Demographic Factors and Students' Satisfaction in Nigerian Private Universities

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Abstract: Private institutions in Nigeria are constantly challenged to improve on the quality of their facilities with a view to continually satisfy students, their primary consumer. This research examined the demographic factors that determine students' satisfaction with academic facilities in private universities in Ogun State, Nigeria. The study is an exploratory cross-sectional survey which sampled seven hundred and seventy (770) students in selected universities. Five hundred and twenty-two (522) questionnaires were returned and analysed using Mann Withney-U test, Kruskal Walis and Cross-tabulation. The analyses showed that four out of the five demographic factors sampled have no effect on students' satisfaction. The implication of these findings were discussed and appropriate recommendations made.

Keywords: Demographic Factors, Determinant, Students' Satisfaction, Universities, Nigeria

1. Introduction
In educational setting, students' satisfaction has been the focus of research efforts both in developed and developing countries. This is because studies have shown that satisfied students are more likely to be committed to their studies (as measured by a higher retention rate) than unsatisfied students, who are likely to be less willing to regularly attend classes, and are more likely to quit their studies (Borden, 1995; Jamelske, 2009).
Considering the importance attached to student satisfaction in educational institutions, several researchers have shown interest in examining factors that determine or enhance students' satisfaction. A study by Carey, Cambiano and De Vore (2002) in the US compared campus satisfaction levels between students and faculty using the Student Satisfaction Inventory (SSI) and the Institutional Priorities Survey (IPS). A total of 692 students and 174 faculties were sampled in Midwestern State University. Using a 7-point Likert scale, respondents' expectation and satisfaction with service quality. The findings indicated that there were no

significant differences in satisfaction among gender, age groups and ethnicities.

Oldfield and Baron (2000) evaluated students' perception of service over time revealed that the mean score for final year students was lower than those of the first year students. This suggests that, as students become more experienced in the higher educational settings, they tend to be more critical in their perceptions of the service quality. In Malaysia, Yusoff (2012) evaluated the drivers that influence business student satisfaction in private educational environment. The study sampled 1,200 undergraduate business students at four private educational institutions in Malaysia and a response rate of 69% was achieved.. Findings from the study showed that there is a significant difference among the demographic factors (gender, year of study, nationality, programme of study and semester grade) and five out of the twelve factors that drive business students' satisfaction (student support facilities, class sizes, classroom environment, business procedures and relationship with the teaching staff).

In the United States of America, Tessema, Ready and Malone (2012) carried out a study on the effects of gender on different college outcomes such as students' satisfaction, ACT scores, and GPA at a mid-sized Midwestern public University. Selected demographic and attitudinal data were collected between 2001 and 2009 from a sample of 5,223 respondents in five colleges at the University (Business, Education, Liberal Arts, Nursing/Health Sciences and Science/Engineering). Findings showed that gender has a significant effect on student's satisfaction, ACT scores and GPA. However, the effect of gender on satisfaction and ACT scores was minimal.

Another study in the US by Tessema, Ready and Yu (2012) assessed the extent to which eleven academically related factors affect the overall satisfaction with major curriculum at a midsized public University. Five thousand, two hundred and twenty-three (5223) questionnaires were returned and analysed. Using descriptive statistics, findings showed that five out of the eleven factors identified in the model (quality of instruction, capstone experience, academic advising, overall college experience and preparation for career or graduate school) showed a statistically significant positive impact in explaining satisfaction with major curriculum and were greater than or equal to ß= .089. Moreover, the study revealed that both males and females were satisfied with the major curriculum and gender has a significant effect on satisfaction (t 5205 =-2.31, p<.05)., however, the study indicated that the size of the effect was small (Cohen's d effect size=0.08); below 0.2, which is considered a small effect.

In Singapore, Min and Khoon (2014) investigated the role that demographic factors play in service quality evaluation in the higher education sector. The framework, used in this study, was adopted from Min, Khoon and Tan (2012) and consists of four key constructs, namely motivation, expectation, perception and satisfaction. Applying the Structural Equation Model (SEM) approach to data collected from a sample of 263 international students in a

private higher education institution in Singapore, the study found that motive of study has moderate relationship with expectation and perception of service quality. Satisfaction of students is also closely and significantly related with the perception of service quality. It was also found that demography impacted on the relationships among the elements of service quality. The study included four demographic variables (gender, age, nationality and current level of study) and it was found that nationality and gender have considerable impact on the weights of relationships. Hence, it was suggested that education marketers should take demographic factors into consideration in the design and development of education services.

In line with the suggestion made by Min and Khoon (2014), that the issue of demographic factors should be taken into consideration by education marketers, this study is set to examine the demographic factors that determine students' satisfaction in private universities in Ogun State, Nigeria.

3. Research Methods

Data for this research was obtained from a survey of students from four private universities in Ogun State, Nigeria. Seven hundred and seventy (770) questionnaires were administered to students, with the help of trained field assistants, in each of the universities. A total of 522 valid questionnaires representing 68 per cent of the distributed questionnaires were retrieved for analysis. Questionnaires were analysed using Statistical Package for Social Scientists (SPSS). Mann Withney-U test was adopted to compare the mean of two groups of variables, Kruskal Wallis to compare the mean of more than two groups of variables and cross-tabulation to ascertain the relationship between each of the selected demographic factors and satisfaction.

4. Results and Discussion

4.1 Demographic Information of Students

Students' demography were analysed based on their gender, age, year of study, religion and college. Five hundred and twenty-two students responded to the structured questionnaires in the selected private universities as presented in Table 1. The analysis showed that most of the students (51%) were male, between 16 and 25years old (91%), in 400 level (30%), of their programmes, Christian (62%) and in the college of science and technology (53%).

Table 1: Students' Demographic Information in the Selected Private Universities

S/N	Demographic Factors	Sub - headings	BU F (%)	CU F (%)	Bells F (%)	CRE F (%)	Mean %
1	**Gender**	Male	61 (45)	90 (56)	60 (52)	56 (52)	51
		Female	75 (55)	72 (44)	56 (48)	52 (48)	49
2	**Age**	<16 yrs	15 (11)	0 (0)	0 (0)	10 (9)	5
		16-20 yrs	85 (63)	39 (24)	53 (46)	49 (45)	45
		21-25 yrs	29 (21)	123 (76)	59 (51)	41 (38)	46
		26-30 yrs	7 (5)	0 (0)	4 (3)	6 (6)	3
		> 30 yrs	0 (0)	0 (0)	0 (0)	2 (2)	1
3	**Level of Study**	100-Level	21 (15)	0 (0)	9 (8)	11 (10)	8
		200-Level	43 (32)	6 (4)	14 (12)	51 (47)	24
		300-Level	23 (17)	17 (10)	61 (52)	19 (18)	24
		400-Level	42 (31)	76 (47)	23 (20)	23 (21)	30
		500-Level	1 (1)	63 (39)	9 (8)	4 (4)	13
		Spill Over	6 (4)	0 (0)	0 (0)	0 (0)	1
4	**Religion**	Christianity	117 (86)	156 (96)	77 (66)	0 (0)	62
		Islam	19 (14)	6 (4)	39 (34)	108 (100)	38
5	**College**	Science & Technology	44 (32)	81 (50)	86 (74)	62 (57)	53
		Social Science	44 (32)	32 (20)	30 (26)	28 (26)	26
		Humanities	48 (36)	49 (30)	N/A	18 (17)	21

4.2 Comparison of Students' Satisfaction with Demographic Factors

This analysis was considered in order to adduce explanations on students' level of satisfaction as assessed generally in the work. In order to establish if there is difference in mean satisfaction of the students based on their demographic information, the researchers compared the mean using Mann Whitney-U test and Kruskal Wallis. The analysis using these statistical tools for sex, age, year of study, religion and college of students are shown in Tables 2 to 5.

Table 2: Comparison of Means Satisfaction using Mann-Whitney U Test

University	Group	Variable	N	Mean Rank	Sum Rank	U	Z	P
BU	Sex	Male	61	65.70	4008.00	2117.000	-.830	.406
		Female	75	70.77	5308.00			
	Religion	Christianity	117	67.18	7859.50	956.500	-1.083	.279
		Islam	19	76.66	1456.50			
CU	Sex	Male	90	78.32	7048.50	2953.500	-1.039	.299
		Female	72	85.48	6154.50			
	Age	16 – 20 yrs	39	82.50	3217.50	2359.500	- .164	.869
		21 – 25 yrs	123	81.18	9985.50			
	Religion	Christianity	156	82.38	12851.00	331.000	-1.308	.191

		Islam	6	58.67	352.00			
BELLS	Sex	Male	60	60.71	3642.50	1547.500	-.751	.453
		Female	56	56.13	3143.50			
	Religion	Christianity	77	60.10	4628.00	1378.000	-.740	.459
		Islam	39	55.33	2158.00			
	College	Science & Technology	86	52.15	4485.00	744.000	-3.531	.000
		Social Science	30	76.70	2301.00			
CRE	Sex	Male	56	53.42	2991.50	1395.500	-.381	.703
		Female	52	55.66	2894.50			
	Religion	Christianity	0	.00	.00			
		Islam	108	54.50	5868.00			

* The difference is significant if *P* < 0.05 *
* The difference is insignificant if *P* > 0.05 *

Table 2 indicates the group with the highest overall mean satisfaction using Mann-Whitney U Test. From data relating to gender of the students, it can be concluded that there is no significant difference in the mean of both groups in the selected Universities (Babcock University - $U = 2117$, $P = .406 > 0.05$; Covenant University - $U = 2953.5$, $P = .299 > 0.05$; Bells University - $U = 1547.5$, $P = .453 > 0.05$; and Crescent University - $U = 1395.5$, $P = .703 > 0.05$).

Considering religion, Table 2 shows that only the means of students in Babcock, Covenant and Bells Universities can be compared. The results from the Universities inferred that there is no significant difference between the means of both Christians and Muslims in Babcock University ($U = 956.5$, $P = .279 > 0.05$), Covenant University ($U = 331$, $P = .191 > 0.05$) and Bells University ($U = 1378$, $P = .459 > 0.05$).

Using Mann-Whitney and Kruskal Wallis test in Tables 2 and 3 to compare the age of students, the analysis revealed that in Babcock ($H(2) = 4.410$, $P = .220 > 0.05$), Covenant ($U = 2359.5$, $P = .869 > 0.05$), Bells ($H(2) = 0.169$, $P = .919 > 0.05$) and Crescent ($H(2) = 1.756$, $P = .780 > 0.05$) Universities, there is no significant difference in the satisfaction of the age groups. Based on these results, it can therefore be inferred that age difference of students have no effect on their level of satisfaction.

Table 3: Comparison of Age of Students using Kruskal Wallis

University	Group	N	Mean Rank	Chi-Square	P
BU	< 16yrs	15	76.43	4.410	.220
	16 – 20yrs	85	65.05		
	21 – 25yrs	29	69.05		
	26 – 30yrs	7	91.07		
BELLS	16 – 20yrs	53	59.38	.169	.919
	21 – 25yrs	59	57.42		
	26 – 30 yrs	4	62.75		
CRE	< 16yrs	10	47.00	1.756	.780
	16 – 20yrs	49	55.17		
	21 – 25yrs	41	56.23		
	26 – 30yrs	6	45.00		
	> 30yrs	2	68.50		

* The difference is significant if $P < 0.05$ *
 * The difference is insignificant if $P > 0.05$ *

Table 4: Comparison of Means Satisfaction using Kruskal Wallis

University	Group	N	Mean Rank	Chi-Square	P
BU	Science & Technology	44	52.72	36.520	.000
	Social Sciences	44	57.32		
	Humanities	48	93.22		
CU	Science & Technology	81	68.54	16.432	.000
	Social Sciences	32	85.75		
	Humanities	49	100.14		
CRE	Sciences & Technology	62	48.55	16.984	.000
	Social Sciences	28	50.29		

Humanities	18	81.56

* The difference is significant if $P < 0.05$ *
* The difference is insignificant if $P > 0.05$ *

The difference in means for college of the students in Tables 2 and 4 indicated that in Babcock University (H(2) = 36.520, P = .000 < 0.05), Covenant University (H(2) = 16.432, P = .000 < 0.05), Bells University (U = 744, P = .000 < 0.05) and Crescent University (H(2) = 16.984, P = .000 < 0.05), college of students significantly affects students' level of satisfaction with facilities. This implies that the facilities available in a college that students is admitted to can determine their level of satisfaction. Hence, universities should make adequate provision for essential facilities in colleges available.

Table 5: Comparison of Means Satisfaction using Kruskal Wallis

University	Group	N	Mean Rank	Chi-Square	P
BU	100 level	21	63.86	1.845	.870
	200 level	43	65.97		
	300 level	23	72.22		
	400 level	42	72.31		
	500 level	1	45.50		
	Spill Over	6	66.17		
CU	200 level	6	95.50	10.494	.015
	300 level	17	98.56		
	400 level	76	87.55		
	500 level	63	68.27		
BELLS	100 level	61	61.67	1.301	.861
	200 level	9	54.06		
	300 level	14	55.21		
	400 level	23	56.22		
	500 level	9	52.39		
CRE	100 level	11	35.77	7.807	.099

200 level	51	56.66	
300 level	19	57.34	
400 level	23	51.67	
500 level	4	81.25	

* The difference is significant if *P* < 0.05 *
* The difference is insignificant if *P* > 0.05 *

Table 5 used to analyse the difference in mean of level of study of the students in the four (4) Universities revealed that there is no significance difference in Babcock University (H(2) = 1.845, P = .870 > 0.05), Bells University (H(2) = 1.301, P = .861 > 0.05) and Crescent (H(2) = 7.807, P = .099 > 0.05). However in Covenant University (H(2) = 10.494, P = .015 < 0.05), the difference is highly significant. This means that in

Covenant University, students' level can determine their level of satisfaction.

4.3 Relationship between Demographic Factors and Students' Satisfaction with Facilities

To further establish if there is any relationship between students' satisfaction and the selected demography, the researchers adopted cross-tabulation for the analysis. The outcome is presented in Tables 6 to 10.

Table 6: Relationship between Gender and Student Satisfaction with Academic Facilities

University	Symmetric Measures	Value	Approx. Sig
BU	Phil	.080	.650
	Cramer's V	.080	
CU	Phil	.126	.464
	Cramer's V	.126	
BELLS	Phil	.129	.746
	Cramer's	.129	
CRE	Phil	.222	.254
	Cramer's	.222	

* .01 – .29 (Weak Relationship)*
* .30 – .49 (Moderate Relationship) *
* .50 – 1.0 (Strong Relationship) *

Table 6 revealed a weak relationship between gender and satisfaction of students in the selected private Universities [BU (Cramer's V = .080, p >

.650); CU (Cramer's V = .126, p > .464); Bells (Cramer's V = .129, p > .746) and CRE (Cramer's V = .222, p > .254)]. The level of significance across the Universities suggests that the relationship between students' gender and satisfaction with their facilities cannot be generalised to the entire population of students.

Table 7: Relationship between Level of Study and Student Satisfaction with Academic Facilities

University	Symmetric Measures	Value	Approx. Sig
BU	Phil	.306	.239
	Cramer's V	.216	
CU	Phil	.327	.043
	Cramer's	.189	
BELLS	Phil	.330	.698
	Cramer's	.165	
CRE	Phil	.401	.364
	Cramer's	.200	

* .01 – .29 (Weak Relationship)*
* .30 – .49 (Moderate Relationship) *
* .50 – 1.0 (Strong Relationship) *

From Table 7, there is weak relationship between students' level of study and satisfaction in the four (4) private Universities. The relationship between level of study and satisfaction cannot be generalised to the entire population of students sampled in BU (significance level = .239), Bells (significance level = .698) and CRE (significance level = .364), however in CU (significance level = .043), the relationship between level of study and their satisfaction is generalisable to the entire population of students in the University. That is in CU, students' level of study determine their satisfaction. However, considering the analysis across the Universities, level of study cannot predictor students' satisfaction with their academic facilities.

Table 8: Relationship between Religion and Student Satisfaction with Academic Facilities

University	Symmetric Measures	Value	Approx. Sig
BU	Phil	.113	.419
	Cramer's V	.113	
CU	Phil	.113	.562
	Cramer's	.113	
BELLS	Phil	.145	.653
	Cramer's	.145	

* .01 – .29 (Weak Relationship)*
* .30 – .49 (Moderate Relationship) *
* .50 – 1.0 (Strong Relationship) *

In Table 8, it is observed that the relationship between religion and satisfaction cannot be generalised to the entire population of students in the selected private Universities [BU (significance level = .419); CU (significance level = .562) and Bells (significance level = .653]. There is no close association between religion and level of satisfaction in BU (Cramer's V = .113, p > .419), CU (Cramer's V = .113, p > .562) and Bells (Cramer's V = .145, p > .653), thus religion is not a strong predictor of satisfaction in the Universities, however in Bells, religion is a better predictor than others.

Note: Crescent university students' data cannot be computed because all the students that participated in the study were Muslims.

Table 9: Relationship between Age and Student Satisfaction with Academic Facilities

University	Method	Value	Asymp. Std	Approx. T	Approx.Sig
BU	Gamma	0.72	.129	.556	.578
CU	Gamma	-.025	.157	-.160	.873
BELLS	Gamma	-.027	.127	-.212	.832
CRE	Gamma	.045	.116	.389	.697

* .01 – .29 (Weak Relationship)*
* .30 – .49 (Moderate Relationship) *
* .50 – 1.0 (Strong Relationship) *

Table 9 revealed that there is strong relationship between students' age and their level of satisfaction only in Babcock University (BU - Cramer's V = 0.72, p > .578), while other Universities have weak relationships (CU - Cramer's V = -.025, p > .873; Bells - Cramer's V

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= -.027, p > .832; CRE - Cramer's V = .045, p > .697). Thus, age is a stronger predictor of students' satisfaction in BU than others. However, the relationships in the four private Universities cannot be generalised to the entire population of students

Table 10: Relationship between College and Student Satisfaction with Academic Facilities

University	Symmetric Measures	Value	Approx. Sig
BU	Phil	.525	.000
	Cramer's V	.327	
CU	Phil	.394	.000
	Cramer's V	.279	
BELLS	Phil	.368	.003
	Cramer's V	.368	
CRE	Phil	.441	.007
	Cramer's V	.312	

* .01 – .29 (Weak Relationship)*
* .30 – .49 (Moderate Relationship) *
* .50 – 1.0 (Strong Relationship) *

Table 10 indicates that there is moderate relationship between student's college and satisfaction in three out of the four Universities (BU - Cramer's V = .327, p < .000; Bells - Cramer's V = .368, p < .003 and CRE - Cramer's V = .312, p < .007 and CRA - Cramer's V = .322, p < .001), while in CU there is weak (Cramer's V = .279, p < .000) relationship. This relationship is generalisable to the population of students in the selected Universities. This finding butress the outcome of analysis in Table 4 that suggested that

college facilities significantly affects students' level of satisfaction. Analysis in Table 10 further revealed that in Bells university with a Cramer's Value of .368, college of student, is a stronger predictor of students' satisfaction when compared to other universities.

5. Conclusion and Recommendations
Students' satisfaction in their academic pursuit in universities has been a subject of discussion over the years. This study examined the demographic factors that determine students' satisfaction in private universities in Ogun State,

Nigeria. Five (5) demographic factors were selected for analysis. Findings from this study showed that only college of student out of the five demographic factors (gender, age, level of study, religion and college) determines student satisfaction with their facilities. This outcome provide support to the work of authors like Ilias, Hasan, Rahman and Yasoa (2008). The authors suggest that

the intake of students at any particular level should be a function of the available functioning facilities in each of the colleges in the universities. In addition, efforts should be made by university management to upgrade existing college facilities as well as making provision for any identified shortfalls of facilities within their colleges.

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