CONSUMER BEHAVIOUR AND PURCHASING DECISION ON MOBILE PHONES

Dr. P.M.Aadil Ahmed.,M.Com., M.Phil., Ph.D.*

Abstract

Telecommunication sector is highly competitive in current scenario. The subscribers have various alternatives to choose according to their behaviour, taste and preferences. Factor analysis is employed to determine the various factors that contribute for making a decision on purchasing mobile phones. The following underlying dimensions are determined- Value for money, customer consciousness factor, Attention to detail factor and convenience factor .By Clustering of factor scores, 4 types of buyers are determined based on their buying behavior pattern and they are termed as-Analytical Buyers, Systematic Buyers, Expressive and Bargain Hunters.

Keywords: Behavior pattern, Telecommunication sector, clustering of factor scores, Analytical Buyers, Systematic Buyers, bargain hunters

* Principal, Mazharul Uloom College, Ambur,Vellore Dt, Tamilnadu

Introduction

In the age of information technology, the mobile phone technology has changed the life style. From a teenage to old age, every person uses mobile for communication. Customers purchase mobile phones for instant communication and various value added services provided by the companies. Services depend on some factors and customers always try to by product which has many factors or attributes fulfilling their desire.

Review of Literature

Spreng and Mackoy (1996) addressed the relationship between service quality and customer satisfaction by using model developed by Oliver et al (1992). The model integrates the two constructs and suggests that among their things, perceived service quality is an antecedent to satisfaction. Lin (2002) studied the factors affecting the brand decision in Asian Mobile Phone industry and found the choice of cell phone is characterized by two different behaviors to brands, the behavior towards brand of cell phone and behavior towards service network. It is also further determine that the brand choice is attributed to new technology features such as messaging capacity and messaging options.

Need for the study

Consumer satisfaction and consumer behavior related to mobile phone products are unique and double edged. It has to be judged not only by product performance but also by service performance which plays a vital role in achieving satisfaction and dissatisfaction level. The mobile phone manufacturers are trying hard to find newer and newer products in the market with diversified features and reduction in prices of their products to satisfy the never ending choices to compete with rivals. The service providers also try hard to compete with the rivals in invention and competitive service features to make consumers happy. Thus, this paper tries to identify the underlying dimensions of consumer preference while purchasing mobile phones.

Objectives of the study

1. T o understand various dimensions to make a decision on mobile phone purchase .

2. To identify the type of customers based on their behavior.

Research Methodology

Simple Random Sampling method is used to collect data. Sample size is 200. The study has been conducted during the period of April 2015- May 2015.Each individual is considered to be the sampling unit. The respondents of the study are part of population of city namely Ambur in Vellore district of Tamilnadu.

Measurement and Scaling

Five point Likert (interval) scaling has been used for conducting the survey to analyze the habits of smart phone users which has been given as follows: 1 – Strongly Disagree, 2 - Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly Agree

Tools used

In order to find out the underlying dimension of the factors and to identify the pattern of correlation within the set of observed variables, factor analysis is used. Hierarchical Cluster analysis is applied to find out the number of cases in each cluster . K-means cluster analysis is employed to factor scores to segment the customers in terms of preferences.

Analysis and Discussion

Factor Analysis

Factor analysis is used in data reduction to identify small number of factors that explain most of the variables. All 18 items of questionnaire were factor analyzed using principal component extraction with an orthogonal (Varimax) rotation. The number of factors were unconstrained in order to obtain convergent validity 0.50 was used as a factor loading cutoff point.

Table 1

Reliability Statistics

Cronbach's Alpha	N of Items
.859	18

To study the reliability of the data collected, reliability test was done in data collected on 18 likert statements. Cronbach's alpha determine the internal consistency or average correlation of items in a survey instrument to to test the reliability (Cronhach,1951) Table No. 3 shows the reliability statistics and proves the data could support 85.9% reliability to do this analysis.

Table 2

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.752
Bartlett's Test of Sphericity	Approx. Chi-Square	2.004
	df	153
	Sig.	.000

Table 2 indicates that Kaiser – Meyer Olkin (KMO) measure of sampling adequacy in the study is 0.752. This is a good result as it exceeds 0.5 Bartlett's measure of spherecity meaning that factors that form the variables are accurate.

Table 3

Total Variance Explained

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	6.016	33.423	33.423	6.016	33.423	33.423	4.888	27.156	27.156
2	2.627	14.597	48.020	2.627	14.597	48.020	2.310	12.833	39.989

3	1.559	8.662	56.682	1.559	8.662	56.682	2.223	12.348	52.337
4	1.420	7.888	64.570	1.420	7.888	64.570	2.202	12.233	64.570
5	.984	5.465	70.035						
6	.818	4.543	74.578						
7	.698	3.880	78.458						
8	.667	3.703	82.161						
9	.526	2.921	85.083						
10	.507	2.818	87.900						
11	.494	2.746	90.646						
12	.434	2.410	93.056						
13	.349	1.941	94.997						
14	.288	1.602	96.599						
15	.216	1.200	97.799						
16	.177	.985	98.784						
17	.151	.840	99.624						
18	.068	.376	100.000						

Extraction Method: Principal Component Analysis.

Total variance explained

Table 3 depicts the total variance explained. Total variance is explained with rotation the Eigen values for factor 1, 2, 3 and 4 are 4.888, 2.310, 2.223 and 2.202. Percentages of variance for factors are 27.156, 12.833, 12.348 and 12.223 respectively. It indicates that 4 factors extracted from 18 factors have cumulative percentage up to 64.570% of the total variance. Thus, the 18 statements are reduced to 4 underlying factors.

Rotated Component Matrix:

The rotated component matrix is discussed in the following table. After Factor solution has been obtained in which all variables have a significant loading on factor, the researcher attempted to assign some meaning to the pattern of factor loadings. The variables with higher loadings are considered to be more important and have greater influence on the name or label

selected to represent a factor. All 4 factors have been given appropriate names on the basis of the variables represented in each case.

Table 4
Rotated Component Matrix

Factors	Value for money factor	Customer Consciousness Factor	Attention to detail Factor	Convenience factor	Extraction
Availability of the recharge facility				-.548	.337
Possibility of choosing different tariff packages		.740			.594
Festival scheme offers			.636		.552
Reasonable price			.589		.476
Full-talk time	.770				.761
Amount of free messages	.772				.780
Call charges	.839				.894
Cheap roaming charges	.636				.543
Transparent Billing	.757				.632
Geographical coverage		.576			.763
Network coverage				.624	.638
Internet connection	.630				.588
Sound clarity	.583				.709
Fault correction	.661				.781
Reliability of service		.731			.580
value added services (user groups, Internet and sms)				.683	.555
Call blockage			.603		.738
No call cutting call drop			.806		.702

The above table shows the rotated component matrix, in which the extracted factors are given new name

- Factor I is the most important factor which explained 27.156 % of the variation. The factors such as Full talk time (.770), amount of free messages (.772), Call charges (.839), Cheap roaming charges (.636), Transparent Billing (.757), Internet connection (.630), Sound clarity (.583) and fault correction (.661) highly correlates with each other. The

customer tries to avail maximum benefit from the service provided. Hence, this factor is termed as "**Value for Money factor**"

- The second kind of factor explained 12.833% of Variances In this segment, Possibility of choosing different tariff package e(.740s), Geographical coverage(.576), Reliability of service and (.731) are highly correlated with each other. These variables help in understanding the consciousness of consumer while purchasing the product. Hence, the factor is termed as "**Customer Consciousness Factor".**
- The third factor explains 12.348% of the Variance. The statements are Festival scheme offers (.636) Reasonable price (.589) Call blockage (.603) No call cutting call drop (.806). The researcher named this section as "**Attention to detail Factor**" as the customer tries to avail these facilities when need arises. .
- The fourth factor explained 12.233 % of the variations. The extracted statements are Availability of recharge facility (.-548), Geographical coverage (.624) and Value added services (.683). This segment is named as "**Convenience Factor"** as the customer tries to get easy maintenance and hassle free consumer experience

Hierarchical cluster Analysis

In order to find out the optimum number of clusters, a hierarchical cluster analysis using wards method applying Euclidean distance as the distance similarity measure was carried out. With agglomeration schedule highest leap in distance co-efficient was determined and deducted from total number of cases (respondents) . Four clusters are determined.

K-means Cluster Analysis

Table 5

Number of Cases in each Cluster

The first cluster has 153 respondents, second cluster has 27, third has 6 and 4th cluster has 14 respondents.

Table 6

Cluster	Number	Percentage
1	153.000	76%
2	27.000	13%
3	6.000	3%
4	14.000	7%
Total	200.000	100%

Final Cluster Centers

	Cluster			
	1	2	3	4
	Analytical buyers	Systematic Buyers	Expressive Buyers	Bargain Hunters
	76%	13%	3%	7%
REGR factor score 1 (for analysis 1 (Value for money Factor)	.41518	-.76846	-2.14824	-2.13457
REGR factor score 2 for analysis 1 (Customer Consciousness Factor)	-.17062	1.56918	-1.46465	-.53396
REGR factor score 3 for analysis 1 (Attention to detail Factor)	.03008	-.30856	-2.07539	1.15583
REGR factor score 4 for analysis 1 (Convenience Factor)	-.00872	.52804	-1.39108	-.32685

There are 76% of Cluster 1 respondents value for money (.4158) but they do not give importance to customer consciousness factor (-.17062).These persons are **Analytical buyers**. Analytical buyers are best identified by their tendencies towards perfectionism. Logic and accuracy are the key motivations for this type of buyer, more information equals more sales to them**.(http://www.avidian.com/blog/the-4-types-of-buyers-and-how-to-sell-them** assessed on June 2, 2015**)**

In cluster 2, 13% of the respondents do not give importance to value for money factor (-.76846) but they rely on consciousness factor (1.56918) and convenience factor (.52804). They are **systematic buyers**. They focus on information .They work slowly because they want to make sure that they fully understand all aspects of the product, These buyers are very serious personalities and do not take the decision lightly. **(http://livehive.com/lh-blog/4-types-of-buyer-personalities** assessed on June 2, 2015**)**

In cluster 3, 3% of the respondents are neither give importance to value for money factor (-2.14824) nor to Attention to detail factor (-2.07539). These buyers are **Expressive Buyers**. They want to know that they are your most important client. If they don't feel that they are getting enough attention, they may become manipulative or reactive**.(http://www.avidian.com/blog/the-4-types-of-buyers-and-how-to-sell-them** assessed on June 2, 2015)

In the cluster 4, 7% of the respondents give importance to attention to detail factor (1.15583) but they do not give importance to value for money factor (-2.13457).They are termed as **Bargain Hunters**. These buyers are price –conscious and they are attracted towards discounts and freebies. (**http://www.res.org.uk/details/mediabrief/4411711/Customer-Loyalty-Versus-The-Bargain-Hunters---The-Two-Types-Of-Shopping-Behaviou.html** assessed on June 2, 2015)

Findings:

The results reveal

1. Four factors were determined, the first and foremost factor is Value for Money, the second factor is customer consciousness factor followed by Opportunity seeking factor and Convenience factors.
2. Four clusters of customers were determined and k-means cluster reveals that around 76% of cluster 1 respondent's value for money, 13% in Cluster 2of the customers relies on customer consciousness factor The customers of cluster 3 gave least importance to all the four factor scores. and 7% of the customers in cluster 4 are give importance to attention to detail factor.

Conclusion

Today, there are a number of mobile service providers in the market and they offered various services for the purpose of mobile users. The analysis reveals that four factors were determined where the customers tend to purchase. The first important factor is Value for money, followed by customer consciousness factor, Attention to detail factor and convenience factor .By Clustering of factor scores, 4 types of buyers are determined based on their buying behavior pattern and they are termed as-Analytical Buyers, Systematic Buyers, Expressive and Bargain Hunters. Thus, every change in public policies and each new innovation in technology must take into account and the service providers should provide various benefits to the customers on basis of their behavior, taste and preferences.

References

Lin, C.F. (2002), "Segmenting customer brand preference: demographic or psychographic", Journal of Product and Brand Management, Vol. 11 No. 4, pp. 249-68.

Michal Kravec and Adela Slivková (2013) "Cluster Analysis of Steel Industry" International Journal of Interdisciplinarity in Theory and Practice",ITPB-NR-2 , pp110-17 http://www.researchgate.net/publication/258833788_CLUSTER_ANALYSIS_OF_STEEL_INDUSTRY assessed on June 2, 2015.-

Oliver, R.L., (1993). " A conceptual model of service quality and service satisfaction: Compatible goals, different concepts" in Swartz, T.A., Bowen, D.E. and Brown, S.W. (Eds), advances in service marketing and Management, Vol. 2, JAI press Greenwich, CT, PP, 65- 85.

Ramulu Bhukya and Sapna Singh (2013) Brand Preference of student towards choosing cellular service providers in Hydrabad city"Asia Pacific Journal of Marketing & ManagementReview., Vol.2 (5), May (2013) indianresearchjournals.com assessed on 21st May 2015

Rehana Kouser, Saifullah Qureshi, Farasat Ali Shahzad and Hassan Hasan(2012) "Factors Influencing the Customer's Satisfaction and Switching Behavior in Cellular Services of Pakistan", Interdisciplinary Journal of Research in Business Vol. 2, Issue. 1, pp.15- 25.

Spreng, R.A. and Mackoy, R.D. (1996) " An empirical examination of a model of perceived service quality and satisfaction", Journal of Retailing, Vol.72 No. 2, pp. 201-14.