

A Study on Consumer Buying Behaviour towards Mobile Phones

Shefali Srivastava¹ Shubham Prakash Srivastava²

¹Indira Gandhi National Open University, New Delhi, India ²University of Petroleum and Energy Studies, Dehradun, India

Abstract— Consumer plays an important role in the successful achievement of organizational goals. According to the new concept of marketing^[1], consumers act as a king around which all the business activities rotate. This paper aims to analyze the factors that influence consumers to purchase a mobile phones. This survey paper studies the various attributes through which consumers decision of buying a product fluctuates. The data is collected by conducting a survey questionnaire method in which the sample of 100 consumers recorded and out of 100, 70 were extracted using simple random sampling method for the purpose of analysis. The extracted data has been analyzed by applying mathematical operations like frequency distribution, percentage and visualized with the help of graphs.

Keywords: Consumers, Random Sampling Method, Buying Decision, Frequency, Visualization, Chi Square Test, Likert Test

I. INTRODUCTION

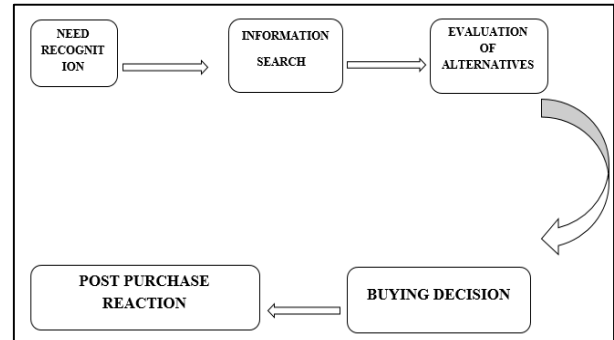
The term 'consumer buying behavior'^[2] is the sum total of a consumer's attitude, preference, intention and decision regarding the consumer's behavior in the marketplace when purchasing a products & services.

Consumer behavior^[3] involves study of how people buy, what they buy, when they buy and why they buy. It blends the elements from psychology, sociology, socio psychology, anthropology and economics. With the development of technology world has shrunk and comes within the reach of every individual, confined into a small box called Mobile phones, which are packed with many additional features, such as web browsers, games, cameras, video players and even navigational systems, etc. Now a days, Mobile Phone has become a necessity. Every individual spends a lot of time on mobile phone for various reasons according to their requirements like web browsing, online shopping, playing games. Lots of mobile analytical companies have been involved to analyze the consumers behaviour by using various analytical tools to insight the consumer behaviour which helps the company to understand on the basis of what factors consumers are influenced to buy a specific mobile product.

A. Buying Process

There are five steps involved to buy a product. Basically, the buying process comprises of five stages^[4]:

B. Five-stage Model of Consumer Buying Process



1) Stage 1: Need Recognition

Before purchasing a product, an individual have to recognize which product or what product he/she wants to buy. Consumer buying process simply starts with need recognition. This stage of buying process helps in to move one step ahead towards successful achieving of buying goals. The decision of buying starts with the recognizing the need or desire for something which will give satisfaction on consumption.

2) Stage 2: Information Search

The second stage in buying decision is to Search the information related to the recognized desire.

The consumer may engage in two types of information search depending on the intensity of need. These are heightened attention and active information search. In the first case the consumer becomes more receptive to information, which comes to him about the product, which may satisfy their needs and in the later case, the consumer seeks information from various sources. Consumer collects the information from various sources e.g. family, friends, advertisement, Magazines, internet and other sources. Consumer whether they are in heightened state or in active information search state, get information from the above mentioned information sources.

3) Stage 3: Evaluation of Alternatives

This stage of buying process is the most complex among all. Consumers evaluate various alternatives before making any purchase decisions. While evaluating various the alternatives many aspects are taken into consideration such as product attributes, brand image, utility function, price of the product, convenience, facilities and many more^[6].

4) Stage 4: Buying Decision

After evaluating various alternatives of a product, consumer finally makes the buying decision.

Consumers likes and dislikes or better to say opinion stars building about other similar items or things in prospective buyers. This will in turn results in creation of brand impact and then a choice to make or not to select (any).Evaluation of alternatives leads to the formation of purchase intentions. Consumer deals with various factors which comes in between the purchase intentions and the actual purchase decision. These factors are attitude of others,

and unanticipated situational factors. If these two factors go in favour of the consumer's then they may purchase the most preferred brand otherwise shifts to the other brand from among his or her choice set.

5) Stage 5: Post Purchase Reaction

After purchasing a product, the consumer may experience either satisfaction or dissatisfaction with the product or service. After purchasing and using the product, if the buyer finds that the product's performance < expectation then buyer dissatisfied, if product performance = expectations then buyer is satisfied and if product performance > expectations then buyer is highly satisfied. The satisfied buyer are more likely to purchase the product again and again without going to the buying process. But the unsatisfied buyer may react differently. That is why a customer-oriented company regularly measures customer satisfaction and dissatisfaction.

II. LITERATURE REVIEW

Neeraj Kumar Mahapatra, Saurabh kumar, Anurag, Aman, Yogi Vij(2016):"A study on consumer behaviour derived benefits from mobile phones by youth". The objectives of the study is to analyze the benefits derived by the consumer of a particular group i.e youth. The study focuses on the various aspects elaborated by the youth with the help of a field survey. Focuses on the penetration of mobile phones in India landscape to reap the benefits. By collecting data from the youth, helps to elaborates the advantage and disadvantage of mobile phones among youth.

Nikita Agarwal(2014):"A comparative study of buying behaviour of rural and urban consumer for mobile phones- A Case study of Yamuna nagar district". The objective of the study is to examine the comparative buying behaviour of rural and their urban counterparts towards the purchase of mobile phone and to explore the motivational factors for mobile purchase. The study also mention various limitations while collecting the information. Buying Behaviour between rural and urban consumer compared on the basis of Price, Quality, Style, Functions, Promotional offering and Compatibility with value added system.

Mesay Sata(2013):"A study on factors affecting consumer buying behaviour of Mobile Phone Devices in Hawassa town". The purpose of the study is to investigate the factors affecting the decision of buying mobile phone devices in Hawassa town. According to the study it was clear that consumer's value price followed by mobile phone features as the most important variable amongst all and it also acted as a motivational force that influences them to go for a mobile phone purchase decision. The study suggested that the mobile phone sellers should consider the above mentioned factors to equate the opportunity.

III. METHODOLOGY

A. Objectives:

- 1) To study the purchasing behaviour of people.
- 2) To understand the influencing factors associated with the buying decision.
- 3) To find out different parameters associated with the decision making styles for purchase of mobile phones.

1) Sources of Data:

Both primary and secondary sources are used to collect the information. For the purpose of data collection a detailed set of questionnaire has been prepared and data were collected from the consumer.

2) Sample Design:

For the purpose of the study, 70 questionnaire were collected from the consumer purchase of mobile phones. In order to select the sample respondents, simple random sampling method was employed.

3) Tools for analysis:

- 1) Frequency distribution, percentage.
- 2) Graphs.
- 3) Chi Square Test.
- 4) Likert Scale test.

IV. DATA ANALYSIS

A. Chi Square Test:

The chi-squared test is used to determine whether there is a significant difference between the expected frequencies and the observed frequencies in one or more categories. Chi Squared Test is also written as χ^2 . It is expressed as,

$$\chi^2 = \sum(O-E)^2/E$$

Where,

χ^2 = Pearson's cumulative test statistic, which asymptotically approaches a χ^2 distribution

O = Observed frequency

E = Expected frequency

Other important terms used in Chi square test for testing hypothesis are:

- 1) Degree of Freedom(df): The degrees of freedom of the distribution is equal to the number of standard normal deviates being summed. Therefore, Chi Square with one degree of freedom, written as $\chi^2(1)$
- 2) Level Of Significance(LOS): The level of significance is defined as the probability of rejecting a null hypothesis by the test when it is really true, which is denoted as α . The level of significance 0.05 is related to the 95% confidence level.
- 3) P Value: When you perform a hypothesis test in statistics, a p-value helps you to determine the significance of your results. All hypothesis tests ultimately use a p-value to weigh the strength of the evidence (what the data are telling you about the population). The p-value is a number between 0 and 1.

1) Operating system attribute that influence the purchase of a mobile phone

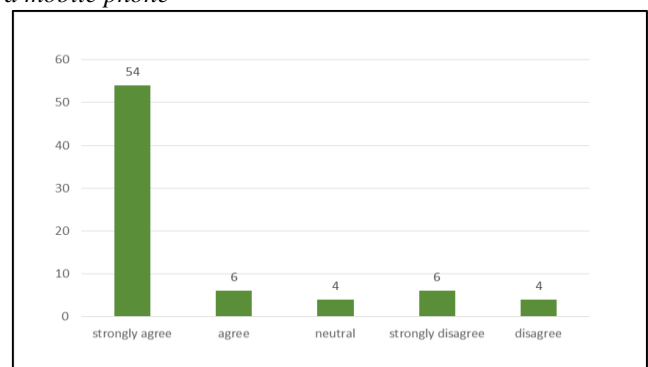


Fig. 1.a:

α value=0.05			
χ^2	df	P value ($\chi^2 > 137.77$)	LOS
137.7	4	0	0.05

- H0(Null hypothesis): Operating System of a mobile phone does not affect the purchasing decision.
- H1(Alternative hypothesis): Operating System of a mobile phone does affect the purchasing decision.

The P Value is 0 which is less than 0.05 that means null hypothesis is rejected and alternative hypothesis is accepted. Hence, operating system fluctuates the purchasing decision of a consumer. Graph(1.a) shows the percentage division of data. About 85.64% of the respondents strongly agrees that operating system fluctuates the purchasing decision of mobile phones, 5.71% neither agree nor disagree and 14.21% disagrees that operating system fluctuates the purchasing decision.

2) Brand attribute that influences the purchase decision

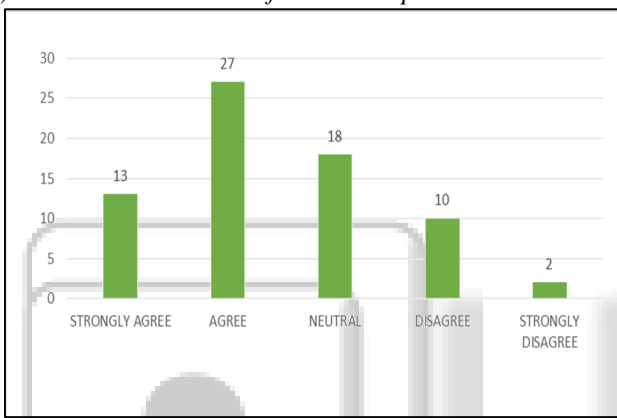


Fig. 2.a:

α value=0.05			
χ^2	Df	P Value ($\chi^2 > 23.56$)	LOS
23.56	4	0.0001	0.05

- H0 (Null hypothesis): Brand is the attribute that does not affect the buying decision of a consumer.
- H1 (Alternative hypothesis): Brand is the attribute that affects the buying decision of a consumer.

The P Value is 0.0001 which is less than 0.05. It means null hypothesis is rejected and alternative hypothesis is accepted. Hence, Brand of a Mobile Phone fluctuates the purchasing decision of a consumer. Graph(2.a) depicts the division of data on the basis of percentage. About 38.57% agrees that brand influences the purchase decision of a consumer, 25.71% neither agree nor disagree that brand influences the purchase decision of a consumer, 18.57% strongly agrees that brand influences the purchase decision and rest 17.14% disagrees.

3) Style statement attributes that influences the purchase decision

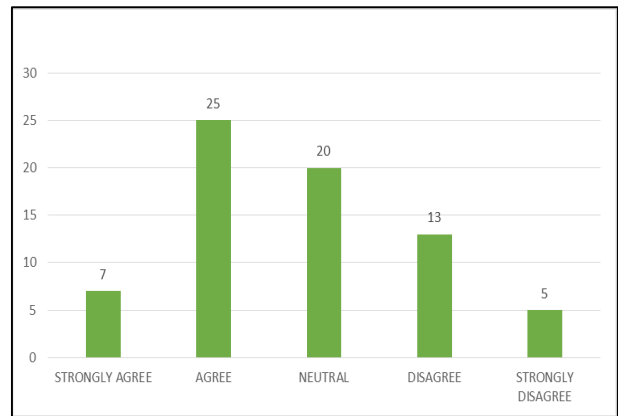


Fig. 3.a:

α value=0.05			
χ^2	df	P Value ($\chi^2 > 20.44$)	LOS
20.44	4	0.0004	0.05

- H0 (Null hypothesis): Style Statement is the attribute that does not affect the buying decision of a consumer.
- H1 (Alternative hypothesis): Style Statement is the attribute that affects the buying decision of a consumer.

The P Value is 0.0004 which is less than 0.05. It means null hypothesis is rejected and alternative hypothesis is accepted. Hence, style statement is the attribute of a mobile phone that fluctuates the purchasing decision of a consumer. The graph represents the style statement attribute that influences the purchase decision. About 45.71% of respondents agree that style statement influences the purchase decision, 28.57% were neither agree nor disagree and 25.71% were disagree.

4) Features attributes that influences the purchase decision

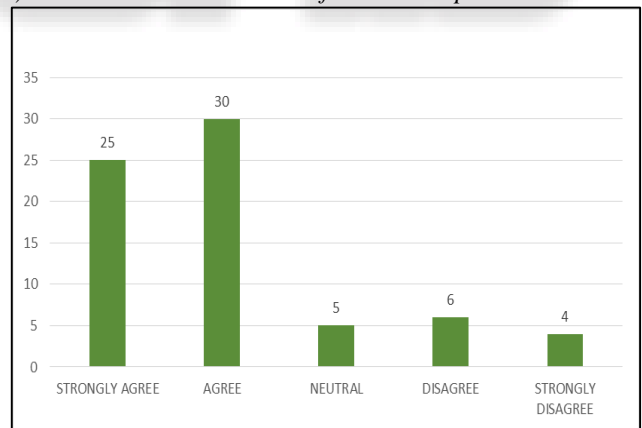


Fig. 4.a:

α value=0.05			
χ^2	df	P Value ($\chi^2 > 44.14$)	LOS
44.14	4	0	0.05

- H0(Null hypothesis): Features is the attribute that does not fluctuates the buying decision of a consumers.
- H1(Alternative hypothesis): Features is the attribute that fluctuates the buying decision of a consumers.

The P Value is 0 which is less than 0.05. It means null hypothesis is rejected and alternative hypothesis is accepted. Hence, features of a mobile phone fluctuates the buying

decision of a consumer. Graph(4.a) depicts the data of a survey which is based on a questionnaire. About 78.57% of respondents agrees that features of a mobile phone influences the purchase decision of a consumer,7.14% were neither agree nor disagree,14.28% were disagree that feature influences the purchase decision.

5) Price attribute that influences the purchase decision

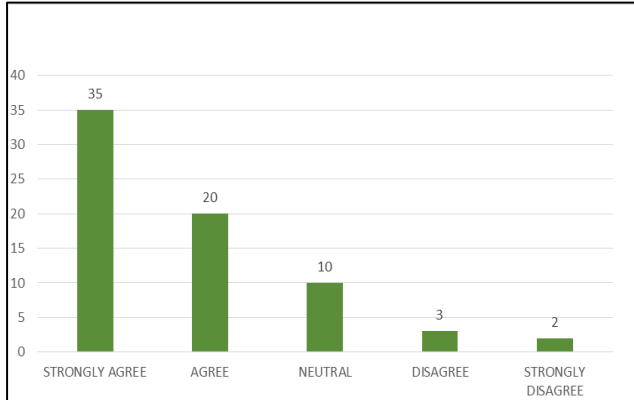


Fig. 5.a:

α value=0.05			
χ^2	df	P Value ($\chi^2 > 54.13$)	LOS
54.13	4	0	0.05

- H0(Null hypothesis): Price is the attribute that does not affect the buying decision of a consumer.
- H1(Alternative hypothesis): Price is the attribute that affects the buying decision of a consumer.

The P Value is 0 which is less than 0.05.It means null hypothesis is rejected and alternative hypothesis is accepted. Hence, price affects the buying decision of a consumer. Graph depicts the division of data based on survey followed by a questionnaire. About 78.57% of respondents agrees that price influences the purchase decision of an individual,14.28% were neither agree nor disagree, and 7.14% were disagree.

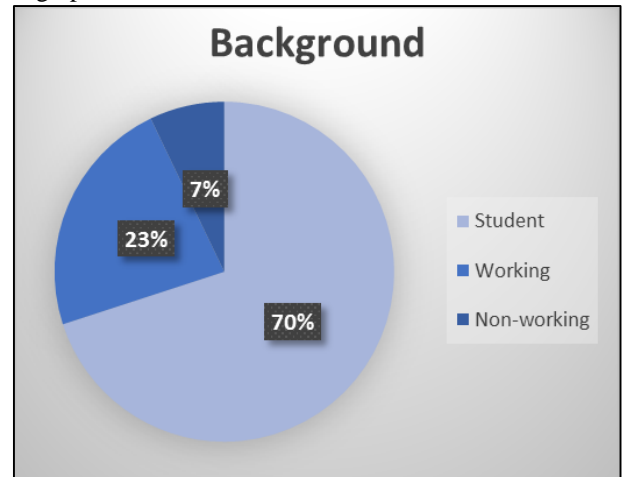
FACTORS	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Total	Mean Score
Brand	13	27	18	10	2	249	3.56
Style Statement	7	25	20	13	5	226	3.23
Features	25	30	5	6	4	276	3.94
Price	35	20	10	3	2	293	4.18
Operating System	54	6	4	6	4	332	4.74

Table 1: Likert Scale Test Mean Score:

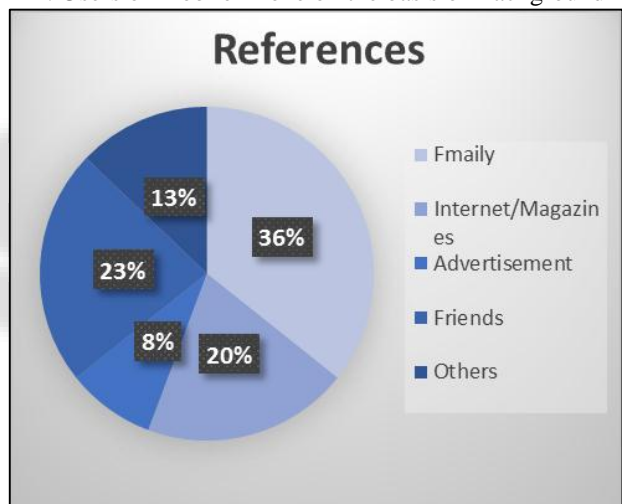
FACTORS	MEAN SCORE
Brands	3.56
Style Statement	3.23

Features	3.94
Price	4.18
Operating System	4.74

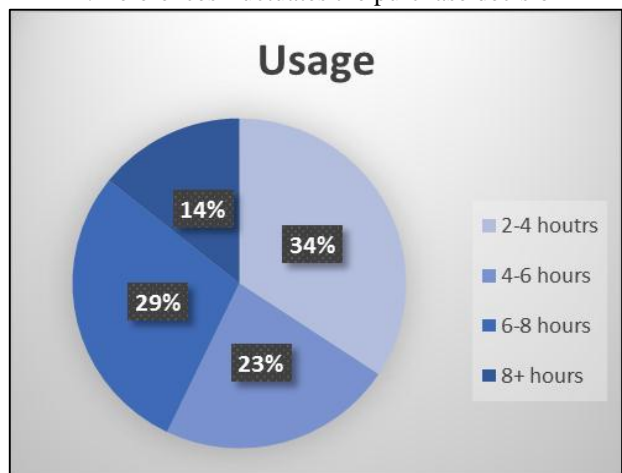
Table 1 depicts that respondents are more concerned about operating system of a mobile phones followed by price and features respectively. Infographics



A. Users of Mobile Phone on the basis of Background



B. References fluctuates the purchase decision



C. Usage of mobile Phones on hours basis

V. CONCLUSION

- The notion of using mobile phone as a style statement is not good.
- The mobile manufacturing companies should be more feature specific because majority of consumer focuses on features of mobile phones before making a purchase decision.
- The amount of time spent may not be beneficial for them in the long run.
- Maximum consumer gathers information about a particular product from their family.
- Before manufacturing a product, manufacturer should also focuses on the operating system of a product whichever is in demand.
- Age factor also affects the buying behaviour of a consumer. This attribute fluctuates the purchase decision of an individual.
- Background of an individual also plays an important role in buying behaviour of a consumer.

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