A Study on Consumer Perception Level on Smart Phones With Reference To Tamilnadu

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Abstract: Smart phone use has been disseminated in recent years. Nowadays it's hard to live people without a mobile phone. People are dependent on smartphone because of its ease, camera features, easy application installation, easy application loading, and it can also do most of the computer and laptop functions. The proposed research on the level of user awareness on smartphones is critical in this dynamic environment. The study focuses on the level of consumer perception about smartphones in selected Tamilnadu region. This research encourages greater value and change in the understanding of customer behavior and attitude towards smartphone firms [6]. The aim of the study is to cover entire research about judging the customer reactions while making purchase of smartphones. A sample of 300 customers of mobile phone users is taken. Questionnaire has been analysed with the help of pie diagram & bar chart and different interpretations have been made to study the impact.

Key words: consumer perception, consumer awareness, satisfaction, consumer preference

I. INTRODUCTION

A smart phone that serves as a spirited part in the life of everyone. Smartphone operated on a mobile operating system and enhanced it with revolutionary features and networking compared to an ordinary cell phone. It then introduces additional models during the evolving era of smartphone organization with the feature of a personal digital assistant (PDA) cell phone and expands with the functions of mobile according to our need and necessity of the ways. It replaces the products like functions like media players, digital cameras, video cameras, & GPS navigation system to form one multitasking device. Many modern smartphones have a high-resolution camera with touch screen pad, web camera, regular web page, finger touch to improve smartphone access to high-speed internet, including Wi-Fi and mobile broadband. The rapid growth of mobile apps in all fields in recent years has generated demands for adaptation of smartphones [7]. The mobile operating system that this new smartphone scenario uses includes Google's ios, Apple's ios, Nokia Symbian, Rim's Blackberry So, Samsung BADA, Microsoft Windows Mobile, and Hewlet. Wedding OS to Packard. Throughout its generation, the operating system can be mounted on different devices in the different cell phones, which can accept several software updates. In this research study, it discusses about the significant of consumer perception towards smartphones. In the world of globalization consumer has become much more awareness and may perceive information about smart phones.

Consumer Perception

The chief goal of marketing is to encounter and gratify target customer's need and wants. Consumer perception discusses to the people or association conduct happenings and together with the effect of various influences on them towards making decision on purchase of product and service in a market.

Need for the Study

The purpose of this study is to analyze the degree of customer attitude towards Smartphone purchase. A study is required to assess Tamilnadu consumer's perception of the market regarding smartphones [8]. It will also direct various smart manufacturing companies and applications regarding the smart modification needed in the current marketing strategies applied for tapping in Tamilnadu and to decide, if possible, and to what extent these strategies can be molded and applied successfully to the Tamilnadu. To achieve these objectives an attempt is made to compare and analyze the factors (High Price, Low brand image, proper functioning, advertisement in appropriate, Quality product, after the auctions and provision is good, Recommendation, and Appearances are good input mechanism is mobile phone service) which act as motivators‟‟ of Tamilnadu people or consumers perception in smart phone.

II. STATEMENT OF THE PROBLEM

The Indian population and the economic growth rate are always high percentage in per annum. All the syndicates are directing towards the consumers growth in India.

 DOI : 10.35291/2454-9150.2020.0167

Apple, Samsung, Lenovo, Redmi, Vivo, I Phone, Nokia, Oppo, Sony, Motto, Realme, Honor ,Black Berry, One plus, HTC, Google, Huawei, Xolo, Microsoft Lumia, and how it attracts various consumers. Marketing variables in Smart phone usage seemed in various perception such as High Price, Low brand image, proper functioning, advertisement in appropriate, Quality product, after the auctions and provision is good, Recommendation, and Appearances are good input mechanism is good. Mobile phone service center are convenient to the customer and satisfied their issues and problems [9]. The consciousness levels of the applications are developed by the Tamilnadu consumers and ordering the factors is not visibly understood by the smart phones dealers. In this characteristic feature a descriptive learning had been undertaken to recognize the Consumer perception level of Smart phone in study area.

III. REVIEW OF LITERATURE

Osman et al. [1] concluded that the selling price is not the most important factor that affects smartphone purchasing decision, whereas the consumers perceive other factors such as design, connectivity, and performance to be more important than the price.

Kaushal and Kumar [3] inferred that the consumers are using or want to purchase Smartphone because their social circle is using it and hence they are also motivated and inspired to use Smart phone.

Nagarkoti [2] found that customers pay huge money in smart phones for latest technology and for brands.

Mohan [5] conducted a survey and his findings were Smartphone is just not only the want of customer but a need. Moreover, consumer perceives brand image while purchasing smartphone and few consumers in Indian market are brand loyal.

Liao [4] concluded that when buying a smartphone, a consumer sees the brand image more than other factor such as design, integration of hardware and software, file transfer and display, price of additional, purchase, price of the phone and camera.

IV. OBJECTIVES OF THE STUDY

1. To understand the socio - economic details of sample respondents in Tamilnadu.
2. To analyze the consumer preference towards smart phone in Tamilnadu.
3. To assess the level of perception towards smart phone among the users in Tamilnadu.
4. To identify the problems faced by customers in using smart phones in the study area.

V. RESEARCH METHODLOGY

The pertinent data has been collected from 300 sample respondents using smart phones in Tamilnadu by applying convenient sampling technique.

Research Design:

Research Design is the overall research strategy to find the answers to the research questions / hypotheses that were set at the outset. It should be detailed and cover all the relevant aspects of performing the research at a fair cost and time. It includes the sampling technique, the collection of data through various instruments, proper statistical tools to do the data analysis and interpreting the same. This study is a descriptive one; where in the primary data is collected through a questionnaire.

Research Design: Survey Research • Sampling Frame: Smartphone users of different age group and different profession.

• Sampling Method: Convenience Sampling

• Sampling Size: 300 respondents

• Nature of Data: Primary data as well as secondary data were collected from journals, websites, book, and magazine and from previous research related to smartphone

• Method of Primary - Data Collection: Questionnaire • Type of Questionnaire: Structured questionnaire with suitable scaling.

• Type of Questions: Closed ended, Likert scale, Ranking questions and multiple-choice questions.

• Statistical tools used: factor analysis, correlation, regression, Chi – square, Garrett's ranking analysis.

VI. SOURCES OF DATA

The survey method was deployed in this study to gain insight and knowledge of the factors influence the user's perception in purchasing of smart phone in selected area of Tamilnadu was taken for the study, the details regarding differences among companies the way it was perceived by the consumers. The primary data of the study was collected through a structured questionnaire. The relevant secondary data was collected from journals, magazines, newspapers, research articles, published information and details on websites taken for study.

Selection of sampling area:

This has the mix of all sorts of smartphone consumers, having different backgrounds with respect to their gender, age, marital status, educational qualification, profession, income, etc. and this has been done in selected Tamilnadu region [10].

 DOI : 10.35291/2454-9150.2020.0167

Sample size:

Sampling of suitability was adopted for the study as the population is small but large in numbers. The sample size is described through several approaches. This involve a census of small populations, emulating a sample size of similar studies, using existing tables, and applying formulas for sample size estimation.

Research instrument:

A well – structured questionnaire was used to collect pertinent data from the sample respondent contains relevant questions to achieve the research objectives of the study.

Data Analysis:

Statistical and hypothesis testing tools such as Percentage analysis, Two-way table, Chi-square analysis is used to analyses the data.

VII. DATA ANALYSIS AND INTERPRETATION CHI-SQUARE TEST

Average Factor	Calculated x^2 Value	Table Value @ 5% level of Significance	Remarks
Age	8.130	9.491	H_0 accepted

Eight independent variables and a dependent variable were used in this study to identify the level of association ship that exists between them. The independent variables are respondents ' gender, respondents ' age, respondent's marital status, respondent's education qualification, respondent's occupation, respondent's monthly income, respondent's family income and type of family of the respondents. The dependent variable is the respondent level of perception towards smart phones. It is classified into three level viz., low level of perception, medium level of perception and high level of perception. Hypotheses also framed between selected independent variables and the dependent variable.

1. Gender of the Respondents and their Level of Perception

Genders of the respondents were classified into two categories viz., male gender category and female gender category. In this analysis, 64.3% (193) of the respondents belongs to male gender category and 35.7% (107) of the respondents belongs to female gender category. The levels of perception of the respondents based on gender are given in table number 1 below.

Table No. 1: Gender of the Respondents and their Level of Perception (Two-way Table)

Age	Level of Perception			Total
	Low (10-23)	Medium (24-37)	High (38-50)	
Below-25	65	54	1	120
	46.8%	33.8%	100.0%	40.0%
25-50	70	95	0	165
	50.4%	59.4%	0%	55.0%
Above-50	4	11	0	15
	2.9%	6.9%	0%	5.0%
Total	**139**	**160**	**1**	**300**
	100.0%	**100.0%**	**100.0%**	**100.0%**

H0: There is no relationship between gender of the respondents and their level of perception on smart phones

H1: There is a close relationship between gender of the respondents and their level of perception on smart phones.

Table No. 2: Gender of the Respondents and their Level of Perception (Chi-Square Test)

Average Factor	Calculated x^2Value	Table Value @ 5% level of Significance	Remarks
Gender	2.439	5.991	H_0 accepted

1. Age of the Respondents and their Level of Perception

The age of the respondents were classified into three categories viz., below 25 years, and 25 – 50 years and above 50 years, of age category. In this analysis, 40% (120) respondents belongs to below 25 years age category, 55.0 % (165) category of the 25-50 years of the age of respondents and 5.0 % (15) of the respondents belongs to above 50 years age category. The levels of perception of the respondents based on age are given inn table number 3 below.

H0: There is no relationship between age of the respondents and their level of perception on smart phones.

Table No. 3: Age of the Respondents and their Level of Perception (Two-way Table)

Gender	Level of Perception			Total
	Low (10-23)	Medium (24-37)	High (38-50)	
Male	93	100	0	193
	66.9%	62.5%	0%	64.3%
Female	46	60	1	107
	33.1%	37.5%	100%	35.7%
Total	**139**	**160**	**1**	**300**
	100.0%	**100.0%**	**100.0%**	**100.0%**

H1: There is a close relationship between age of the respondents and their level of perception on smart phones

Table No. 4: Age of the Respondents and their Level of Perception (Chi-Square Test)

2. Marital status of the Respondents and their Level of Perception:

In this study, marital status of the respondents were classified into two viz., married category and unmarried

 DOI : 10.35291/2454-9150.2020.0167

category. In this analysis, 59.7% (179) of the respondents belongs to married category and 40.3% (121) of the respondents belongs to unmarried category. The levels of Perception of the respondents based on marital status of the respondents are given in table number 5 below.

Table No. 5: Marital Status of the Respondents Level of Perception (Two-way Table)

Occupation	Level of Perception			Total
	Low (10-23)	Medium (24-37)	High (38-50)	
Government employee	29	22	0	51
	20.9%	13.8%	0%	17.0%
Private employee	31	39	0	70
	22.3%	24.4%	0%	23.3%
Self employed	22	32	1	55
	15.8%	20.0%	100.0%	18.3%
Others	57	67	0	124
	41.0%	41.9%	0%	41.3%
Total	139	160	1	300
	100.0%	100.0%	100.0%	100.0%

H0: There is no relationship between marital status of the respondents and their level of perception on smart phones.

H1: There is a close relationship between marital status of the respondents and their level of perception on smart phones.

Table No. 6: Marital Status of the Respondents and their Level of Perception (Chi-Square Test)

Average Factor	Calculated x^2 Value	Table Value @ 5% level of Significance	Remarks
Marital Status	1.463	5.991	H_o accepted

3. Educational Qualification of the Respondents and their Level of Perception:

In this study, educational qualifications of the respondents were classified into four viz., school level, under graduate, post graduate and others. In this analysis, 12% (36) of the respondents belongs to school level education, 33.0% (99) of the respondents belongs to under graduate level, 23.7% (71), of the respondents belong to post graduate level, and 31.3% (94) of the respondents belongs to others. The levels of perception of the respondents based on educational qualification of the respondents are given in table number 7 below:

Table No. 7: Educational Qualification of the Respondents and their Level of Perception (Two-way Table)

Marital Status	Level of Perception			Total
	Low (10-23)	Medium (24-37)	High (38-50)	
Married	79	99	1	179
	56.8%	61.9%	100.0%	59.7%
Unmarried	60	61	0	121
	43.2%	38.1%	0%	40.3%
Total	**139**	**167**	**1**	**300**
	100.0%	**100.0%**	**100.0%**	**100.0%**

H0: There is no relationship between educational qualification of the respondents and their level of perception on smart phones

H1: There is a close relationship between educational qualification of the respondents and their level of perception on smart phones.

Table No. 8: Educational Qualification of the Respondents and their Level of Perception (Chi-Square Test)

Average Factor	Calculated x^2 Value	Table Value @ 5% level of Significance	Remarks
Occupation	7.540	12.592	H_o accepted

4. Occupation of the Respondents and their Level of Perception:

In this study, occupations of the respondents were classified into four categories viz., government employee, and private employee, self-employed and other. 17.0% (51) of the respondents belongs to government employee, 23.3% (70) of the respondents belongs to private employee, and 18.3% (55) of the respondents belongs to self-employed, and 41.3% (124) of the respondents belongs to others. The levels of perception of the respondents based on occupation of the respondents are given in table number 9 below:

H0: There is no relationship between occupation of the respondents and their level of perception on smart phones

H1: There is a close relationship between occupation of the respondents and their level of perception on smart phones.

Educational Qualification	Level of Perception			Total
	Low (10-23)	Medium (24-37)	High (38-50)	
School Level	17	19	0	36
	12.2%	11.9%	0%	12.0%
UG Level	46	53	0	99
	33.1%	33.1%	0%	33.0%
PG Level	32	38	1	71
	23.0%	23.8%	100.0%	23.7%
Other	44	50	0	94
	31.7%	31.2%	0%	31.3%
Total	139	160	1	300
	100.0%	100.0%	100.0%	100.0%

Table No. 10: Occupation of the Respondents and their Level of Perception (Chi-Square Test)

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Average Factor	Calculated x^2 Value	Table Value @ 5% level of Significance	Remarks
Education Qualification	3.265	12.592	H_o accepted

5. Monthly income of the Respondents and their Level of Perception:

Monthly incomes of the respondents were classified into three category viz., below Rs.15000, between Rs.15,000-30,000 and above Rs.30,000 categories. In this analysis, 51.0% (153) of the respondents belongs to monthly income are below Rs.15,000 category. 40.3% (121) of the respondents belongs to monthly income are between Rs.15, 000-30,000 category, 8.7% (26) of the respondents belongs to monthly incomes above Rs.30,000 category. The levels of Perception of the respondents based on monthly income are given in table number 11 below.

Table No. 11: Monthly income of the Respondents and their Level of Perception (Two-way Table)

Monthly income	Level of Perception			Total
	Low (10-23)	Medium (24-37)	High (38-50)	
Below-15,000	83	70	0	153
	59.7%	43.8%	0%	51.0%
15,001-30,000	42	78	1	121
	30.2%	48.8%	100.0%	40.3%
Above-30,000	14	12	0	26
	10.1%	7.5%	0%	8.7%
Total	139	160	1	300
	100.0%	100.0%	100.0%	100%

H0: There is no relationship between Monthly income of the respondents and their level of perception on smart phones

H1: There is a close relationship between Monthly income of the respondents and their level of perception on smart phones.

Table No.: 12 Monthly income of the Respondents and their Level of Perception (Chi-Square Test)

Average Factor	Calculated x^2 Value	Table Value @ 5% level of Significance	Remarks
Monthly income	12.103	9.498	H_0 rejected

7. Family Income of the Respondents and Level of Perception:

In this study, family income of the respondents were classified into three category viz., below Rs.35,000, between Rs.35,000- Rs.50,000 and above Rs.50,000 Category In this analysis, 45.0% (135) of the respondents belongs to below Rs.30,000, family income Category . 40.3% (121) of the respondents belongs to Rs.35, 000 - 50,000.family income Category 8.7% (26) of the respondents belongs to above Rs.50,000 family income Category. The levels of perception of the respondents based on family income of the respondents are given in table number 13 below:

Table No. 13: Family income of the Respondents and their Level of Perception (Two-way Table)

Family income	Level of Perception			Total
	Low (10-23)	Medium (24-37)	High (38-50)	
Below-35,000	61	73	1	135
	43.9%	45.6%	100.0%	45.0%
35,000-50,000	47	52	0	99
	33.8%	32.5%	0%	33.0%
Above-50,000	31	35	0	66
	22.3%	21.9%	0%	22.0%
Total	139	160	1	300
	100.0%	100.0%	100.0%	100.0%

H0: There is no relationship between family income of the respondents and their level of perception on smart phones

H1: There is a close relationship between family incomes the respondents and their level of perception on smart phones.

Table No. 14: Family income of the Respondents and their Level of Perception (Chi-Square Test)

Average Factor	Calculated x^2 Value	Table Value @ 5% level of Significance	Remarks
Family income	1.321	9.498	H_o accepted

8. Family Type of the Respondents and their Level of Perception:

In this study, family types of the respondents were classified into two viz., Joint family and nuclear family. In this analysis, 61.7% (185) of the respondents belongs to joint family category and 38.3% (115) of the respondents belongs to nuclear family category. The levels of perception of the respondents based on family type of the respondents are given in table number 15 below:

Table No.: 15 Family Type of the Respondents and their Level of Perception (Two-way Table)

Family	Level of Perception	

 DOI : 10.35291/2454-9150.2020.0167

type	Low (10-23)	Medium (24-37)	High (38-50)	Total
Joint family	80	104	1	185
	57.6%	65.0%	100.0%	61.7%
Nuclear family	59	56	0	115
	42.4%	35.0%	0%	38.3%
Total	**139**	**160**	**1**	**300**
	100.0%	**100.0%**	**100.0%**	**100.0%**

H0: There is no relationship between family type of the respondents and their level of perception on smart phones

H1: There is a close relationship between family type of the respondents and their level of perception on smart phones.

Table No. 16: Family type of the Respondents and their Level of Perception (Chi-Square Test)

Average Factor	Calculated x^2 Value	Table Value @ 5% level of Significance	Remarks
Family type	2.368	5.991	H_o accepted

VIII. FINDINGS

1. It is found from the analysis that, only one respondent having high level of perception towards smart phone in the study area.
2. It is identified from the analysis that, most of the respondents (160) having medium level of perception towards smart phones.
3. It is found from the chi-square analysis that, there is a close relationship between monthly income of the respondents and their level of perception towards smart phones in the study area.
4. It is limelighed from the chi-square analysis that, there is no relationship between gender of the respondents, age of the respondents, marital status of the respondents, educational qualification of the respondents, occupation of the respondents, family income of the respondents, and type of the family of the respondents with their level of perception towards smart phones in the study area.
5. It is found from the analysis that, most (64) of the respondents prefer Samsung smart phones and it is followed by Lenovo with 32 sample respondents in the study area.
6. It is identified from the analysis that, most (38.3%) of the respondents gathering information from websites about smart phones, and it is followed by friends / relatives with 102 sample respondents.
7. Most of the respondents (55.3%) having the habit of changing their smart phones between two years to four years, it is found from the analysis.
8. It is identified from the analysis that, high price and uncomfortable in using smart phones leads the problems among the sample respondents in the study area.
9. It is found from the analysis that, most of the smart phones having less overheating and maintaining the quality expected by the respondents.
10. It is found from the multiple regression analysis that, gender of the respondents, age of the respondents, marital status of the respondents, occupation of the respondents, and monthly income of the respondents has the positive co-efficient with the level of perception towards smart phones in the study area.

IX. SUGGESTIONS

Based on the findings of the study, the following suggestions were made are;

1. It is suggested that, smart phone companies may concentrate on female respondents with special advertisement campaign. By adopting this Strategy, level of perception may be increased. Similarly customer's age group above 50 has low level of perception on smart phones. To boost the level of perception among them, special schemes may be launched to attract them.
2. It is suggested that, respondents" occupation category viz., Government employees, Private employees, and self-employed may be given higher rate of attention to improve the level of perception in the study area. To achieve this, a special campaign may be conducted in front of the gate of the respective offices.
3. All smart phone companies may conduct the special rally on smart phone literacy in important locations in the study area. It will improve the sales of the smart phones. This will be a better market share promotion tactics. To achieve this, web based advertisement also a supportive tool. Since most of the respondents using website as information source.
4. It is suggested to maintain the quality of the smart phones and may concentrate on reducing the weight simultaneously; attention may be given to increase the internal storage in the smart phones.

X.CONCLUSION

Smart phones will play a vital role in all aspects in future. Those days we used a separate product for each and every activity to fulfill our requirements. But now, one commodity meets all requirements. It can also be used in

 DOI : 10.35291/2454-9150.2020.0167

place of a computer. This replaces other worldwide goods, and the consumer expects to see more improvements in its functionality. In this analysis, the researcher made an attempt to classify the level of perception with the correct socio-economic profile of the analysis area sample respondents, and a standardized Questionnaires was used to collect relevant data from the study area sample respondents. After data collection, suitable tools were applied to the results of analysis. Based on the findings of analysis, suitable suggestions also offered to the target people.

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