007
Laboratory facilities	2.80	1.749
Lower tuition fee	2.46	2.191

Location of the university	2.45	1.714
Social & academic status of VC	2.32	1.977
Social status	2.31	1.453
Infrastructure of the university	1.92	1.148
Hostel facility	1.78	.843
Co-curricular activity	1.74	1.002
Advertisement	1.61	1.104
Medium of instruction	1.56	1.001
Course system (year/sem. based)	1.55	.939
Freedom to choose major subject	1.34	.062

Source: Field survey, 2008

Descriptive statistical analysis in Table 3 shows the ranking of the selection criteria of the female students of the universities other than the top ranked universities. The students of these universities very strongly agree that they look for lower tuition fees of their preferred program during enrollment into a university.

Table 3: Descriptive Statistics (Selection Criteria: Female Students of other Universities)

Criteria	Mean	Std. Deviation
Lower tuition fee	5.80	1.309
Availability of Concession/scholarship	5.62	1.529
Parents decision	5.23	1.534
Quality of teaching	5.19	1.041
No. of qualified faculty members	4.89	1.565
Image of the university	4.77	1.501
Location of the university	4.32	1.099
Congenial env. (cls & cmn_rm, cntn)	4.11	1.636
Hostel facility	4.06	1.493
Demand of preferred program	3.92	1.091
Infrastructure of the university	3.34	1.416
Library facilities	3.23	1.435
Social & academic status of VC	3.18	1.439

Peer influence(other than parents)	2.99	1.672
Laboratory facilities	2.71	1.449
Advertisement	2.60	1.772
Credit transfer facility	2.33	1.607
Performance of graduate Students	2.16	1.567
UGC ranking	2.11	1.580
Social status	2.02	1.888
Co-curricular activity	1.93	1.319
Medium of instruction	1.82	1.121
Freedom to choose major subject	1.69	1.004
Course system(year/sem. based)	1.61	.590

Source: Field survey, 2008

Availability of concession or scholarship, parents' decision, quality of teaching and location of the university follow the priority list. They also highly disagree that the course system (year-end/semester end examination), freedom to choose major subject and medium of instruction have strong influence on their decision to get themselves admitted into a university.

From the results of the statistical analyses in Table 2 and Table 3, it can be stated that there are some differences between the preferences of the female students of the two strata.

IV.6 Female Students' Satisfaction with Several Criteria: Does It Vary between the Two Strata?

Table 4 presents that image of the university has been rated as the most satisfying factor by the female students of the top ranked universities.

Table 4: Satisfaction Level: Female Students of Top Ranked Universities

Factor	Mean	Std. Deviation
Quality of teaching	3.94	.960
Image of the university	4.11	.912
Demand of the studied program	3.77	1.059
Library facilities	3.34	.978
Performance of graduate students	3.91	.871

Credit transfer facility	3.26	1.079
Administrative support	3.21	.916
Envrnmnt (cls_rm, cntn, cmn_rm audi)	3.68	.968
Availability of Concession/scholarship	1.69	1.136
Laboratory facilities	2.97	.911
Tuition fee	1.26	1.177
Location of the university	3.01	.918
Social & academic status of VC	3.96	1.096
Internship facility	3.16	1.213
Infrastructure of the university	3.31	1.196
Hostel facility	1.99	1.085
Co-curricular activity	3.26	1.228
Job placement facility	3.41	.912
No of full time qualified faculty members	3.67	1.059

Source: Field survey, 2008

Quality of teaching and number of full time qualified faculty members follow the list. It may be attributed to the fact that these universities mostly conduct their programs by the ex and present faculty members of IBA, DU, BUET and other renowned public universities who have foreign exposure. The female students of these top ranked universities have an above average level of satisfaction with almost all the factors they considered during admission. However, they have rated tuition fees as the most dissatisfying factor for them. They perceive that they are charged high tuition fees. They are also dissatisfied with the concession and the scholarship facilities they are provided with. On the contrary, the female students of other strata are satisfied having a mean score above 4 with the tuition fee they are charged for their preferred program (Table 5).

Table 5: Satisfaction Level: Female Students of Other Universities

Factor	Mean	Std. Deviation
Quality of teaching	3.09	1.406
Image of the university	2.64	1.224

Factor	Mean	Std. Deviation
Demand of the studied program	2.89	1.559
Library facilities	2.43	.880
Performance of graduated students	2.21	1.271
Credit transfer facility	1.16	1.109
Administrative support	2.41	1.160
Envrnmnt.(cls_rm, cntn, cmn_rm audi)	3.03	1.022
Availability of Concession/scholarship	4.15	.936
Laboratory facilities	2.97	1.811
Tuition fee	4.26	.877
Location of the university	3.24	1.117
Social & academic status of VC	3.39	1.006
Internship facility	1.53	1.213
Infrastructure of the university	2.71	1.093
Hostel facility	2.76	1.505
Co-curricular activity	1.93	1.028
Job placement facility	1.21	1.119
No of qualified full time faculty members	2.67	1.481

Source: Field survey, 2008

The reason may be that these universities charge comparatively lower tuition fee for the programs they offer than that of other universities or they provide more concession/scholarship facilities or waive many courses of the female students. Quality of teaching and social and academic status of the Vice Chancellor respectively follow the ranking list which have the mean score just above the average score 3. It needs to be mentioned here that the female students of these universities are dissatisfied with most of the factors they have been provided to. Among them credit transfer facility to foreign universities, job placement facility, co-curricular activities and internship assistance facility have been rated as the least satisfying factors by the female students of these universities.

The result from ANOVA tests (Table 6) shows that there is a significant difference among the opinions of the two groups.

Table 6: Comparison of overall satisfaction level of female students between top ranked universities and that of other universities**ANOVA**

Overall Satisfaction

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	109.958	1	109.958	115.983	.000
Within Groups	852.252	899	.948		
Total	962.210	900			

The mean score of top ranked universities is 3.98 which is clearly above than the average score 3 where as the mean score of other universities is 2.95. It represents that considering all the factors the female students of top universities are satisfied with the performance of their universities where as the students of other universities are not satisfied at all.

V. CONCLUSION AND RECOMMENDATIONS

This study provides useful information for both the business and academic community who are either involved or keen to get involved into higher education in private sector.

It shows that the market share of female students in private universities is almost one fourth of the total market of private universities. Majority of these female students are Muslim and the concentration is in the age between 18 to 22 years. Concentration in this age category attributes that most of the female students in private universities are undergraduate students. The findings of guardians' income show that a major portion of the female students in private universities are from the upper class of the society. Even then, the private universities charging comparatively lower tuition fees or providing financial support in terms of course waiver or scholarships attract the large number of female students from other classes and represent almost half of the female students. Majority of the female students studying in private universities had science in HSC level and percentage of students from Madrassa and English background is very lower.

The female students mostly prefer BBA program followed by Bachelor of Arts in English and Bachelor of Law program. In the Faculty of Science and Engineering, Bachelor of Science in

Pharmacy gets the highest preference from the female students which is followed by Bachelor in Electrical and Electronic Engineering and BS in Architecture. It also shows that in Post Graduate level more than half of the female students are in MBA program followed by Masters in MA in English program and Masters in Public Health.

There is a significant relationship between choices of program in undergraduate level with the guardians' income level of the female students. Educational background in HSC also has a significant association on program selection. Majority of the female students having science and more than three fourth of the female students having commerce background in HSC enroll themselves in Business Administration program and Arts students have a preference to English. University selection also has a high degree of association with the level of guardians' income of the female students.

The university selection criteria vary significantly among the female students who study in the top ranked universities and those of others universities. The most important factor for the female students of the top ranked universities during admission into a university is the quality of teaching of the university, followed by the image of the university and number of full time qualified faculty members. On the contrary, the students of other universities look for lower tuition fees of their preferred program and availability of concession or scholarship during enrollment into a university. For all private universities, parents' decision has a significant influence on the female students' university selection process.

Further more, the satisfaction level between the female students who study in the top ranked universities and those of other universities vary significantly. The female students of the top ranked universities are almost highly satisfied with the

image of their universities. Quality of teaching and number of full time qualified faculty members are other satisfying factors for them. The female students have an above average level of satisfaction with almost all the factors they considered during admission. However, they are dissatisfied with the tuition fees, the concession and the scholarship facilities they are provided by their respective universities. Whereas, the tuition fee they are charged for their preferred program is the most satisfying factors for the female students of other strata. Availability of concession and scholarship are other areas of satisfaction for them. It needs to be mentioned here that the female students of these universities are dissatisfied with most of the factors they have been provided to. Among them credit transfer facility to foreign universities, job placement facility, co-curricular activities and internship assistance facility are the least satisfying factors for the female students of these universities.

From the conclusions of the study, the following recommendations can be reasonably forwarded for those who are concerned about higher education in private sector. As the market share of the female

students is increasing day by day, the female students deserve special attention. Focus should be given to BBA, English, Law, Pharmacy and Architecture programs in under graduate level and MBA and MA in English in graduate level to get the maximum share of the female market. They should consider quality of teaching, image of the university, number of full time qualified faculty members and tuition fees as vital factors to attract the female students. As parents' decision has significant impact on the female students' enrollment process, the university has to formulate effective strategy to attract the students' parents as well. Satisfying the existing female students should get priority from the authority as peer influence has impact on university selection criteria. To attract a large number of female students who passed A level or Alim degree from Madrasa needs special attention. To satisfy the existing female students, the top ranked universities should focus on their current tuition fees, concession and scholarship facilities while other universities should focus on quality of teaching, image of the university, job placement facility and internship assistance facility.

APPENDIX

Table*: Results of Chi-square Tests for association between female students' demography and university & program selection

	Age			Guardians' Income level			Religion			HSC Group		
	χ^2	df	<i>p</i>	χ^2	df	<i>p</i>	χ^2	df	<i>p</i>	χ^2	df	<i>p</i>
University Selection	6.182	4	.186	141.54	4	.037	6.432	4	.677	7.10	3	.069
Program Selection	91.953	22	.508	139.348	22	.063	149.02	22	.759	438.89	22	.026

Source: Field survey, 2008

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Higher Education in Private Universities of Bangladesh: A Study on Female Students' Enrollment Behavior	For official Use Only Respondent Code <table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>			
<h2 style="margin: 0;">Questionnaire</h2>				

Dear respondent, a very good day to you. This survey is a study on the enrollment behavior of the female students of Private Universities in Bangladesh which will help the academic institutions to formulate strategy to attract the said segment. The information you provide will be used absolutely for academic purpose. Please feel free to provide your opinions. Your personal perception and honest answer is considered of vital importance for the success of this study. Please answer all questions. No answer is considered right or wrong. Your cooperation in this regard will be highly appreciable.

Your identity will be kept confidential. Thank you very much for your time and interest.

Please put tick mark on the box that is applicable to you.

Part A: Demographic information

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1. Your religion is

- a) Islam b) Hindu c) Christian d) Buddhist e) Other

Q1	
----	--

2. In which of the following groups do you belong to?

- a) Below 18 years
 b) 18 to 22 years
 c) 23 to 27 years
 d) 28 to 32 years
 e) Above 32 years

Q2	
----	--

3. Approximate income of your guardian (who bears the educational expenses) ranges --

- a) Below Tk. 20000
 b) Tk. 20000- Tk. 30000
 c) Tk. 30001- Tk. 40000
 d) Tk. 40001- Tk. 50000
 e) Above Tk. 50000

Q3	
----	--

4. From which group did you pass your HSC?

- a) Science b) Commerce c) Arts d) Other (A level, Madrasa) _____

Q4	
----	--

5. The name of the university you are studying in is

Q5	
----	--

6. In which level do you study?

- a) Under Graduate program b) Post Graduate program

Q6	
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7. In which program do you study?

Q7	
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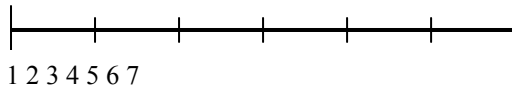
Part B: University/Program Selection Criteria

In the following section of the questionnaire, please score the statements according to your opinion based on the scale provided.

(1 indicates very strongly disagree and 7 indicates very strongly agree)

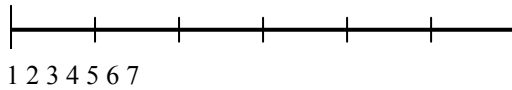
For Official Use

1. Quality of teaching of the university attracted me most.



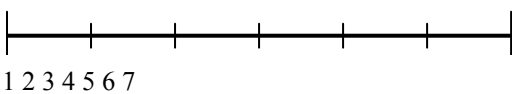
Q1	
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2. Number of full time qualified faculty members is the key factor for me.



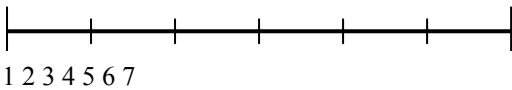
Q2	
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3. Image of the university is the factor which influenced me to get myself admitted here.



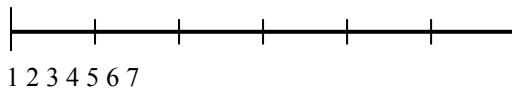
Q3	
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4. Demand of my preferred program of this university is the key factor.



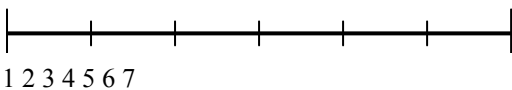
Q4	
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5. Library facility of this university influenced me to get myself admitted here.



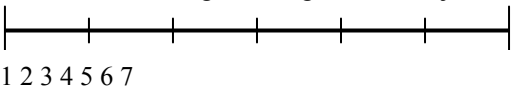
Q5	
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6. Parents decision to get enroll here influenced me most.



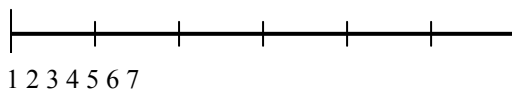
Q6	
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7. Performance of the graduating students in job market attracted me most.



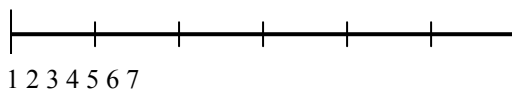
Q7	
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8. Credit transfer facility to foreign universities influenced me to get enrolled here.



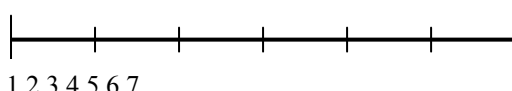
Q8	
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9. Location of the university is an important factor for me.



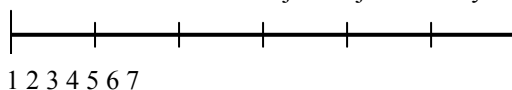
Q9	
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10. Social & academic status of the VC is the attribute which made me enroll here.



Q10	
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11. Freedom to choose the major subject is a key feature for me.



Q11	
-----	--

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12. Congenial environment(class room, common room, canteen)facility for female students is a key feature for me.

1	2	3	4	5	6	7
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Q12	
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13. Course system (year/semester end exam) is an important factor for me.

1	2	3	4	5	6	7
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Q13	
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14. Medium of instruction in the class room impressed me most.

1	2	3	4	5	6	7
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Q14	
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15. Laboratory facility is the key factor for me to be here.

1	2	3	4	5	6	7
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Q15	
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16. Infrastructure of the university attracted me to get myself admitted here.

1	2	3	4	5	6	7
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Q16	
-----	--

17

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Q17	
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18. Availability of concession/scholarship is an important factor for me.

1	2	3	4	5	6	7
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Q18	
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19. Hostel facility for the female students attracted me most.

1	2	3	4	5	6	7
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Q19	
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20. Co-curricular activities of this university influenced me most.

1	2	3	4	5	6	7
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Q20	
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21. Position of this university in the UGC ranking influenced me most.

1	2	3	4	5	6	7
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Q21	
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22 for me to be here.

1	2	3	4	5	6	7
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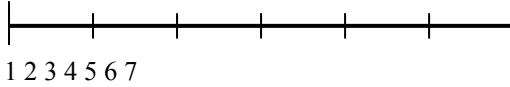
Q22	
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23. Advertisement of this university played a key role for me to be here.

1	2	3	4	5	6	7
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Q23	
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24. Lower tuition fees of this university attracted me most to be here.



Q24	
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25. Please mention if there is any other factor(s) which you considered for admission into this university.

Q25	
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Part C: Satisfaction Measurement

How satisfied are you with the aspects you considered to get enrolled into this university? Please circle/tick your satisfaction level by using the following scale.

5-Highly Satisfied
4-Satisfied
3-Not sure whether satisfied or not satisfied
2-Dissatisfied
1-Highly dissatisfied

Criteria		Satisfaction level		
1	Quality of teaching	1 2 3 4 5	O1	
2	Image of the university	1 2 3 4 5	O2	
3	Demand of the studied program	1 2 3 4 5	O3	
4	Library facilities	1 2 3 4 5	O4	
5	Performance of graduating students	1 2 3 4 5	O5	
6	Credit transfer facility to foreign university	1 2 3 4 5	O6	
7	Administrative support	1 2 3 4 5	O7	
8	Environment (cls_rm, cntn, cmn_rm_audi.)	1 2 3 4 5	O8	
9	Availability of Concession/scholarship	1 2 3 4 5	O9	
10	Laboratory facilities	1 2 3 4 5	O10	
11	Tuition fee	1 2 3 4 5	O11	
12	Location of the university	1 2 3 4 5	O12	
13	Social & academic status of VC	1 2 3 4 5	O13	
14	Internship facility	1 2 3 4 5	O14	
15	Infrastructure of the university	1 2 3 4 5	O15	
16	Hostel facility	1 2 3 4 5	O16	
17	Co-curricular activity	1 2 3 4 5	O17	
18	Job placement facility	1 2 3 4 5	O18	
19	No of qualified full time faculty members	1 2 3 4 5	O19	
20	Overall satisfaction	1 2 3 4 5	O20	