

Factors Shaping the Customer's Choice of Brands in Mobile Telecommunication Sector in Bangladesh: An Insight Into Aktel GSM Bangladesh Ltd.

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Abstract:

This paper investigates the crucial factors that are responsible in determining the customer's choice in the growing competitive telecommunication sector in Bangladesh through some statistical analysis. By investigating the service of one of the fast growing mobile companies, it addresses the preference of the customers as well as the limitation of the service providers. Statistical significant association was tested by tools like chi-Square test, correlation analysis, and descriptive analysis etc. to investigate the relationship of the considered variables. The perception of mobile users has been analyzed to see the status, problems and prospects of mobile service providers with Aktel GSM Bangladesh as a case.

1.0 Introduction

In global context, an increasing number of academic studies are focusing on mobile services from a service management perspective, rather than a technology oriented perspective (e.g. Balasubramanian, et. al. 2002; Heinonen and Andersson 2003; Nysveen et. al. 2005a,b) and formal classifications or categorizations of mobile services are still scarce. Previous studies clearly indicate that specific categorizations are needed and especial categories of mobile service providers have been called for (e.g. Rodgers and Sheldon 2002)*. (Sobhan, Farooq et. al. March 15 2002).

Nowadays, all over the world trade and commerce, research and education, health, agriculture and different types of socio-economic activities of a country are very much dependent on telecommunication access. That means telecommunications play a vital role for the socio-economic development of a country. And there are significant factors shaping successful partnership in the ICT sector in Bangladesh (Sobhan, Farooq et. al. March 15 2002).

Besides, mobile phone is the most common and convenient medium of communication for distant inhabitants in Bangladesh. The introduction of mobile phone has not only accelerated the economic growth by vast marketing in the field of new business; but also made the lifestyle of the overall population easy. A good number of operators have popularized the cellular phone service in Bangladesh through opening a new path of communication. By following that corridor Aktel has constructed a unique perception regarding their services in consumers' mind. Aktel is one of the leading mobile telephone companies in Bangladesh. There are five mobile service providers in our country. Due to the growing competition in mobile telecommunication sector, it is necessary for the companies to know the customer perception about the satisfaction on the service provided by them. In the study, attempt has been made to know the perception of Aktel user's about the service and some other related issues.

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2.0 Background of the Study

Some attempts have already been made to develop service categorizations that depict the special nature of electronic services in general (e.g. Angehrn, 1997; Dabholkar 1996; Meuter et al., 2000). Some categorizations of mobile services exist already. However, most mobile service categorizations tend to focus on the providers' perspective rather than the customer or user's perspective on the service (e.g. Hyvönen and Repo 2005; Giaglis, Kourouthanassis and Tsamakos 2003; Sullivan Mort and Drennan 2005; Mitchell and Whitmore, 2003). Looking more generally at research on mobile services, some previous research emphasizes the customer perspective of mobile services. The human development index published by UNDP shows that Bangladesh is yet to develop human resource sector to meet the growing need of telecommunication sector.

Table 1.1 Human Development Index 1999

Country/ Rank	GDP per capita (pppUS\$) rank minus HDI rank	Adult literacy rate(% age 15 & above)	Combined primary, secondary & tertiary enrolment ratio (%)	GDP per capita (ppp US\$)	Life expect ancy index	Educa tion index	GD P inde x	Human Develop ment index (HDI) value	Life expent ncy at birth (years)
Bangladesh/132	-4	40.8	37	1,483	0.57	0.39	0.45	0.47	58.9
China/87	7	83.5	73	3,617	0.75	0.8	0.6	0.718	70.2
India/115	0	56.5	55	2,248	0.63	0.56	0.52	0.571	62.9
Indonesia/102	3	86.3	65	2,857	0.68	0.79	0.56	0.677	65.8
Malayasia/56	-4	87	66	8,209	0.79	0.8	0.74	0.774	72.2
Nepal/129	7	40.7	60	1,237	0.55	0.47	0.42	0.48	58.1
Pakistan/127	-5	45	40	1,834	1	0.43	0.49	0.498	59.6
Sri Lanka/81	19	91.4	70	3,279	0.78	0.84	0.58	0.735	71.9

Source: UNDP web site

Aktel is the dynamic and leading end-to-end countrywide GSM mobile communication solutions of TM International *Bangladesh* Limited. It has a global presence in 11 countries with staff strength of 30,000. TM has recently made a couple of major acquisitions in India and Indonesia in order to stamp its presence internationally.

Since the commencement of its operation, Aktel has been a major force to be reckoned with in the telecommunication industry of Bangladesh, being one of the fastest growing mobile communication companies offering comprehensive GSM mobile solutions to more than two million subscribers. Today, Aktel boasts the widest International Roaming service in the market connecting 315 operators even to Tetulia and Teknaf, the northern and southern most points of Bangladesh. At the heart of all of Aktel's success today, lies the young dynamic workforce comprising of over 600 highly motivated and well-skilled professionals.

3.0 Objective

The objective of the study is to identify a number of factors shaping the customers satisfaction in mobile telecommunication in Bangladesh taking Aktel GSM as a case. The acceptability and the perspective of Aktel users were measured through statistical analysis of the consumer perception and to identify whether demographic variables like age, occupation, length, type, reason, expense, location, problems are interrelated. From the satisfaction and dissatisfaction factors it aims to identify the crucial factors that are responsible in choosing the service providers. Moreover it aims to find out the reasons of the consumer dissatisfaction regarding the Aktel service providers. In order to reach to some important recommendations, it attempts

to find out the association among or influence on different variables through some statistical tools. The ultimate objective of this study is to provide inputs for preparing a guideline for the telecommunication service providers from the perception of the customers.

4.0 Methodology and Data Source

Considerable effort was devoted to developing the appropriate sample plan. The target population of the study involves present Aktel users who have been using the line for minimum 6 months. Those who are using the line for less than the considered period were excluded from the target population. Therefore, the present users both male and female were considered to be the users and each user for the considered use limits was defined as the sampling unit. The extent of the study was the metropolitan area of Dhaka City considering their mobility to urban and rural areas. Most of the respondents were selected from Dhaka City and only few of them were from outside of Dhaka. The survey was conducted in December 2007 with 100 respondents living in both urban and rural areas.

Since the list of the target population was difficult to get, a non-probability sampling technique was applied. In this study, convenience sampling procedure was used to collect the data on the perception of the customers. Following guidelines were followed to select the sampling units: (i) the users are using the line for more than 6 months and (ii) there should be diversification among age, sex, education and geographical locations of the respondents. To focus on mobile telecommunication sector in Bangladesh a set of structured questionnaire was developed to collect the data from Aktel phone users. A variety of measurement scales (nominal, interval and ratio) were included in a structured format to examine the relationship between the considered variables. Open-ended question are also used to get suggestions from the consumers. A total number of 10 variables related to the personal and analytical perception of the respondents are included. Secondary data were used in the study. They were collected from the website and some of the research articles from home and abroad. The data then was analyzed by SPSS 12.0. To interpret the data, frequency and percentage were used in the first phase. To test some hypotheses, cross-tabulation and chi-square test were used as statistical tool.

5.0 Analysis of Data

Simple statistical techniques like frequency distribution along with percentage were applied to check for data entry errors (e.g. unrecognized or missing codes) and to obtain descriptive statistics like mean and standard deviation from the frequency analysis. To determine whether significant association exists between some important variables (e.g. income or type of sim), cross-tabulation analysis and chi-square test were done. Chi-square, F values, symmetric measures and “p” value were considered in testing hypothesis. Data entry was done in SPSS 12.0 data editor and analyzed under some specific hypothesis. Missing values or non-response answers were also included in the analysis to get the exact picture of the respondent’s attitude.

The descriptive analysis of the data shows that a total number of 10 variables have been undertaken (Table-3.1). Since the total number of respondents is 100, percentage and cumulative percentage column were not taken; the frequency is equal to the percentage frequency of the data. Although the average age of the respondents are 29.84% with a standard deviation of 9.739 years, the age distribution (Table-3.2) supports that 47% of the Aktel users belong to the age group 20-24. Among this 47% of 20-24 age group, 26% are exactly 22 years of age. The mean length of phone use is 24.48 months with a wide disparity of 17.275 months. It is also observed that 52 percent users are using this phone for 12-24 months.

Regarding the per month expense 45% of the users spend money between Tk.1000-2000 per month and most of them are of young age (table-3.2). Table-3.2 depicts that 60% of the phone users are students, 34% are in service and 75% are using prepaid lines. And 50% are using this line because of minimum call rate. Almost 73% of the respondents complained about bad or weak network but interestingly 63% still don’t want to change (Table 3.2) this line. Also there

is a paradox that while they were asked about the cause for which they want to change the line, only 32.5% said that they often face network problem. So this is a complex psychological phenomenon. At the same time they have some satisfaction for which they are not willing to change the line, but some of the underlying factors often push them to change the line because the telecommunication market has become actually very competitive.

To test the statistical association between the considered variables, null and alternative hypotheses are designed in the following format:

- H₀: There is no significant association between the variables.
- H_a: There is significant association between the variables.

The variables to be tested are (i) Age of the respondents and length of phone use (ii) Occupation of the respondents and type of Sim card used. (iii) Age of the respondents Vs reasons for using the Aktel Sim (iv) Occupation of the respondents Vs per month expenditure of the subscribers (V) Length of phone use Vs cause behind for the intention to change the Aktel Sim..

(i) On the basis of the chi-square values, we reject the hypothesis of no association, that is, there is a significant association between the age of the respondents and length of phone use. ($\chi^2 = 774.137$ with 210 degrees of freedom. $p = .000 < .05$) Also there is a moderate positive relation between the variables (Pearson's $R = 0.592$).

(ii) Table 1.2 indicates that the relationship between occupation of the respondents and type of Sim card used is strongly supported (As, $\chi^2 = 44.356$ with 2 degrees of freedom, $p = .000 < .05$, the null hypothesis is rejected at 5% level of significance. So there is a significant statistical relationship between occupation of the respondents and type of Sim card used. The study reveals that maximum number of respondents (58 out of 75) is students and others are using prepaid lines. Whereas both prepaid and post paid users are equal in service category. There is also a insignificant positive correlation (Person's $r = .0666$).

Table 2.1: Chi-square test between Occupations of the respondent's and Type of Sim card used.

		Type of Sim card		Total
		prepaid	postpaid	
Occupation of the respondents	student	58	2	60
	Service	17	17	34
	Business	0	6	6
Total		75	25	100

$\chi^2 = 44.356$ with 2 degrees of freedom, $p = .000 < .05$

(iii) The association between the age of the respondents and reason for using the Sim is strongly supported as $\chi^2 = 202.937$ with 56 degrees of freedom, $p = .000 < .05$. But there is a negative correlation between the variables (Pearson's $r = 0-.485$) which means as the age of the respondents increases, the reasons considered will be marginalized.

(iv) Here we reject the null hypothesis; that means, there is a strong significant association between occupations of the respondents Vs per month expanse done by the subscribers ($\chi^2 = 109.705$ with 6 degrees of freedom, $p = .000$). From the survey it is found that 39 respondents out of 43 who are students have per month's expenditure between 100-500 taka. (See table-2.2). The correlation between the variable is positive ($r = 0.636$).

Table2.2: Chi-square test between Occupations of the respondents Vs Per month expanse.

	Per month expanse	Total

		100-500	501-1000	1001-2000	2000+	
Occupation of the respondents	student	39	4	15	2	60
	Service	4	0	30	0	34
	Business	0	0	0	6	6
Total		43	4	45	8	100

$\chi^2 = 109.705$ with 6 degrees of freedom, $p = .000$

(v) Statistical analysis on the association between the length of phone use Vs the intention to change the line shows that there is a statistical significant association between those two variables ($\chi^2 = 27.692$ with 10 degrees of freedom $p = .002 < .05$) Pearson's coefficient of correlation shows that there is a weak positive relationship between the variables (Pearson's $r = 0.209$).

Table2.3: Chi-square test between Length of phone use and Cause of desire to change line

		Cause of desire to change line			Total
		Often network problem faced.	sometime charged more	others	
Length of phone use	2	3	0	0	3
	8	4	0	0	4
	10	0	3	0	3
	12	0	10	3	13
	24	6	5	4	15
	36	0	2	0	2
Total		13	20	7	40

$\chi^2 = 27.692$ with 10 degrees of freedom ($p = .002 < .05$)

6.0 Findings and Focus of Further Study

Through the analysis, some limitations of the mobile service providers have been identified. The most important findings of the analysis is customers have claimed some problems in their network system. It is found that some of the customers of Aktel hardly got connected after calling more than 4 to 5 times. This problem occurs especially in case of connecting outside Dhaka. It is found that Aktel is being used more by the students. Also, they have been frequently changing their choices regarding mobile service providers. It is observed that only 6% business people are using this line. So, the provider should take some steps with lucrative offers to increase business customers because their monthly expense is higher than the students. The basic satisfaction of the Aktel users seems to be the minimum call rate. But presently some other providers (Warid Telecom) are offering less than other providers. Therefore, Aktel is at risk of losing customers. Analysis shows that more than 75% of the customers use prepaid lines. One of the significant findings from the analysis is that customer who uses Aktel, use the line because of minimum call charge in comparison to others. So, Aktel should keep their call charge level minimum rather than the other competitors to attract their customers. 40% of the customers of Aktel want to change their line for some specific reasons. Among the reasons, network problem is the most significant one. Another is, often some calls are charged more than expectation. These problems of Aktel should be overcome as early as possible. If a customer becomes dissatisfied with the service provider, he/she might switch the line and obviously use the others' because this sector is excessively competitive now a days in Bangladesh. It was found through statistical chi-square test that this intension depends on the problems faced by the users. From the chi-square test, it is clear that the age of the respondents is associated with length of phone use, and the reason for using this particular line. Therefore, age seems to be a very significant factor to be considered by the providers. Many other

providers are offering packages, keeping this in mind. Occupation of the respondents seems to be another significant factor for choosing the providers as well as per month expense. So, the providers should target the specific occupation while they are offering packages.

7.0 Conclusion & Recommendation

In the ever-growing competitive field of telecommunication in Bangladesh significant factors have been identified. Among them, the most important factors are firstly, minimum call charge, secondly, facilities offered by the providers through different packages, thirdly, area under network coverage and access to network and finally, the media advertisement. Aktel Mobile Phone Company is one of the potential companies in this sector. A good number of customers have opined that the service should be improved. Aktel firstly, should improve their network to get connection easily. So, while they are offering a package, they should give preference to student choice. Because a significant number of customers are found to be students. The young generation, basically the age group around '22' should be their target group. Also, Aktel should motivate their prepaid customers by offering attractive offers, since 80% of the customers are using pre-paid lines. As, it is very easy to change a line now a days, the company should be well aware of their services.

It is recommended that they should reduce call rate and other costs. It would provide some exclusive services than other mobile companies. Although Aktel Mobile Phone believes in the service, a service that leads to good business and development, some of the customers are still dissatisfied. This gain in productivity is development, which in turn enables them to afford a telephone service, generating a good business.

The company should diversify its customer services and new features so that it can attract customers from all groups of people. The company is continuously improving services through diversification in product and services. While they are offering packages to the customers, variety of choices and options should be introduced in their business strategy targeting the young generation. If they can increase their number of customers, they would be able to provide better services. If they can earn their customer's satisfaction, they will be able to keep their customers satisfied for a long time.

8.0 References

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ANNEX:

Table3.1: Descriptive Statistics of the variables under study

	N	Mean	Std. Deviation
Age of the respondents	100	29.84	9.739
Occupation of the respondents	100	1.46	.610
Length of phone use	100	24.48	17.275
Type of Sim card	100	1.25	.435
Reason for using the sim	100	2.19	1.398
Per month expanse	100	2.18	1.086
Location of user	100	1.08	.273
Problems from Aktel-use	100	2.35	1.956
Do u want to change your line?	100	1.63	.485
Cause of desire to change line	40	2.52	1.132
Valid N (list wise)	40		

Table3.2: Frequencies along with percentage

Age of the respondents		Frequency	Cumulative Percent
Valid	20-24	47	
	25-29	17	
	30-34	3	
	35-39	10	
	40-44	14	
	45+	9	

Occupation of the respondents		Frequency	Cumulative Percent
Valid	student	60	60.0
	Service	34	94.0
	Business	6	100.0
	Total	100	

Type of Sim card		Frequency	Cumulative Percent
Valid	perpaid	75	75.0
	postpaid	25	100.0
	Total	100	

Reason for using the sim		Frequency	Cumulative Percent
Valid	minimum call rate	50	50.0
	good network	8	58.0
	minimum pulse	27	85.0
	special bonus	3	88.0
	others	12	100.0
	Total	100	

Per month expense		Frequency	Cumulative Percent
Valid	100-500	43	43.0
	501-1000	4	47.0
	1001-2000	45	92.0
	2000+	8	100.0
	Total	100	

Location of user		Frequency	Cumulative Percent
Valid	Dhaka	92	92.0
	outside Dhaka	8	100.0
	Total	100	

Problems from Aktel-use		Frequency	Cumulative Percent
Valid	bad network	30	30.0
	no network at village	43	73.0
	others	9	82.0
	no problem	16	98.0
	14	2	100.0
	Total	100	

Do u want to change your line?		Frequency	Cumulative Percent
Valid	yes	37	37.0
	no	63	100.0
	Total	100	

Cause of desire to change line		Frequency	Cumulative Percent
Valid	Often network problem faced.	13	32.5
	sometime charged more	20	82.5
	others	7	100.0
	Total	40	
Missing	System	60	
	Total	100	

Note: Since the total number of respondents is 100, percentage and cumulative percentage column were not taken; the frequency is equal to the percentage frequency of the data.