

Study of Factors Influencing Smart Phone Purchase by Consumers in Gwalior City

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Abstract: *Now days understanding consumers' buying behaviour and decision making process are becoming very complex across the product markets. When it comes to technological product markets like smart phone, which is marked by rapidly changing technologies, it becomes further complex. Therefore it becomes imperative for the researchers and marketers to understand how consumers make purchase decisions, so that an effective marketing strategy could be designed. This study mainly focuses on understanding the external factors like demographic variables, product attribute, advertisement and promotional schemes etc., which influence the buying behaviour of consumers. It also attempts to analyze the relationship between such factors and its influence on purchase decisions made by the consumers. For conduction of this study, the Descriptive research design was adopted and the data was collected through primary sources. The respondents were selected through Simple Random Sampling technique and questionnaire was used as a tool to conduct the survey.*

Keywords: Consumer Buying Behaviour, Smart Phone Purchase, Demographic Factors Marketing Stimuli, Purchase Influence

1. Introduction

According to a report by Counterpoint Research, India has become the second-biggest smart phone market in terms of active unique smart phone users, crossing 220 million users, surpassing the US market. However, the smart phone penetration of the total potential population is still below 30 per cent. As a result, India continues to attract new smart phone brands every quarter adding to the more than 150 smart phone brands selling their devices in the country.

Above mentioned facts about Indian smart phone market speak volumes about the current fondness of consumers for smart phone products. However with such large number of smart phone brands being at disposal, the choice and selection criteria used by consumers for final purchase is a matter of study and research. Therefore this study aims at exploring those factors which may influence the purchase decision process for smart phones, with the help of responses taken from consumers in city of Gwalior, MP.

According to literature available, factors which influence the purchase decisions of consumers could either be Individual Factors, Environmental factors or Marketing Stimuli.

For a Smart phone product market, where a large number of brand options are available to consumers, third category of influence factors assumes prime importance. However this third category "Marketing stimuli" which includes the development of Marketing mix and is a highly effective tool in increasing the awareness among the consumers, ultimately depends upon a careful study of factors of first two categories in order to attain a comprehensive insight into the influence process.

In India, the Smart phone market provides enormous potential to the marketers because the per capita consumption and penetration of smart phones is still very low. Nevertheless the rising income and increasing awareness is steering the demand. Consumers have started opting for different types of value additions, which are

available at higher end of price spectrum. In many of the semi urban and rural areas, where the consumers have been in habit of using traditional feature phones, the young generation has now started switching to new generation smart phones. This shows a remarkable change in consumer behaviour towards use of the mobile and smart phone products.

2. Literature Review

There are many individual and environmental factors that influence customers to decide about any product, including smart phones. Consumer behavior is influenced by a lots of variables, ranging from personal motivations, needs, attitudes and values, personality characteristics, socio-economic background, age, sex, professional status to social influences of various kinds exerted by family, friends, colleagues and society as a whole (1). Consumer behavior involves studying how people buy, what they buy, when they buy and why they buy. When a consumer wanted to make the purchase decision, they will pass through the process through recognition, search information, evaluation, purchase, feedback. Consumer buying behavior is influenced by two major factors. These factors are individual and environmental. Environmental factors represent those items outside of the individual that affect individual consumer's decision making process. These factors include culture, social class, reference group, family and household. The above mentioned factors are the major determinants behind the decision of consumers to opt a given good or service (2).

Price, brand, interface, and properties tend to have the most influential factors affecting the actual choice amongst mobile phone brands (3). The physical appearance, size and menu organization of the mobile phones are the most determinant factors affecting the choice of mobile phones (4). Usability in the most important determinant of mobile choice; other attributes particularly features, aesthetics and cost are other factors that have implication on the choice of mobile phone brand (5). Factors affecting the decision

regarding brand were analyzed in the mobile phone industry in Asia. It was found that Customers' choice of mobile phone brand is affected largely by new features more than size. This trend of choosing is definitely towards phones with better capacity and larger screens (6).

Also it has been found that customers formulate their purchasing decision based on the limited information search activity that they performed (7) rather than a detailed evaluation of all possible alternatives (8). Mobile phone selection can either be based on functional/primary/rational factors or it can be based on emotional factors such as: fun, pleasure, excitement etc. (9).

Objectives of Study

The specific objectives of this study are:

- 1) To examine the demographic factors which influence the smart phone buying behaviour.
- 2) To examine the factors including Product attributes and Marketing stimuli which influence the smart phone buying behaviour.
- 3) To study the relationship between different factors influencing the smart phone buying behaviour.

3. Research Methodology

The study makes use of Descriptive research design. Descriptive studies are conducted to answer who, what, when, where, and how questions. Further a non probability sampling method, having a combination of Judgment and Snowball sampling was used. The research was carried out by serving questionnaires to 50 participants at different locations in the city. Questionnaire was designed with closed and a few open ended questions.

3.1 Data Analysis

Table 1: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Valid/Missing	50	100.00%	0	0.00%	50	100.00%

Hypothesis 1:

- H₀: Choice of Attribute is independent of Age group.
 H₁: Choice of Attribute is not independent of Age group.

Table 2: Age * Attribute Crosstabulation

			attb			Total
			technical	appearance and style	price	
Age	below 35	Count	7	9	11	27
		% within age	25.90%	33.30%	40.70%	100.00%
		% within attb	29.20%	60.00%	100.00%	54.00%
		% of Total	14.00%	18.00%	22.00%	54.00%
	above or equal to 35	Count	17	6	0	23
		% within age	73.90%	26.10%	0.00%	100.00%
		% within attb	70.80%	40.00%	0.00%	46.00%
		% of Total	34.00%	12.00%	0.00%	46.00%
	Total	Count	24	15	11	50
		% within age	48.00%	30.00%	22.00%	100.00%
		% within attb	100.00%	100.00%	100.00%	100.00%
		% of Total	48.00%	30.00%	22.00%	100.00%

Table 3: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.546 ^a	2	.000
Likelihood Ratio	19.829	2	.000
Linear-by-Linear Association	15.152	1	.000
N of Valid Cases	50		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.06.			

Table 4: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.558	.000
	Cramer's V	0.558	.000
N of Valid Cases		50	

Result: A Chi-square test for independence indicated a significant association between choice of attributes and age group, $\chi^2(1, n=50)=15.546, p=0.00, \phi=0.558$.

Hypothesis 2

- H₀: Choice of Promotions is independent of Age group.
 H₁: Choice of Promotions is not independent of Age group.

Table 5: Age * Promototype Crosstabulation

		Promototype			Total
		word of mouth	tv advt	internet search	
below 35	Count	1	9	17	27
	% within age	3.70%	33.30%	63.00%	100.00%
	% within promototype	5.60%	60.00%	100.00%	54.00%
	% of Total	2.00%	18.00%	34.00%	54.00%
above or equal to 35	Count	17	6	0	23
	% within age	73.90%	26.10%	0.00%	100.00%
	% within promototype	94.40%	40.00%	0.00%	46.00%
	% of Total	34.00%	12.00%	0.00%	46.00%
Total	Count	18	15	17	50
	% within age	36.00%	30.00%	34.00%	100.00%
	% within promototype	100.00%	100.00%	100.00%	100.00%
	% of Total	36.00%	30.00%	34.00%	100.00%

Table 6: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.705 ^a	2	.000
Likelihood Ratio	41.08	2	.000
Linear-by-Linear Association	30.855	1	.000
N of Valid Cases	50		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.90.

Table 7: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.796	.000
	Cramer's V	0.796	.000
N of Valid Cases		50	

Result: A Chi-square test for independence indicated a significant association between choice of Promotion type and age group, $\chi^2(1, n=50)=31.70, p=0.00, \phi=0.796$.

Hypothesis 3

H₀: Choice of Attributes is independent of Gender.

H₁: Choice of Attributes is not independent of Gender.

Table 8: Gender * Attb Cross tabulation

		Attb			Total	
		technical	appearance and style	Price		
gender	male	Count	14	5	6	25
		% within gender	56.00%	20.00%	24.00%	100.00%
		% within attb	82.40%	41.70%	28.60%	50.00%
		% of Total	28.00%	10.00%	12.00%	50.00%
	female	Count	3	7	15	25
		% within gender	12.00%	28.00%	60.00%	100.00%
		% within attb	17.60%	58.30%	71.40%	50.00%
		% of Total	6.00%	14.00%	30.00%	50.00%
Total	Count	17	12	21	50	
	% within gender	34.00%	24.00%	42.00%	100.00%	
	% within attb	100.00%	100.00%	100.00%	100.00%	
	% of Total	34.00%	24.00%	42.00%	100.00%	

Table 9: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.308 ^a	2	0.004
Likelihood Ratio	12.043	2	0.002
Linear-by-Linear Association	10.403	1	0.001
N of Valid Cases	50		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.00.

Table 10: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.476	0.004
	Cramer's V	0.476	0.004
N of Valid Cases		50	

Result: A Chi-square test for independence indicated a significant association between choice of attributes and gender, $\chi^2(1, n=50)=11.308, p=0.004, \phi=0.476$

Hypothesis 4

H₀: Choice of Promotion type is independent of Gender.
 H₁: Choice of Promotion type is not independent of Gender.

Table 11: Gender * Promototype Crosstabulation

			Promototype			Total
			word of mouth	tv advt	internet search	
gender	male	Count	11	7	7	25
		% within gender	44.00%	28.00%	28.00%	100.00%
		% within promototype	57.90%	43.80%	46.70%	50.00%
		% of Total	22.00%	14.00%	14.00%	50.00%
	female	Count	8	9	8	25
		% within gender	32.00%	36.00%	32.00%	100.00%
		% within promototype	42.10%	56.30%	53.30%	50.00%
Total		% of Total	16.00%	18.00%	16.00%	50.00%
		Count	19	16	15	50
		% within gender	38.00%	32.00%	30.00%	100.00%
		% within promototype	100.00%	100.00%	100.00%	100.00%
		% of Total	38.00%	32.00%	30.00%	100.00%

Table 12: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.790 ^a	2	0.674
Likelihood Ratio	0.793	2	0.673
Linear-by-Linear Association	0.466	1	0.495
N of Valid Cases	50		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.50.			

Table 13: Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal	0.126	0.674
	0.126	0.674
N of Valid Cases	50	

Result: A Chi-square test for independence indicated no significant association between choice of promotion type and gender, $\chi^2(1, n=50)=0.790, p=0.674, \phi=0.126$.

Hypothesis 5:

H₀: Choice of Attributes is independent of Occupation.
 H₁: Choice of Attributes is not independent of Occupation.

Table 14: Occpn * attb Crosstabulation

			attb			Total
			technical	appearance and style	price	
occupation	salaried	Count	12	2	10	24
		% within occupation	50.00%	8.30%	41.70%	100.00%
		% within attb	66.70%	16.70%	50.00%	48.00%
		% of Total	24.00%	4.00%	20.00%	48.00%
	business	Count	6	10	10	26
		% within occupation	23.10%	38.50%	38.50%	100.00%
		% within attb	33.30%	83.30%	50.00%	52.00%
		% of Total	12.00%	20.00%	20.00%	52.00%
	Total		Count	18	12	20
% within occupation			36.00%	24.00%	40.00%	100.00%
% within attb			100.00%	100.00%	100.00%	100.00%
% of Total			36.00%	24.00%	40.00%	100.00%

Table 15: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.265 ^a	2	0.026
Likelihood Ratio	7.781	2	0.02
Linear-by-Linear Association	0.907	1	0.341
N of Valid Cases	50		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.76.

Table 16: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.381	0.026
	Cramer's V	0.381	0.026
N of Valid Cases		50	

Result: A Chi-square test for independence indicated a significant association between choice of attributes and occupation, $\chi^2(1, n=50)=7.265, p=0.026, \phi=0.381$.

Hypothesis 6:

H₀: Choice of Promotion type is independent of Occupation.

H₁: Choice of Promotion type is not independent of Occupation.

Table 17: Occpn * Promotype Crosstabulation

			Promotype			Total
			word of mouth	tv advt	internet search	
occpn	Salaried	Count	9	8	7	24
		% within occpn	37.50%	33.30%	29.20%	100.00%
		% within promotype	60.00%	44.40%	41.20%	48.00%
		% of Total	18.00%	16.00%	14.00%	48.00%
	Business	Count	6	10	10	26
		% within occpn	23.10%	38.50%	38.50%	100.00%
		% within promotype	40.00%	55.60%	58.80%	52.00%
		% of Total	12.00%	20.00%	20.00%	52.00%
	Total		Count	15	18	17
% within occpn			30.00%	36.00%	34.00%	100.00%
% within promotype			100.00%	100.00%	100.00%	100.00%
% of Total			30.00%	36.00%	34.00%	100.00%

Table 18: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.274 ^a	2	0.529
Likelihood Ratio	1.279	2	0.528
Linear-by-Linear Association	1.078	1	0.299
N of Valid Cases	50		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.20.

Table 19: Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal	0.16	0.529
	0.16	0.529
N of Valid Cases	50	

Result: A Chi-square test for independence indicated no significant association between choice of Promotion type and occupation, $\chi^2(1, n=50)=1.274, p=0.529, \phi=0.16$.

4. Result and Discussion

- 1) Consumers in different age groups have different inclinations while choosing a smart phone. For people of 35 years and above age, price of smart phone is not a criteria. However majority (70.8%) of them look for technical features while buying the smart phone. Whereas among people within the age of 35 years, most of them (60%) opted for appearance and style and are price sensitive.
- 2) The age factor also influences the choice of promotion method which consumers make use of while selecting a smart phone. While majority of people in upper age bracket (73.9%) rely on word of mouth, they do not use internet while decision making process for purchase. Just against it, consumers in lower age group majorly(63%) use internet and sometimes (33.33%) consider TV advertisements for smart phone purchases.
- 3) Gender also played a significant role in choices made by consumers towards different attributes of smart phone. While 56% of male consumers look for technical features, 60% and 28% of females opted for price and appearance/style respectively, while selecting a smart phone.
- 4) Gender did not play a significant role in choice of promotion method which consumers make use of while selecting a smart phone.
- 5) Consumers belonging to different professions showed different choices of criteria while selecting a smart phone. While 50% of salaried people made technical features a criteria , 41.7% of them opted for price. On the other hand, people from business class mostly(38.5%) opted for appearance and style.
- 6) Occupation of consumers did not have a bearing upon their choice of promotion method while selecting a smart phone.

5. Recommendations

On the basis of results obtained from analysis of the sample response, it could be stated that the demographic factors, product attributes and market stimuli do influence the smart phone purchase by consumers. Also, choice of product attributes as well as the influence of different types of market stimuli is many a time dictated by these demographic factors. While designing the marketing program for smart phones, companies should take into account the age group requirements, gender preferences as well as occupation based mindsets. Segmentation of market along the lines of these variables will certainly help boost the market prospects.

6. Limitations

This research work has been carried out within a certain geographical area with a small sample size. The result shown is reflective of these constraints. Though the result may vary, if the study contain larger sample size, the obtained result in this study do provide an insight into the influence of certain factors into smart phone purchase process.

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List of Tables

Table No.	Table	Page No.
1	Case Processing Summary	2
2	Age * Attribute Crosstabulation	2
3	Chi-Square Tests	3
4	Symmetric Measures	3
5	Age * Promototype Cross tabulation	3
6	Chi-Square Tests	4
7	Symmetric Measures	4
8	Gender * Attribute Crosstabulation	4
9	Chi-Square Tests	4
10	Symmetric Measures	5
11	Gender * Promototype Cross tabulation	5
12	Chi-Square Tests	5
13	Symmetric Measures	6
14	Occpn * attb Crosstabulation	6
15	Chi-Square Tests	6
16	Symmetric Measures	6
17	Occpn * Promototype Crosstabulation	7
18	Chi-Square Tests	7
19	Symmetric Measures	7