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A STUDY ON CONSUMER PREFERENCES AND SATISFACTION TOWARDS 3G DATA SERVICE PROVIDERS IN BUDALUR IN THANJAVUR DISTRICT

S.Sinduja*

**II Year MBA Student, School of Management, SASTRA University, Thanjavur, South India*

ABSTRACT

The main focus of the study is to understand the consumer preferences and satisfaction towards 3G data service providers. 3G data services are in the growth phase in the wireless segment with enhanced focus on providing data services and Internet. Development of applications useful to people will be the key to success. 3G – the third generation of wireless communication technologies, which support broadband voice, data and multi-media communications over wireless networks. 3G combines a mobile phone, laptop PC and TV. The objectives of the study are: To identify consumer satisfaction level, to ascertain the consumer preference level regarding 3G data services and to identify the factors that motivates the consumer to choose 3G data services. The location which is focused under this topic in Budalur region which is located in a rural area, in Thanjavur District. The study was conducted among 100 consumers on a simple random sampling method. These samples were chosen by applying convenient sampling techniques and standard questionnaire was administrated to collect primary data. The researcher has applied the statistical tools in SPSS software such as frequency analysis, factor analysis, correlation and regression. From the analysis, the researcher found that the mobile compatibility is most important factor among the respondents. Aircel and Airtel are highly preferred 3G networks and most satisfied network in Budalur region, in Thanjavur District. Nowadays consumer preferred their 3G networks by comparing other services. It was inferred that providing high compatibility with better connectivity is more important requirements in 3G data services.

Key Words: 3G, Consumer preferences. Satisfaction, Data service providers, Factors that motives the Consumer to choose 3G data services.

1. INTRODUCTION:

3G is a family of standards for wireless communications, defined by the International Telecommunication Union. It includes various standards, such as GSM EDGE, and Wi MAX. They are mainly used to provide wireless internet connectivity using mobile phone frequencies.

3G data services are in the growth phase in the wireless segment with enhanced focus on providing data services and Internet. Development of applications useful to people will be the key to success. 3G – the third generation of wireless communication technologies, which support broadband voice, data and multi-media communications over wireless networks. 3G combines a mobile phone, laptop PC and TV. While urban wireless subscribers continued to grow by leaps and bounds, rural tele-density, with increased mobility, has also helped India clock one of the fastest growing telecom market numbers

3G allows for simultaneous use of voice and data at high speeds. Due to this bandwidth, it allows a wide array of services, like full internet access, video-calls, to function properly.

3G is the next generation of technology which has revolutionized the telecommunication industry. Apart from increasing the speed of communication, the objective of this technology is to provide various value added services like video calling, live streaming, mobile internet access, etc on the mobile phones. These services are possible because the 3G spectrum provides the necessary bandwidth.

3G Technology is designed for multimedia communication. It provides services like higher data transfer rates. One of its key visions is to provide seamless global roaming, enabling users to move across borders while using the same number and handset.

3G actually stands for "third generation", as it is the third type of access technology that has been made widely commercially available for connecting mobile phones.

The development of 3G services in the early years of the 21st century was a major step forward both in terms of reliability and UK coverage for voice calls and text messaging, as well as providing far more rapid access to the internet due to its capability of carrying larger amounts of data.

However, the technology continues to develop rapidly, with phone operators continuing to provide phones with faster processors, and mobile operators also upgrading their networks.

2. REVIEW OF LITERATURE:

D'Alessandro, Steven; Johnson, Lester; Gray, David; Carter, Leanne Dec 2015: This study refers to, the current use of 3G technologies has created significant demands for capacity, such as cell TV, and this needs to be balanced with the capital constraints of many firms. Providers face price pressures on margins and the need to update cell networks to 4G in the post-GFC era where

capital is scarce. This study demonstrates that the use of a simple, agent-based model can lead to accurate initial prediction of parameters of satisfaction with a cell phone provider, and provides a basis of understanding factors of cell phone subscriber choice in the context of the introduction of new technology.

Pandey, Mithilesh; Nakra, Neelam Nov 2014: This paper studies the consumer preference towards various OS and preference towards a smartphone brand with android as its OS. A quantitative study on 300 respondents was carried out in Ludhiana region. The collected data was analyzed with descriptive statistics, Chi-Square, Friedman test and Kendall's W-test. The study found that android and iOS are the most preferred OS, while Samsung is the highest preferred brand to be selected for an android platform.

Salomi, R Santhi Jun 2014: This study also helps to understand the factors, which influence the consumers to purchase the home appliances. Further, this study covers various factors influencing consumers towards different brands of home appliances in Tirunelveli district. The study area is confined to the sample population in Tirunelveli district. Only five items of home appliances: Mixie, Grinder, Refrigerators, Washing Machines and Television are taken into consideration. There is no significant difference in brand preference towards home appliances among different educational qualification of consumers in rural area in Tirunelveli district.

Lin, Chun-Te; Liu, Chao-Fa; Chen, Hsiu-Min; Lin, Cheng-Yuan; Chang, Chien-Cheng 2013: The study deals with the consumer's preference and image perceptions to classic chairs. 40 users were invited for the semantic differential experiment in which 18 representative classic chair samples were evaluated on a 9-pointed Likert scale. The results indicate that subjects in Taiwan market prefer classic chairs of modern, simple, soft, delicate, and unique styles.

Kumar, Anil Dec 2012: This study is to evaluate the consumer satisfaction of mobile connections and its impact on consumer buying behaviour. Customers of Kurukshetra city of Haryana State are surveyed. The effects of different services and schemes on mobile connections on consumer are measured. Consumer's satisfaction plays a very important role for making appropriate strategies to increase sale and customer retention. A face-to-face interview survey is conducted on 100 consumers on random basis. Data are analysed by using Fisher's Exact Test SPSS 19.0.

She, Yutong 2011: The primary objective of this thesis is to explore the influence of products' aesthetic forms on consumer preferences for utilitarian or hedonic attributes. A total of 239 on-line surveys were collected concerning participants' responses to two products (a watch and a mouse) that differed in orientations. Based on the research findings, theoretical, methodological and managerial contributions of this research are provided.

3. OBJECTIVES OF THE STUDY:

i) To identify consumer satisfaction level,

ii) To ascertain the consumer preference level regarding 3G data services,

iii) To identify the factors that motivated the consumers to choose 3G Live services.

4. SCOPE OF THE STUDY:

A separate Questionnaire is formed for this study. The analysis, interpretations, findings and suggestions are done on the basis of the surveyed data. The study area refers to Budalur region in Thanjavur city. The study has used both primary and secondary data. The data were collected using questionnaire.

The collected data are analysed through frequency analysis, factor analysis, correlation, regression. The study has been carried out the period of one month. The study was conducted among 100 customers on a simple random sampling method.

5. HYPOTHESIS:

A Null Hypothesis is “the hypothesis that there is no relationship between two or more variables, symbolized as H0”.

The Alternate or Research Hypothesis proposes a relationship between two or more variables, symbolized as H1.

6. ANALYSIS AND INTERPRETATION:

Frequency analysis and Interpretation:

Demographic profile of the respondents

Table-I

Characters	Variables	Respondents	Percentage
Age	Below 25	58	58.0
	26-35	18	18.0
	36-45	12	12.0
	Above 45	12	12.0

	Total	**100**	**100.0**
Gender	Male	43	43.0
	Female	57	57.0
	Total	**100**	**100.0**
Education	Up to 10^{th}	2	2.0
	Intermediate	14	14.0
	Graduate	66	66.0
	Post-graduation & others	18	18.0
	Total	**100**	**100.0**
Marital	Married	30	30.0
	Unmarried	70	70.0
	Total	**100**	**100.0**
Income	Students	31	31.0
	Below 5000	10	10.0
	5001-10000	18	18.0
	10001-15000	13	13.0
	Above 15001	28	28.0
	Total	**100**	**100.0**
Occupation	Business	10	10.0
	Government employee	7	7.0
	Professional	25	25.0
	Students	37	37.0
	Others	21	21.0
	Total	**100**	**100.0**
Using mobile network of the respondent	BSNL	12	12.0
	Tata Teleservices	2	2.0
	Airtel	26	26.0
	Aircel	26	26.0
	Vodafone	22	22.0
	Idea	10	10.0
	Reliance	2	2.0
	Total	**100**	**100.0**

Source: primary Data

Inference:

It is ascertained from above the table shows that 58% of the respondents age group is below 25, 18% of the respondents are in the age group are 26-35, 12% of respondents are in the age group of 36-45, above 45.

From the above table, it is inferred that the majority of 57% respondents are in the gender group of female, 43% of respondents are in the group of male.

It is ascertained from the above table shows that 66% of the respondents are in the education group of graduate, 18% of respondents are in the education group of post-graduate & others, 14% of respondents are intermediate, and finally very least respondents of 2% are in the group of up to 10^{th}.

It is ascertained from the above table shows that 70% of the respondents are in the marital group of unmarried; only 30% of the respondents are in the marital group of married.

It is ascertained from the above table shows that 31% of the respondents are in the group of non-income (students), 28% of the respondents are in the income group of above 15001, 18% of the respondents are 5001-10000, 13% of respondents are in the group of 10001-15000, finally 10% of the respondents are in the group of below 5000 is mentioned.

It is inferred from the above table shows that 37% of respondents are in the occupation group of students, 25% of the respondents are in the group of professional, 21% of respondents are in the group of others, for e.g. Private employees etc., 10% respondents are in the group of business people, and 7% respondents are in the group of government employee.

It is ascertained from the above table shows that 226% of the respondents are in the mobile network usage group of Aircel and Airtel, 22% of respondents are in the network usage group of Vodafone, 12% of respondents are BSNL, 10% respondents are Idea, and finally very least respondents of 2% are in the group of Reliance.

Factor Analysis and Interpretation:

KMO and Bartlett's Test

Table-II

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.806
Bartlett's Test of Sphericity	Approx. Chi-Square	
	Df	231
	Significance	.000

Inference:

The above table shows the Kaiser-Meyer-Olkin Measure of Sampling Adequacy. This measure varies between 0 and 1, and values closer to 1are better. A value of .6 is suggested minimum value. Here the KMO measure of sampling adequacy is .806 which higher than the

minimum required value that is 0.6. Here, the significance value also 0. Therefore, the given variables are suited for factor analysis in this study.

Total Variance Explained and Factors for 3G data Service Providers

Table-III

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.093	32.243	32.243	7.093	32.243	32.243	5.950	27.046	27.046
2	2.240	10.181	42.424	2.240	10.181	42.424	2.195	9.976	37.022
3	1.606	7.301	49.725	1.606	7.301	49.725	2.017	9.169	46.191
4	1.553	7.061	56.786	1.553	7.061	56.786	1.747	7.941	54.131
5	1.121	5.094	61.879	1.121	5.094	61.879	1.705	7.748	61.879
6	1.013	4.604	66.483						
7	.884	4.019	70.502						
8	.826	3.752	74.254						
9	.751	3.414	77.668						
10	.685	3.114	80.781						
11	.599	2.722	83.504						
12	.562	2.554	86.058						
13	.508	2.311	88.369						
14	.442	2.007	90.376						
15	.416	1.890	92.266						
16	.368	1.673	93.939						
17	.286	1.298	95.237						
18	.261	1.189	96.425						
19	.237	1.075	97.501						
20	.215	.975	98.476						

21	.184	.837	99.313						
22	.151	.687	100.000						

Extraction Method: Principal Component Analysis.

Inference:

Initial Eigen values are the variances among the factors. Total column contains Eigen values. Percentage of variance column the percentage of total variance accounted for each factor.

Here the initial Eigen values, extraction sum of square loadings, rotation sum of square loadings are indicated by total variance with cumulative variance in the group of factors. From this table, rotation sums of square loadings cumulative percentage is 61.879, that table shows does not obtained by overall 22 factors are calculated. In this study, only determined by first five factors will be evaluated. It means that, the first five factors only influencing more preferred and satisfaction towards consumer by 61.879% among the other factors.

Variables	Component				
	1	2	3	4	5
Cheaper price	.806				
Video calling	.762				
Due to mobile compatibility	.755				
Usage of 2G compatible mobile	-.732				
Better connectivity	.730				
Speed of data transfer	.698				
Less/no connectivity	.671				
Perceived ease to use	.671				
Perceived Usefulness	.581				
Willing to shift from 2G to 3G network service provider may prefer	-.566				
Mobile TV	.564				
Gaming application		.741			

Behaviour intention		.641			
Perceived enjoyment		.576			
Lack of high speed			.836		
Poor network coverage			.806		
Slow drainage of data			.512		
Is Data Service Provider(DSP) / sales calls irritates you				-.731	
Attitude				.575	
Satisfied with 2G itself				.539	
Not affordable					.786
High charging rate					.613

Extraction Method: Principal Component Analysis

Inference:

From the above table shows the rotated component matrix which assembles extraction method gives principal component analysis. In this study represents how the variables are weighted for each factor and correlating the variables and factor. Then the table should only be allowing to analysing the value is above 0.5 is valid, there is extracted five factors as per the communalities of 22 items range from least value 0.400 to higher value 0.725 which indicates that a large amount of variables are extracted by the factor analysis.

Correlation Analysis and Interpretation:

Correlation with Factor Variables

Table-IV

Factors		Frequent Usage Factor	External variables	Problems Encounted Data	Willing To Shift	Usage Data
Frequent Usage Factor		1	.518(**)	-.062	-.250*	.077
External variables		.518**	1	-.223*	-.292**	-.167
Problems Encounted Data		-.062	-.223*	1	.348**	.143

Willing To Shift		-.250*	-.292**	.348**	1	.241*
Usage Data		.077	-.167	.143	.241*	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Inference:

From the above analysis, the correlation is determined by individual factors such as frequent usage factor with external variables are positively correlated (.518), if the preferred value is less than 3 is identified by weakly correlated and if the value is moderate, then we have to identified by monthly correlated. If it is above .5, the value which is mentioned by strongly correlated. So that, the willing to shift with usage data is also positively correlated, which is (.241), is less than 3. So it is weakly correlated.

Problems encounted data with frequent usage, willing to shift with frequent usage factor, willing to shift with external variables are represents (-2.50, -0.60) etc., is negatively correlated. Then the usage data with frequent usage factor is very weakly correlated (.077) which is least correlated.

Regression Analysis and Interpretation:

Table-V

Model Summary			
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
.705[a]	.497	.464	.774
a. Predictors: (Constant), frequent usage data variables			

Source: primary data

Table-VI

ANOVA						
		Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
	Regression	55.028	6	9.171	15.307	·000[a]
	Residual	55.722	93	.599		
	Total	110.750	99			

a. Predictors: (Constant), frequent usage data variables				
b. Dependent Variable: overall satisfied towards 3G data services				

Source: primary data

Table-VII

Coefficients						
Demographic Variables		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
	(Constant)	.590	.328		1.792	.076
	Cheaper Price	-.177	.096	-.209	-1.852	.067
	Due to Mobile Compatibility	.033	.109	.032	.303	.763
	Video Calling	.309	.106	.315	2.899	.005
	Speed Of Access	.309	.099	.312	3.121	.002
	Speed Of Data Transfer	.110	.092	.124	1.200	.233
	Better Connectivity	.258	.119	.253	2.175	.032
a. Dependent Variable: Overall satisfied towards 3G data services						

Inference:

From the above analysis provides the R and R^2 values. The R value represents the simple correlation 0.705 (the "**R"** Column), which indicates a high degree of correlation between overall satisfaction and frequent usage 3G data service variables. The R^2 value = .497 which means that the total variation in the dependent variable overall satisfied towards 3G data service providers which can be explained by the independent variable frequent usage data variables by 49.7%. The P value = 0.000 which indicates that the model is significant.

The regression equation can be formed in determining the level of Overall Satisfaction as: 0.590 - 0.177 (Cheaper Price) + .033 (Due to Mobile Compatibility) + 0.309 (Video Calling) + 0.309 (Speed of Access) + 0.110 (Speed of data transfer) + 0.258 (Better Connectivity).

7. FINDINGS:

- Out of 100 respondents majority are female (57%) and the (43%) are male of the respondents.
- Majority of the people who prefer to use to buy a 3G data are in the group of below 25 years, (58%) of the consumers fall in this group.
- Unmarried respondents are mostly preferred and satisfaction towards 3G data service providers more when compared to married respondents, (70%) of the respondents who preferred and satisfied were unmarried.
- Majority of respondents agreed that the mobile compatibility, better connectivity of the 3G data service providers attracts them and they feel good whenever preferred that particular data comparing two services.
- Majority of respondents who preferred at 3G data are graduates, (66%) fall in this group.
- From the analysis it is found that majority of consumers prefer that due to mobile network data, the consumer mostly prefer Airtel and Aircel are in the same level of (26%) to be shown.
- Majority of non-income respondents are preferred mostly of (31%) students were spend fall in this group.
- Majority of respondents are spend average per month of 3G data is (71%) of below 200 rupees fall in this group.
- In values consumer giving importance to mobile TV, video calling, gaming application are the satisfaction towards generally neutral and agreed by choosing them and so on.
- Overall (82%) of the respondents has satisfied rated their 3G data service providers in Budalur region near Thanjavur district.
- Hereafter, the people who were not satisfied to using current network, if they are willing to shift another coverage area is BSNL and Vodafone are (24%) is mostly preferred.

8. SUGGESTIONS:

- Today 3G data service providers are growing more and more in day to day activities. Then consumers are mostly preferred and satisfied towards 3G data services are good in Budalur area in Thanjavur district. Through this study I can understand, how the consumers are preferred and satisfy by using 3G network data.
- Speed awareness about availability of services is moderate and the better connectivity is also neutral. There are available in all over network packs are purchased, and some offers are also preferred, so most probably the consumers has eagerly to buy, but the speed of data transfer is average, not reached to expected level.
- Majority of respondents by students to use 3G data network, for the purpose of some personal issue or education oriented, otherwise business people, government employees, professionals are using data should be rare, so that they are going to prefer high rate of BSNL connection with Wi-Fi network coverage. But students are not to using BSNL connectivity, because of budget problem.
- So this study would explain, network packages are all run that Budalur area, but most probably the network speed only problem may occur. Even If they are using 3G, but the mobile shows only 2G itself or some loading for a long period, because of network/tower facilities are less.
- In order to develop, 3G limited should be very clear on their schemes and freebees to dealers and consumers. They should try to reduce the cost and introduce many cheap plans to make it affordable to those who cannot afford it which will in turn help them to increase their consumers.
- More advertisement and customer awareness is the need of the hour. Very few advertisement practices is existing in 3G. This shall be made very frequent for future development. The Subscribers who have opted for the pre-paid schemes feel that the validity time for their prepaid cards is short and hence their level of satisfaction can be improved by considerably extending the validity period of the prepaid cards
- They can provide more information about the network data packages and service availability which will improve the knowledge of the consumers and help them to prefer easily and develop more network coverage facilities which is more affordable.

9. CONCLUSION:

The project reveals that mainly college students prefer purchasing on 3G data network. Most of the consumers are satisfied by using 3G data service providers, but the only hinder is that they are not fully satisfied. The study in hand reveals that consumers prefer a particular mobile data service provider on the basis of online portal, network coverage and value added services. The consumers are highly influenced by their family members, friends and advertisement while selecting or buying a 3G data service provider. It is concluded from the study that consumers prefer prepaid plans and all most every consumer treat their mobile data as a necessity. They generally use their network data service for their personal use and for both important working process. The study reveals that BSNL is the most preferred data service providers willing to buy/chosen, among consumers followed by Airtel and Vodafone, Aircel. It is concluded from the study that majority of consumers are aware about the services offered by their 3G network data.

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