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**JOURNAL AND OTHER ARTICLES**

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## STUDY OF CONSUMER BEHAVIOR IN CELL PHONE INDUSTRY

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NIGDI

## ABSTRACT

The number of cellphone users has increased in large in past few years from few hundreds to now in millions. Earlier phone was considered as a mode of communication for people in distant locations and that too in case of any emergencies. But now the things are entirely different. Cell phones have become utmost necessity of every one of all age people. The study attempts to investigate the basic reason and mindset of consumer while purchasing a cell phone handset and its service. The researcher has surveyed 145 cell phone consumers from Pune and Pimpri-Chinchwad area. The result indicates that the price, appearance and user friendliness were considered as the prime factor while purchasing a handset, and cost, quality of service and network connectivity were considered as the most influential factor in terms of service provider selection. This paper concludes by proposing a model for understanding the consumer behavior in cell phone industry to enhance the consumer satisfaction.

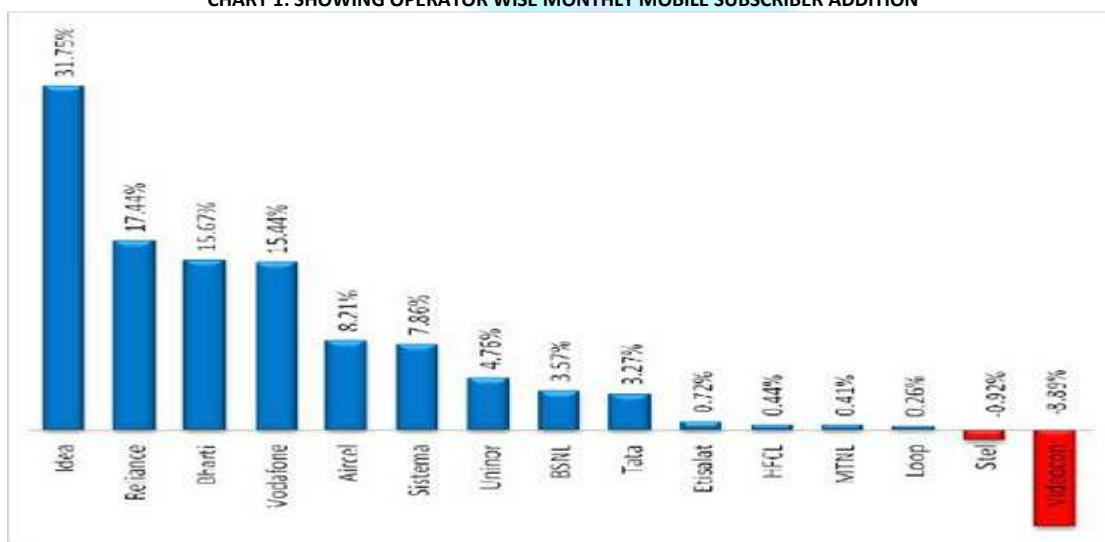
## KEYWORDS

Cell phone, Consumer, Network Coverage, Quality of Service.

## INTRODUCTION

The growing market of telecom sector from wired to wireless has bring the mobility in terms of consumer requirements. In early 1980's telephone was considered as the only mean of communication to people at remote locations. With change in science and technology the mode of communication has also emerges with new trends. In past decades the telecommunication sector has changes from wired to wireless to mobility communication. As per telecom statistics the communication media and corresponding number of users for wired to wireless has changed remarkably from few hundred to several millions. According to figures released by Telecom Regulatory authority of India in their press releases, India has now crossed around 900 million Telecom subscribers across the country by the end of year 2012. Mobile number Portability requests from customers have also increased significantly in last couple of years. With revolutionary change in 2G and 3G services, the subscriber is more demanding in terms of several Value Added services.

CHART 1: SHOWING OPERATOR WISE MONTHLY MOBILE SUBSCRIBER ADDITION



Source : COAI statistics

This mobility in communication technology allows people to be in touch with each other anytime and anywhere. With increasing technology the consumer is now becoming more and more demanding in terms of availing the services. Consumer awareness towards service quality is providing a new dimension in forcing the service quality standards. This paper studies the basic motive of cell phone service factors that affect the consumer behavior. The paper describes the cell phone service factors including various value added services which are availed by 2G and 3G consumers.

## Mobile Technology : 1G, 2G, 3G, 4G...

The first generation cell phones were based on analog technology and were started in late 1970s. The digital technology based cell phones were started with voice and data based services in early 1990s. This 2<sup>nd</sup> generation cellular service was based on multiple digital standards including GSM, CDMA and Personal digital Communication. Multiple text and graphics rich packets transmission started with 2.5 generation mobile services. The third generation technology has added many multimedia facilities to existing 2G technology. 3G cellular service providers provide various value added services to subscribers with very high speed under a common standard known as UMTS – universal Mobile Telecommunication System. The fourth generation mobile technology can speed up the transmission up to 50 times higher than that of 3G technology.

## LITERATURE REVIEW

The telephony market in India has started long back in 1990s. In 1994 Government had issued licenses for cellular mobile services only for metropolitan cities : Delhi, Mumbai, Kolkata & Chennai. In past few years the telecom scenario has spread like a web among consumers. The change in technology from 0g to 3g, has changed the consumer mindset. Quality is highly correlated with customer satisfaction & customer satisfaction is affected by the customer behavior. Customer is the consumer who assesses the quality from consumer perception.

FIG. 1: CONSUMER RELATION WITH SERVICE QUALITY AND SERVICE SATISFACTION

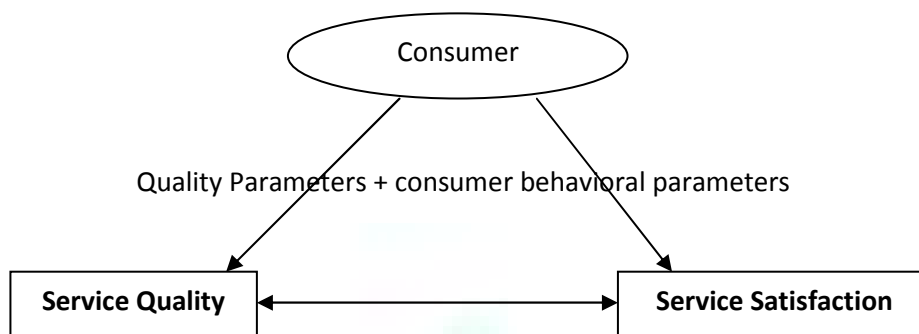


TABLE 1 : ATTRIBUTES AFFECTING THE CONSUMER BEHAVIOR

Quality Attributes	Behavioral Attributes	Service Satisfaction
Cost	Economical Attributes	Low cost
Network Coverage	Psychology Attribute	Getting connected with good network
Customer care	Sociology (emotional)	Having a feeling that someone take care of our service
VAS	Desire, Ease of Use	Availability of applications with comfort
Cell phone make	Appearance , Brand image	Model appearance and Handy
Cell phone look	Appearance	Model appearance and Handy

Table 1 shows the quality and behavioral attributes affecting the service satisfaction of customer. Past survey on telecom sector and several TRAI press releases shows that with increase in number of subscriber in cell phone world, more and more services are offered by service providers to attract the more and more customers. But the consumer behavior which is changing with day by day is not taken in to consideration while expanding the market.

Consumer behavior is varying depending upon the consumers' perception towards expected service quality and accordingly service satisfaction also changes. As per Telecom Regulatory Authority of India (TRAI) the desired key attribute for cell phone service sector to bring the customer satisfaction are<sup>1</sup>:

1. Provision of service
2. Billing performance
3. Help services
4. Network performance, reliability and availability
5. Maintainability
6. Customer satisfaction with offered supplementary services
7. Overall customer satisfaction

Customer satisfaction is affected by consumer behavior. The service quality awareness among consumers has changed consumer behavior towards their service need and service expectations. People get fascinated very fast with new emerging telecom trends. But this fascination some times last only for few months and then dissatisfaction starts. The need arises to understand such change in consumer behavior towards such telecom market to get the fruitful market growth. In this paper the defined parameters as given by TRAI are studied from consumer behavior and are analyzed accordingly.

As per the telecom regulatory Authority of India customer satisfaction for cell phone users can be measured through service quality parameters. These quality parameters need to be defined separately for tangible and non-tangible characteristics. Consumer market is attracted by both the service effectiveness of non-tangible characteristics as well as with the appearance of tangible things.

A recent survey conducted by Govt. on 2g and 3g users through online portals, it has been observed that the 2g and 3g market may run successfully if they are launched and marketed to the right consumers and as per their demand and needs. (Survey on 3Gportal.com by Trifika, Jones 2002). The paper also studies the consumer affection and demand towards various popular 3G Value added services

## RESEARCH METHODOLOGY AND DATA ANALYSIS

Survey based research methodology is used by the researcher. Primary data is collected through questionnaires within Pune and Pimpri Chinchwad area. The targeted consumers divided in to three age groups. Groups are divided with reference to age group below 18, 18 to 25 and above 25 years. Total 147 valid data was collected comprising of 102 male and 45 female respondents. Questions having the choice of cell phone handset and service features are collected from various consumers on five point Likert scale.

A survey conducted by the author on 147 cellphone users indicate that age is one of the factor which differentiate the consumer choice towards service quality. Students prefer good and slick model of handset compared to the old traditional model. 88% consumers of age group 18 to 25 years prefer cell phone for entertainment. Only 12% youngsters thinks that cell phone should be used with only incoming and outgoing mode. Questions were set based on TRAI (Telecom Regulatory Authority of India) service quality press releases based on set QoS (Quality of Service) parameters. Questionnaire is divided in to four categories :

- A. General Information
- B. Usage of Mobile Services (2G Users)
- C. Usage of Mobile Services (3G Users)
- D. 3G VAS Benefits
- E. Comments (Open Ended Question)

Secondary data is collected through published articles, journals and press releases related to cellular services and consumer satisfaction. Telecom Regulatory Authority of India and Cellular Operators' Association of India (COAI) has been used as the major source of secondary data.

## RESULTS AND OBSERVATIONS

- Majority of students procured their first cell phone at the age below 18 years. Between 18 to 26 years of age 92% consumers are used of their cell phone and uses 2nd or sometimes 3<sup>rd</sup> cell phone.
- 72% consumers of age group below 18 years uses their cell phone as prime mode of entertainment. While 22% consumers mostly students uses it primarily for communication to their friends, relatives. 6% consumers are neutral about the basic use of their cell phones.
- 90% consumers of age group below 18 and between 18 to 25 years prefer sleek model with value added services in 2G or 3G services.
- 88% girls prefer good looking phone and never restrict themselves with branded phone. Usually such group prefers china made phones or the model with maximum supporting applications. For them mode of communication is secondary need. Majority of student community fall into this category.
- 85% targeted group belongs to student category and 15% belongs to some employment.



**FACTORS AFFECTING THE MOBILE PHONE SELECTION**

Price and additional features (Value Added Service) have been observed as the most important factors while purchasing a cell phone. 62% consumer look towards cost as the prime factor and 38% consider VAS as the main factor affecting the decision of cell phone purchase.

- 88% youngsters prefer the current model but cost comes as the major hurdle for them.
- 55% Consumer prefers branded cell phone but their decision depends upon their guardian or financier.
- A factor analysis on 10 factors for cell phone selection suggests that three prime factors are there whose eigen value is close to and larger than 1.0. The first factor is cellular brand who is having highest loading factor related to four variables : VAS, Screen Appearance, Voice Quality and Lookup. The 2nd and 3rd factors are cell phone market condition and influential resource respectively. Price, Memory and Make of cell are the major variables affecting the decision of consumer while procuring the cell phone and depends upon the cell phone market condition.

**TABLE 2 : FACTOR ANALYSIS ON CELL PHONE SELECTION**

Factors			
Choice Factor Variables	Cell phone Brand	Cell phone Market condition	Resource person (Influenced by)
Value Added Services	.88		
Screen Appearance	.72		
Voice Quality	.70		
Lookup	.69		
Price		.81	
Memory		.72	
Make			.77
Advertisement			.68
Friends			.44
Family			.28

**FACTORS AFFECTING THE CELL PHONE SERVICE PROVIDER SELECTION**

The variables which affect the decision of consumer regarding the cellular operator selection include network range, call drop frequency, customer care service by operator, price, free calls facility and SMS facility, VAS. Operator selection is influenced mainly by three factors :

1. Network coverage quality
2. Customer care quality
3. Charges (Billing).

The first factor Network Coverage has the highest loadings for service provider in terms of service quality and consumer satisfaction.

**TABLE 3: FACTOR ANALYSIS ON SERVICE PROVIDER SELECTION**

Factors			
Choice Factor Variables	Service provider Brand & Quality	Service provider Market condition	Resource person (Influenced by)
Network Coverage	.81		
Voice Quality	.80		
Customer care	.77		
Value Added Services	.76		
Billing charges		.84	
Free call facility		.73	
Advertisement			.42
Friends			.25
Family			.24

The choice of service operator was primarily affected by network availability. Around 81% consumer thinks that network coverage could be the highest priority while considering the service provider by name. 84% consumer relates billing as the highest factor but in relation with market conditions. Depending upon market value their decision for service provider selection varies. Table 3 shows the factor analysis of nine statements. Three identified factors were 1) service provider brand & quality, 2) Market condition, 3) Influential person. Four factors have the highest loadings for brand image and service quality. Two variables strongly affect the market condition. While last three variables have strong loadings for influential person factor.

**SERVICE QUALITY AND CONSUMER PERCEPTION**

Consumer behavior is the study of experiences which every individual, group of people or any organization gets towards some service, or some product use or any other. Consumer behavioral attributes are basically related to psychological, sociological and economical factors. But it is very difficult to predict the consumer behavior as it is affected by four different roles: the customer (the actual buyer), the service provider (brand), the seller (shop keeper) and the actual user. This study considers the consumer behavior from actual user point of view. Perception of every individual differs from consumer to consumer. Gender and age influences the consumer selection and perception towards service provider selection and cell phone selection. Students and young consumers of age group 18 to 24 years are more influenced by their friends and advertisements.

The study indicates that the psychological attributes with ease of use and availability of value added services with minimum expense put a positive influence on the utilization of perceived services. Consumer perception of age group 18 to 24 years towards service quality differs from that of age group 25 and above.

**CONCLUSION**

This study was conducted to understand the cell phone market and consumer decision related to cellular services and cellular product. The main observation of this study are as follows :

1. Though the study was conducted considering the average minimum age of cell phone users as 18 years but the study shows that the minimum age of cell phone users has lowered down from 18 years to 12-14 years.
2. Basic factors affecting the cellular service provider selection are service provider brand, their market conditions and influential person(s) along with their impact on variables like network coverage, billing, customer care, value added service and free call facilities.
3. Basic factors affecting the cell phone selection are service provider brand, their market conditions and influential person(s) along with their impact on variables like screen, appearance, price, memory and additional applications and features.

This study reveals the consumer perception towards the cell phone service and cell phone model selection. Results may vary from consumer to consumer. Although price and features appeared to be the preferred choices of consumer but value added services like internet surfing, call tracking applications and other advanced applications were also considered as important factors. These value added service did not considered under the scope of study, but these were reflected as general consumer perception as answered by many consumers in open ended question.

**REFERENCES**

1. Dr. Mrs. G. Santhiyavalli, Customer's perception of service quality of State Bank of India - A Factor Analysis <http://www.ijmbs.com/13/gsanthivalli.pdfvol.1issue3>
2. JANAWADE Vikrant , Paul Cezanne University, France Consumer perceptions of service quality of complex services: An application to airline alliances, on <http://reser.net/materiali/priloge/slo/janawade.pdf>
3. Liu, C.M. the effects of promotional activities on brand decision in the cellular telephone Industry, the journal of Product & Brand management, 2002, 11(1), 42-51
4. Press releases from [www.coai.in](http://www.coai.in)
5. Statistical data from Cellular operators Association of India ... [www.coai.in](http://www.coai.in)
6. TELCOM REGULATORY AUTHORITY OF INDIA QUALITY OF SERVICE DIVISION, <http://www.trai.gov.in/WriteReadData/trai/Upload/ConsultationPapers>



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