A Study of Consumer Buying Behavior for Mobile Phones, With Respect To Gender Difference: Male or Female

Dr. Reena Modi

Abstract— **Mobile phones have become basic component of communication. Indian mobile market has noticed a paradigm shift and emerged as the fastest growing market for mobile handsets globally. Consumers, both males and females are showing preference towards mobile phones as it is being used for a variety of purposes. The aim of the present study is to investigate customer buying behavior for mobile phones, with respect to gender difference i.e., male or female. The study was undertaken on 30 mobile phone users of Hyderabad city, India**

Index Terms— **customer buying behavior, mobile phones, gender difference**

I. INTRODUCTION

Globally, with the advent of technology, mobile feature phones converted to smart phones have become supreme for individuals. A recent report "The Mobile Economy 2017" by GSMA (Global System Mobile Association) shows that there are 4.8 billion unique subscribers in 2015 and by 2020 it is estimated to reach 5.7 billion. The penetration rate, which stands at 63%, will increase to 72% by 2020. The report also shows 81% growth in smart phone market globally. This clearly spotlights the opportunity for mobile phone companies globally.

Indian mobile market has observed a paradigm shift. India is one of the fastest growing markets for mobile phones globally and is expected to reach 13.5% market share by 2025 as per the joint report of ASSOCHAM & KPMG, 2016. As per the same report the key drivers of the growth are popularity and availability of mobile handsets and much improved availability of data services in India. Affordable price of the mobile phones is yet another key driver of growth. Mobile phone usage has changed dramatically. As observed in the market, Besides communications, people are using mobile phones for social networking, gaming, Internet surfing, entertainment, camera, online shopping, banking and many more, as observed in the market.

Consumers are purchasing smart phones at a remarkable pace and see them as personal expressions of their lifestyle (Castells et al, 2006). The government is also doing their job to fuel the demand for mobile phones. It has initiated various schemes like Digital India, relaxation in FDI norms, Make in India etc. to boost the usage, manufacturing and sale of mobile phones. Also, the increasing GDP per capita has increased the real disposable income. Growing young population and changing life styles are also the key determinants for growth of mobile phone industry. So it can

be clearly predicted that smart phones market holds an immense opportunity for companies.

If companies want to overpower their competitors it becomes imperative for them to understand how consumers decide for smart phone purchase or what is the consumer buying behavior towards them. The present study aims towards providing insights for consumer buying behavior of males and females towards smart phones so that it can help companies in deciding type of smartphones to be introduced in the market. According to Senecal et al (2005) marketers should analyze consumer's mind where they buy, what they buy and why they buy. Why they choose a particular product is a mystery because it depends on their physical conditions and perceptions about the product.

SCOPE OF THE STUDY

This study is limited to customer buying behavior only for mobile phones, with respect to only gender difference i.e. male or female.

NEED OF THE STUDY

This study will help the sellers and mobiles companies in understanding the customers and also their preferences in mobiles phones depending on their gender. The sellers and mobiles companies will be able to be more competitive in the market and even earn more profits by understanding their customers better.

OBJECTIVES OF THE STUDY

1. To study the mobile market in Hyderabad city, India.
2. To understand the preferences of males and females while buying a mobile phone in Hyderabad city, India.

II. LITERATURE REVIEW

Consumer behaviour is defined as "the decision process and physical activity individuals engage in, when evaluating, acquiring, using or abandoning of goods and services (Loudon & Bita, 1994). Understanding the consumer behavior concept is very critical for survival and profitability of firm. Consumers are central to organizational success and the organizations that understand this are more successful in their business operations (Blackwell, Miniard, & Engel, 2006).

Peers have more influence in teenager's smart phone buying behavior compared to parental influence (Lachance et al., 2003). Bristol and Manglegurg (2005) say "Peer influence plays a vital role in an individual's decision making towards purchase of consumer goods."Consumer behavior in context

of mobile phones has been studied widely across the globe, indicating the importance of price, technology and brand as the major significant factors for decision-making. According to Karjaluoto et al (2005) study of factors affecting consumer choice for mobile phones in Finland found that price, brand and size of the phone are the key factors in purchase of any new mobile phone. It also underlined the importance of innovative services, multimedia, design, outside influence and reliability as significant factors.

Ling et al (2006) surveyed College students to identify their preference for the mobile phones. The result showed that physical appearance, size and menu of the mobile phone are the most determinant factors affecting the buying behavior of consumers. Xihao, H., & Yang, J. (2006) too measured the influence of the reference group on the purchasing behavior and found "a strong influence of reference group on cell phone consumers in their purchasing decisions. Informational influence on consumers found to be highest compared with utilitarian influence and value-expressive influence." Mark and Sharples (2009) found usability as the most important factors of mobile choice; other features like aesthetics and cost too were important. Consumer behavior towards mobile phones has also been segregated with respect to age groups and gender differences and substantial research has also been done in that respect.

One such research is by Singh and Goyal (2009) who examined importance of physical appearance, brand, value added features, core technology features, price and post- sale services across three different age groups (18-30, 30-50, and 50 above) and two gender groups. Overall physical appearance got the highest importance followed by brand and after sale services. Also Physical appearance, brand, value added features, and core technical features influence the age group of 18-30 years more than consumers of other age groups. The consumers of age 50 years and above are price sensitive as they have given greater importance to price than any other age group. Based on research by Khasawneh (2010) on mobile phones, it was found that products brand name influence customers' evaluation and affects their purchasing decision. This can also be supported by the research work done by Norazah (2013), in which brand name had a significant effect on the demand for smartphones among Malaysian students. Ahmed and Qazi (2011) investigated buying and re-buying mobile purchase behaviour of 500 University students in Pakistan for adoption and consumption patterns. Consumer prefers service provider offering services to suiting to their requirements and features of a mobile phone. Favorite brand is Nokia and preferred service provider U-phone. Islam (2011) studied mobile phone adoption amongst farmers in the rural area of Bangladesh. Nokia was the most preferred brand due to affordability.

Azira, R. et al. (2015) examined factors influencing purchasing intention of Smartphone among university students in Malaysia and deduced that "Three of four variables in study namely product features, brand name, and social influence have a significant relationship with product purchase intention and have positive correlation amongst them" Kaushal, SK and Kumar Rakesh (2016) conducted study of 159 students and young professionals from city of Lucknow to find out presence of any significant difference

between factors like Compatibility, Product Features, Price, Brand, relative advantage, dependency, social influence and convenience that affect consumer's (male or female) purchase of Smartphone. Results of the study revealed that only Compatibility, Dependency and Social Influence had a significant effect on purchase intention of Smartphone users. Only convenience factor showed a significant difference between male and female purchase intention. Kushagra et al (2017) in their elaborate study involving 417 respondents on Impact of Brand Cues on Young Consumers' Preference for Mobile Phones using Conjoint Analysis and Simulation Modelling deducted that the attributes or brand cues influencing youth can be broadly classified as extrinsic cues and intrinsic cues. Extrinsic cues were found to be brand name and price while Camera quality, RAM, Operating system and battery power were intrinsic cues.

Literature review for consumer behavior towards mobile phones clearly highlights the importance of technology, price, brand, recommendations and product features. Not only this, it also highlights that this preference differs across the demographics of the consumer and marketers must take into account this difference while formulating strategy to sell their product.

III. METHODOLOGY

3.1 Research design
Impact of gender difference on consumer buying behavior for mobile phones is seen in this research. For this purpose chi-square test was used taking level of significance at 5%. Degree of freedom was calculated and the critical value was determined using chi-square table. Chi value was calculated

using the formula:
$$\chi^2 = \Sigma \frac{(O-E)^2}{E}$$

Where,

O –observed value

E –expected value

After finding chi value, it was compared with critical value on a deviation curve and finally interpretations were drawn.

Also, T-Test was performed wherein T-value was calculated considering the sample sets to be two-tailed and independent or unpaired. The formula used was:

$$\text{Test Statistic of Unpaired Samples} = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

where

$$s^2 = \frac{\sum_{i=1}^{n_1}(x_i - \overline{x}_1)^2 + \sum_{j=1}^{n_2}(x_j - \overline{x}_2)^2}{n_1 + n_2 - 2}$$

After calculating T-value , it was compared with critical value which was determined by finding degrees of freedom and then finding the critical value on critical value table at 5% significance level.

Then T-value was compared to critical value. If T-value is less than critical value then null hypothesis (H0) should be rejected and vice-versa.

3.2 Population and sampling:

To confirm that the sample selected is representative of the population, simple random convenience sampling was used in this research where **each individual in the population of interest has an equal likelihood of selection**, and a random sample was taken. For this data was collected from mobile customers conveniently and randomly and then it was analyzed. Sample size is 30.
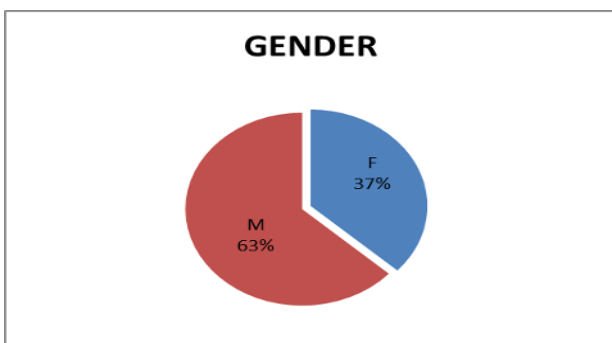
3.3 Data collection:

Secondary data was collected from the various mobile companies and outlets. Also some data was collected from magazines, research papers, articles, journals and internet.

3.4 Data analysis and interpretation:

Gender

male	female
19	11

GENDER

From the above pie diagram it is observed that 63% i.e. 19 males participated as respondents and 37% i.e. 11 females participated as respondents.

Q2. How often do you change your mobile?

s.no.	male	female
1	2	0
2	10	4
3	3	3
4	4	1
5	1	1
6	0	1

Null Hypothesis (Ho): There is no relationship between the duration in which mobile is changed and the gender.

Alternative Hypothesis (H1): There is a relationship between the duration in which mobile is changed and the gender.

CHI-SQUARE TEST
Degree of freedom (df) = (r-1)(c-1)
$\qquad$ =(6-1)(2-1)
$\qquad$ =(5)(1)
$\qquad$ =5
Calculated chi-square value = 1.22
Table value at 5% significance = 11.040

Interpretation:
Since the calculated chi-square value is less than the table value null hypothesis(Ho) is accepted. Hence, it is concluded that there is no significant relationship between the duration in which mobile is changed and the gender.

T- TEST DATA

Gender of customers		MEAN	STD DEV	VAR
	male	3.33	3.55	12.66
Duration of changing mobile	female	1.66	1.51	2.26

T value is 0.13 and critical value is 2.23 @5% significance level.
Since t value is less than critical value.
So, H0 is accepted. Hence, according to T-Test, there is a relationship between the duration in which mobile is changed and the gender.

Q3. Mostly, what is the reason for changing mobile?

s.no.	male	female
1	8	2
2	8	4
3	4	4

Null Hypothesis (Ho): There is no relationship between the reason for changing mobile and the gender.

Alternative Hypothesis (H1): There is a relationship between the reason for changing mobile and the gender.
CHI-SQUARE TEST
Degree of freedom (df) = (r-1)(c-1)
$\qquad$ =(3-1)(2-1)
$\qquad$ =(2)(1)
$\qquad$ =2
Calculated chi-square value = 0.77
Table value at 5% significance = 5.991

Interpretation:
Since the calculated chi-square value is less than the table value null hypothesis(Ho) is accepted. Hence, it is concluded that there is no significant relationship between the reason for changing mobile and the gender.

T- TEST DATA

Gender of customers		MEAN	STD DEV	VARIANCE
	MALE	6.67	2.31	5.33
Reason for mob change	FEMALE	3.33	1.15	1.33

T value is 0.13 and critical value is 2.23 @5% significance level.
Since t value is less than critical value.
So, H0 is accepted. Hence, according to T-Test, there is a no relationship between the reason for changing mobile and the gender.

Q4. What features do you observe while purchasing a new mobile?

s.no.	male	female
1	1	1
2	7	5
3	11	5

Null Hypothesis (Ho): There is no relation between the features observed by customers while purchasing a new mobile and the gender.

Alternative Hypothesis (H1): There is a relation between the features observed by customers while purchasing a new mobile and the gender.

CHI-SQUARE TEST

Degree of freedom (df) = (r-1)(c-1)
$$=(3-1)(2-1)$$
$$=(2)(1)$$
$$=2$$

Calculated chi-square value = 2.71
Table value at 5% significance = 5.991

Interpretation:

Since the calculated chi-square value is less than the table value null hypothesis(Ho) is accepted. Hence, it is concluded that there is no significant relationship between the features observed by customers while purchasing a new mobile and the gender.

T- TEST DATA

Gender of customers		MEAN	STD DEV	VARIANCE
features that are observed	MALE	6.33	5.03	25.33
	FEMALE	3.66	2.31	5.33

T value is 0.45 and critical value is 2.776 @5% significance level.
Since t value is less than critical value.
So, H0 is accepted. Hence, according to T-Test , there is no relationship between the features observed by customers while purchasing a new mobile and the gender.

IV. FINDINGS

For chi-square test and For T-Test
1. The gender difference does not influence duration of changing of mobile phones decision by customers.
2. The gender difference does not influence the reasons for changing of mobile phones by the customers.
3. The gender difference does not influence the selection of features of mobile phones by the customers.

CONCLUSION

Mobile phones have become an essential product for all the customers whether its male or female. It's a very user-friendly device which makes life of each and every individual much easy and helps them to be efficient to the most of their capabilities. But the usage of mobile has turned into its misuse as everyone is busy in it 24*7, which is very harmful for the human health as it affects the brain the most. So, mobile usage should be restricted.

REFERENCES

[1] Gender, culture and consumer behavior by Cele C. Otnes, Linda Tuncay Zayer,Routledge

[2] Handbook of Research on Gender and Marketing Edited by Susan Dobscha, Professor of Marketing, Bentley University, US
[3] Consumer Behaviour Paperback – January 5, 2009 by Satish K Batra (Author), S H H Kazmi (Author)
[4] Consumer Behaviour Text and Cases Paperback– 2015 by N.K. Sahni & Meenu Gupta (Author)

Web links
http://uf.catalog.fcla.edu/permalink.jsp?20UF002827910
https://www.routledge.com/Gender-Culture-and-Consumer-Behavior/Otnes-Zayer/p/book/9781848729469
https://businesslibrary.uflib.ufl.edu/c.php?g=114642&p=746492