Consumer's Attitude towards the Use of Smartphone in Bangladesh: A Circumstantial Study on Rangpur Region

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Abstract

The study existed to examine the consumer's attitude towards Smartphone usage and explore the relationship of selected socio- economic profile of Smartphone consumers with their attitude toward Smartphone usage. The selected socio- economic profile were gender, age, occupation, education level, income level, and experience level on Smartphone. The study, descriptive in nature, has conducted based on primary and secondary data from the 100 respondents of Rangpur city who use Smartphone. A conceptual framework has designed to conduct the research. The survey questionnaire has included 13 questions most of those designed under five (5) points likert scale. The collected data had analyzed by using frequency distribution and Pearson's product moment co-efficient of correlation through the SPSS 20.0 version. The study showed that male (58 percent) and young consumers was greater user of Smartphone. The findings revealed that majority (70 percent) of the respondents felt favorable category followed by 25 percent most favorable and 5 percent less favorable towards Smartphone. Some attributes consumers considered to purchase Smartphone such as brand image, functional features & apps, outlook & appearance, power supply, operating system, price, service, camera resolution, durability, and compatibility. Correlation analysis indicated that there was no relationship between socio- economic profiles of consumers with their attitude towards Smartphone usage. All of the consumers confronted hitches to use Smartphone but their problematic stood slight. Consumers used Smartphone to make their life easier and to adopt the digitalized world by connecting internet with the whole world.

Keywords: Smartphone, Consumer attitude, Experience, Bangladesh.

1.   Introduction

At the present competitive world mobile phones are part & parcel of human life. People cannot think their existence without mobile phone because people are getting all types of facilities by staying on their desire place just only click or touch on their phone. Most of the mobile phones nowadays are addressed as 'Smartphone', as they offer more advanced computing power and connectivity than a contemporary mobile phone. Smartphone is one of the most popular communication devices in this modern world. It is a mobile phone running on a complete operating system in a manner similar to a traditional computer, which offer advanced computing abilities and connectivity options. As users can now access the internet from anywhere they can get a signal, users are beginning to rely on their smartphone more and more now as a personal assistant. Most sites have now developed websites which are functional for the mobile internet and customers can now even shopping or bank online via their smartphone. With the help of mobile users, a smartphone has become a very desirable device. Nowadays, smartphone have been used to replace desktop or mobile computers. All activities which can be performed on normal computers such as sharing information, sending and receiving emails, chatting, opening and editing documents, can be kept inside a pocket of a trouser or a shirt. Some smartphone have sophisticated applications such as a camera which can work as a scanner. Marketing start with the consumer and end with the consumer. Under the modern marketing concept all marketing activities have to reveal around consumer. Today consumer attitude is not constant. It is always ready to take advantage of any price cuts and sales, because consumers are fully aware of the market conditions. So today it is necessary for every marketer to understand the attitude of consumers toward the uses of smartphone. Many of the factors/attributes influence the consumer's behavior to purchase Smartphone. This may be brand image, functional features & apps, outlook & appearance, power supply, operating system, price, service, camera resolution, durability and compatibility. It is important for companies to know consumers behavior and attitude towards product. If they provide proper products then the consumer will show positive attitude which helps to increase the sales and stay market in the long run.

2.   Background of the study

Bangladesh is a country with wide technological advancement opportunities. In this developing country a large number of people are growing up with new advance technological innovation like Smartphone. This average group of people is using Smartphone, and there are significant reasons behind their likings and using of Smartphone. Moreover almost 10 crore people in Bangladesh are using mobile phone recorded by Bangladesh Telecommunication Regulatory Commission. From this large number of users almost 40 percent people are

using Smartphone. Today Consumers are interested and showed positive attitude towards smartphone usage. Many of the factors influenced consumer behavior to purchase Smartphone. This may be Brand image, Functional features & apps, outlook & appearance, power supply, operating system, price, service, camera resolution, durability, & compatibility etc.

3. Rationalization of the study

Present world is changing rapidly because of digital technology. Nowadays One countries people can communicate with other countries people through digital technology such as – Computer, laptop & many handheld devices like as Smartphone. So competitive area to market Smartphone are extremely difficult without gaining proper knowledge about consumer attitude towards Smartphone usage. Different consumers show different attitude towards products. But nowadays customers are more educated and more conscious about their life style. They want to express their status with others through Smartphone network. The Smartphone companies must consider the customer choice and preference and know the consumer behavior. They must have proper knowledge about some factors which help consumers to make purchase decision & to use Smartphone. If companies know customer attitude towards Smartphone usage fully then it can launch a new item for consumers and stay market in the long run.

4. Objectives of the study

Objectives are:
- To assess the selected socio economic profile of Smartphone's consumers.
- To know the level of consumers knowledge towards Smartphone.
- To determine consumer attitude towards smartphone.
- To assess the factors/attributes customers consider purchasing Smartphone.
- To find out the problem faced by consumers to use the smartphone.

5. Scope of the Study

The study was undertaken in order to have an understanding about the consumers' attitude towards Smartphone usage. With a view to conducting the research in a meaningful and manageable way number of attributes was taken that influence consumers to use Smartphone.

6. Limitations of the Study

For the preparation this researcher confronted many problems. Seeing the limitations of time, money and other resources available to the researcher, the following limitations were observed throughout the study:
- The study was confined only to Rangpur region.
- There were many considerable attributes remaining to use Smartphone but only 10 of them were selected for investigation, the researcher depended on the data provided by the selected respondents during interview period.
- Facts and figures collected by the researcher applied to the situation prevailing during the year 2015.
- Reluctance of the consumers to provide information was overcome by establishing rapport.
- The selected respondents did not want to give time to provide information

7. Theoretical framework

Smartphone

A smartphone is a mobile phone with an advance mobile operating system which combines features of a personal computer operating system with other features useful for mobile or handheld use. They typically combine the features of a cell phone with those of other popular mobile devices, such as personal digital Assistant (PDA) and GPS navigation system. Most Smartphone's can access the Internet, have a touch screen user interface with either a Gorilla Glass, sapphire, or similar screen, can run third-party apps, music players and are camera. Most smart phones produced from 2012 onwards also have high-speed mobile broad band 4G LTE internet, motion seniors, and mobile payment.

Consumer

Consumers are person who are end user or final buyer of smartphone.

Attitude

It means ones feelings, beliefs and tendencies towards an object and concept. This variable was operationalized by developing an attitude scale, following Likert method of summated ratings. It may positive, negative, favorable, moderate and unfavorable for particular objector soft drinks.

8. Literature Review

Bishal Nagarkoti (2009) Conducted research on Factors influencing consumer Behavior of Smartphone users. He found that Smartphone was not only the want but also a need in the modern area because Smartphone helps to connect with people all over the world. Social & personal factors affected deeply on consumer towards Smartphone & social factors had no effect on purchasing behavior especially male participants because they liked to take purchasing decision independently. Personal factors affected the consumer to buy because most of the respondents identified that they were influenced greatly by age & life cycle stage.

Mohd Azam Osman, Maziani sabudin,Azlan osman, & Tan shiang-Yen(2011) "Consumer Behaviors towards usage of Smartphone" Findings revealed that the male & younger consumers are generally greater target market for smartphone & majority of male consumers had higher acceptance towards various mobile contents such as: Game, application software, e-mail, internet Browsing etc and they prefer the practical & useful information where there was no relation between education & occupation level with the behaviors of usage of Smartphone.

Vikrant Awasthi (2012) "stated that consumer Buying Behavior towards smart phone" He found that most of the consumers preferred brand in Smartphone market is Apple, consumers prefer Smartphone for its features. There was no association between preferences for features of Smartphone on the basis of gender & brand loyalty for Smartphone.

According to Liao Yu-Jui (2012) "Consumer Behavior on Smartphone" showed that most of the users of Smartphone were male; he divided the market into two segments camera group & outer image & performance group. The results showed that the most of the females belong to camera group and males belong to performance & outer image group. The influencing factors of consumer behavior on Smartphone were product design, features, price, performance, branding etc.

Surendra Malviya, Dr.Manminder singh Salvja, Avijeet Singh Thakur (2013) Conducted research on A study on the factors influencing consumers purchase decision towards Smartphone in Indore. They identified four important factors such as Price, Brand preference, social influence & features had on dominant influence to make purchase decision through measurement model. Actually the results showed that pricing was not an influencing factor of consumer but features & social influence affected heavily because Smartphone was a status showing product.

Amrit Mohan (2014) "Consumer Behavior Towards Smartphone industry in Indian Market" He found out four important factors that affect consumer purchase decision for Smartphone such as social factors, Self-actualization, Brand concern, Price concern, & product features concern. The study showed that consumers present positive attitude or Behavior towards Indian Smartphone industry because most of the respondents showed high level of satisfaction & their buying pattern has increased gradually.

Ashmeet Singkhanuja(2014) "Consumer perception towards smartphone" He found that consumers consider price & brand value mostly to purchase & battery life plays negligible role to purchase smartphone. He also explored that smartphone technology was the most influencing factor to purchase decision.

Joshi Sujata, Arindom Roy, Dikshit Thakkur, Anish Banik, Gagan Deep Arora and Pallav parashar (2015) describe in their paper "Conceptual paper on Factors affecting the attitude of senior citizens towards Purchase of Smartphone" results revealed that Smartphone gained popularity on senior citizens for its distinct advantages & improved features & they also found out six important factors such as price, Brand image, Technology, Functional factors, perceived value & Referrals those affect senior citizens purchasing decision. The major finding was the senior citizens were more conscious about technology.

From the literature review it has been observed that smartphone can be the hottest issue to both users & marketers. The study can be able to provide a better learning about smartphone usage that can be helpful for consumers to use phone properly as well as pave the way of profitability of smartphone marketers. In addition, the study also included activities to deepen users understanding & can be helped to marketers to apply theories & concepts. Therefore the study that has designed can help to find out the attributes that affect the consumer's purchase pattern of Smartphone

9.   METHODOLOGY

In conducting a research study, methodological issue is one of the prime considerations for yielding of valid and reliable findings. Appropriate methodology enables the researcher to collect valid and reliable information and to analyze the information properly in order to arrive at desire conclusions. The study is basically descriptive in nature and data of the study was both qualitative and quantitative.

9.1 Target people and sampling: The study was conducted over the citizen of Rangpur Region and has been conducted purposively. The main populations of the study are the citizens of Rangpur region who use Smartphone constituted the population of the study. The sample size of the population is 100 customers who are smartphone users Rangpur Region , among them service holder is 20, businessman is 20 . students is 50 and rest 10 is for others. Thus one hundred (100) respondents were selected randomly as the sample of the study.

9.2 Data collection:
For conducting research, an appropriate instrument is necessary. Keeping this fact in mind an interview schedule with appropriate Questionnaire has prepared carefully for collecting data from the respondents. Objectives of the study have kept in view while preparing the interview schedule. English version of the interview schedule is shown in appendix-A. Data has been gathered from two sources are mentioning below :-

9.2.1 Primary data
Data collected from the sample consumer with the help of a pretested interview schedule. Adequate rapport established so that the respondents did not feel hesitant to provide actual information. Primary data collected from 100 respondents who use Smartphone through a structured questionnaire including both open ended & close ended questions. In this study 120 questionnaires were provided but 100 questionnaires have been collected, the rest did not collect for different reasons of respondents. The survey questionnaire included 13 questions regarding demography and Smartphone related. Both dichotomous & likert scale used.

9.2.2 Secondary Data
Secondary data collected from various books, published journals, articles, research paper, Dissertation paper and internet website etc.

9.3 Selection of Dependent and Independent Variables
Consumers' attitude towards usage of Smartphone (attitude) was the main focus of this study and it was considered as the dependent variable. For selection of independent variables went through the past related literature as far as available, discussed with the experts in the relevant fields and research fellows in marketing related disciplines. Availability of time, money and other resources were also kept in view in selected the variables. Socioeconomic profiles of consumers like gender, age, occupation, education level, income level, experience level of Smartphone were selected as the independent variables.

9.4 Research hypotheses
In the light of the objectives of the study and variables selected, the following research hypotheses were formulated to test them in. The research hypotheses were stated in positive form, the hypotheses were as follows:
"Each of the selected socio-economic profile of Smartphone consumers had relationship to their attitude towards smartphone usage"

Null hypotheses
In order to conduct statistical tests, the research hypotheses were converted to null form. Hence, the null hypotheses were as follows:
"Each of the selected socio-economic profile of Smartphone consumers had no relation to their attitude towards smartphone usage"

9.5 Data Processing
Editing
The collected raw data were examined thoroughly to detect errors and omissions. As a matter of fact the researcher made a careful scrutiny of the completed interview schedule to make sure that necessary data were entered as complete as possible and well arranged to facilitate coding and tabulation. Very minor mistakes were detected by doing this, which were corrected promptly.

9.6 Statistical Analysis
The statistical measures such as percentage, mean, standard deviation were used for describing both the independent and dependent variables. Tables were also used in presenting data for clarity of understanding. For better understanding (Microsoft office excel) Bar charts were used that were shown in Appendix B. Initially, Pearson Product Moment correlation was run to determine the relationship between the selected socio-economic profiles of the consumers with their attitude towards Smartphone usage by using SPSS 20.Version. Five percent (0.05) level of probability was used as the basis for rejection of a null hypothesis throughout the study. Co-efficient values significant at 0.05 level is indicated by one asterisk (*), and that at 0.01 level by two asterisks (**).

10. FINDINGS AND DISCUSSION
This chapter deals with the result and discussion of present research work. Necessary explanations and appropriate interpretations have also been made showing possible and logical basis of the findings. However, for convenience of the discussions, the findings are systematically presented in the following sections. This section deals with the socio-economic profile of Smartphone Consumers which were assumed to be associated with the attitude of Smartphone usage. Different consumers possess different characteristics which are focused by his/her behavior. In this section 6 socio-economic profiles have been discussed. The selected socio-economic profile of

the consumers was; Gender, age, occupation, level of education, income level, and experience level on Smartphone. Frequency, percentage, means, standard deviations were described in this section.

The purpose of this section is to examine the relationship of 6 selected socio-economic profiles of the consumers with their attitude towards Smartphone usage. The 6 socio-economic profile of the consumers included gender, age, occupation, level of education, level of income, and experience level to use Smartphone. Each of the socio-economic profile constituted the independent variables, while consumers' attitude towards Smartphone usage was the dependent variable. To explore the relationships between the selected individual socio-economic profile of the consumers and their attitude towards Smartphone usage, Pearson's product moment co-efficient of correlation (r) (Gupta and Gupta-2011) has been used. Five percent level of probability was used as the basis for rejection of a null hypothesis. The computed values of 'r' were compared with relevant tabulated values for 99 degrees of freedom at the designated level of probability in order to determine whether the relationships between the concerned variables were significant or not. The summary of the results of the correlation analysis has been presented in a table showing the relationship between 6 socio-economic profiles of the consumers with their attitude towards Smartphone usage. For clarity of understanding Appendix-B may be seen.

Table- 1: Co-efficient of correlation showing relationship between selected socio-economic profile of the Consumers and their attitude towards Smartphone usage.

Dependent variable	Independent variable	Computed value "r"	Tabulated value of "r"	
			at 0.05 level	At 0.01 level
Attitude Towards Smartphone usage	Gender	.028 NS	0.196	0.255
	Age	NS -.075		
	Occupation	NS -.017		
	Level of education	NS .038		
	Level of income	-.086 NS		
	Level of experience	-.104 NS		

Here

NS refers Not significant

10.1 Relationship between gender of the consumers and their attitude towards Smartphone usage.

Relationship between gender of the consumers and their attitude towards Smartphone usage was determined by testing the following null hypothesis:

"There is no relationship between gender of the consumers and their attitude towards Smartphone usage".

The calculated value of the co-efficient of correlation between the concerned variables was found to be .028 as shown in Table (1). The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r= .028) was found to be smaller than the tabulated value (r= 0.196) with 99 degree of freedom at 0.05 level of probability.
b) The null hypothesis could not be rejected.
c) The relationship between the concerned variables was not significant.

Based on the above findings, the researcher concluded that gender of the consumers had no significant relationship with their attitude towards Smartphone usage. This meant that gender of the consumer was not an important factor of consumers' attitude towards the usage of Smartphone.

Relationship between age of the consumers and their attitude towards Smartphone usage.

Relationship between age of the consumers and their attitude towards Smartphone usage was determined by testing the following null hypothesis:

"There is no relationship between age of the consumers and their attitude towards Smartphone usage".

The calculated value of the co-efficient of correlation between the concerned variables was found to be -0.075 as shown in Table (1) The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r= -0.075) was found to be smaller than the tabulated value (r= 0.196) with 99 degree of freedom at 0.05 level of probability.

b) The null hypothesis could not be rejected.

c) The relationship between the concerned variables was not significant.

Based on the above findings, the researcher concluded that age of the consumers had no significant relationship with their attitude towards Smartphone usage. This meant that age of the consumer was not an important factor of consumers' attitude towards Smartphone.

Relationship between occupation of the consumers and their attitude towards

Smartphone usages.

Relationship between occupation of the consumers and their attitude towards Smartphone usage was determined by testing the following null hypothesis:

"There is no relationship between occupation of the consumers and their attitude towards Smartphone usage".

The calculated value of the co-efficient of correlation between the concerned variables was found to be -.017 as shown in Table (1). The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r= -.017) was found to be smaller than the tabulated value (r= 0.196) with 99 degree of freedom at 0.05 level of probability.

b) The null hypothesis could not be rejected.

c) The relationship between the concerned variables was not significant.

Based on the above findings, the researcher concluded that occupation of the consumers had no significant relationship with their attitude towards Smartphone usage. This meant that occupation of the consumer was not an important factor of consumers' attitude towards Smartphone usage.

Relationship between education of the consumers and their attitude towards

Smartphone usage.

Relationship between education of the consumers and their attitude towards Smartphone usage was determined by testing the following null hypothesis:

"There is no relationship between level of education of the consumers and their attitude towards Smartphone usage".

The calculated value of the co-efficient of correlation between the concerned variables was found to be 0.038 as shown in Table (1). The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r = 0.038) was found to be smaller than the tabulated value (r= 0.196) with 99 degree of freedom at 0.05 level of probability.

b) The null hypothesis could not be rejected.

c) The relationship between the concerned variables was not significant.

Based on the above findings, the researcher concluded that education of the consumers had no significant relationship with their attitude towards Smartphone usage. This meant that education of the consumer was an important factor of consumers' attitude towards Smartphone.

Relationship between income level of the consumers and their attitude towards

Smartphone usage.

Relationship between income level of the consumers and their attitude towards Smartphone usage was determined by testing the following null hypothesis:

"There is no relationship between income level of the consumers and their attitude towards Smartphone usage".

The calculated value of the co-efficient of correlation between the concerned variables was found to be -0.086 as shown in Table (1). The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r= -.086) was found to be smaller than the tabulated value (r= 0.196) with 99 degree of freedom at 0.05 level of probability.

b) The null hypothesis could not be rejected.

c) The relationship between the concerned variables was not significant.

Based on the above findings, the researcher concluded that income level of the consumers had no significant relationship with their attitude towards Smartphone usage. This meant that income level of the consumer was not an important factor of consumers' attitude towards Smartphone usage.

Relationship between consumers' experience level on Smartphone and their

attitude towards Smartphone usage.

Relationship between experience level of the consumers and their attitude towards Smartphone usage was determined by testing the following null hypothesis:

"There is no relationship between experience level of the consumers and their attitude towards Smartphone usage".

The calculated value of the co-efficient of correlation between the concerned variables was found to be -.104 as shown in Table (1). The following observations were made regarding the relationship between the two variables under consideration.

a)   The computed value of 'r' (r= -.104) was found to be smaller than the tabulated value (r= 0.196) with 99 degree of freedom at 0.05 level of probability.

b)   The null hypothesis could not be rejected.

c)   The relationship between the concerned variables was not significant.

    Based on the above findings, the researcher concluded that experience level of the consumers had no significant relationship with their attitude towards Smartphone usage. This meant that consumer's experience level of Smartphone was not an important factor of their attitude towards Smartphone usage.

    From the above findings, it can be concluded that gender, age, occupation, education level, income level, and experience level of consumers had no relationship with their attitude towards Smartphone usage. So the null hypothesis had accepted and the alternative hypothesis had rejected. The above analysis proved that anyone can use Smartphone if they wish to use and ability to buy.

10.2. Knowledge of consumers towards Smartphone

This section emphasize on analyzing the consumer's knowledge towards Smartphone. Different consumers have different knowledge towards Smartphone, some people may have more knowledge than the others people. Consumer's knowledge about Smartphone was shown with mean and standard deviation. Table 4.7 (appendices 4.7) provides a summary of consumers Smartphone knowledge level. **N=100**

Idea about Smartphone

Consumer's idea of the Smartphone varied from 1 to 2, the mean being 1.00 with the standard deviation of .000. Consumer idea on Smartphone shown in table 4.8. (Appendices 4.8) indicated that 100 percent of the respondents have idea about Smartphone Therefore, it could be said that purchasing and attitude towards Smartphone in the study area were increased tremendously. In the modern era, people are more conscious about their lifestyle for adopting Digital technology.

Use of Smartphone

Respondent's usage pattern of Smartphone ranged from 1 to 2, the average being 1.00 with the standard deviation of .000. Table 4.9 presented about consumers Smartphone Usage (Appendices 4.9) showed that 100 percent of the respondents in the study area used Smartphone. The study had conducted to those respondents who use Smartphone. Therefore consumers of the concerned area are changing their standard of living by showing positive attention towards Smartphone.

Brand of Smartphone consumer's use

Brand of Smartphone consumers use varied from 1 to 9, having average on 4.47 with standard deviation of 2.20. Depending on Consumer's use, Smartphone brands were classified into 9 categories. The following table (4.10) shown that different consumers use different Brands

Table -2: Brands of Smartphone consumer's use

Categories	Basis of categorization	Respondents	
		Numbers	Percent
Sony	1	2	2
Samsung	2	34	34
HTC	3	1	1
Apple	4	2	2
Symphony	5	28	28
Walton	6	22	22
Micromax	7	1	1
Nokia	8	3	3
Others	9	7	7
Total		100	100

Data presented in table (2) referred that only 2 percent respondents used Sony which was 17 times less than the respondents who used Samsung brand, 1 percent used Apple 28 percent used symphony, 22 percent used Walton a product of Bangladesh, only 1 percent used Micromax,3 percent use Nokia and 7 percent used others brand. Therefore, it could be told that different consumers use different brands of Smartphone because people needs are different and they possess different characteristics. In the study area Samsung was the most usable Smartphone to use for consumers.

Purpose to use Smartphone mostly (Excluding voice calls)

Purpose of using Smartphone was different from one to another. So purpose of using Smartphone varied from 1 to 7, being average on 3.06 with standard deviation 2.27. Differences on Consumers needs purpose to use Smartphone were categorized into 7 options. Table (3) provides consumers aim to use smartphone except voice calls

Table -3: Purposes to use Smartphone.

Categories	Basis of categorization	Respondents	
		Numbers	Percent
Internet Browsing	1	28	28
Variety of information	2	35	35
Music and Entertainment	3	9	9
Camera	4	5	5
Studying	5	12	12
Read PDF	6	4	4
Others	7	7	7
Total		100	100

The above table showed that purpose of using Smartphone varies from consumers to consumers. Data

presented on table explored that the purpose of consumer's to use smartphone for variety of information was 7 percent more than the consumers used for internet browsing, almost 2 times more the respondents who used for music and entertainment than the percentage used for camera, the purpose to use Smartphone for Studying was 3 times higher than for Reading PDF and only 7 percent use for others purpose except voice calls. Findings revealed that majority (63) of respondents use Smartphone mostly for connecting in the world through internet and for various types of information.

Time to use Smartphone
Respondent's time to use Smartphone differentiated from 1 to 5, having average with 4.67 with standard deviation of .897. According to respondent's characteristics, their time to use Smartphone was classified into 5 categories. the consumer's time to use Smartphone (Appendices 4.12) showed that timing of respondents to use Smartphone when needed was 4 times more than for before sleeping, 4 percent used on morning and only 1 percent respondents used on afternoon and working time. Findings indicated that consumers had no specific time to use Smartphone mostly they use when they feel need to use.

Amount of time spends daily on Smartphone.
Consumer's amount of time varied from 1 to 5, with average on 2.55 with standard deviation of 1.21. So consumers amount of time were classified into 5 categories. Table 4.13 shown amount of time spends daily on Smartphone (Appendices 4.13) showed that most of the consumers spent daily 2 hours to 4 hours on Smartphone was almost 3 times more than the consumers spent on Bellow 2 hours, 9 percent consumers spent on 6 hours to 8 hours which was almost half percent less than consumers spent on 4 hours to 6 hours and 12 percent on 8 hours or above. Findings again explored that almost half (46 percent) of the respondents of total respondents spent on 2 hours to 4 hours daily on Smartphone.

10.3 Attitude towards Smartphone
This section focuses on determining consumer's attitude towards Smartphone. Consumer's attitude towards Smartphone was shown with mean and Standard deviation, **N=100**

Table -4: Consumer's attitude towards Smartphone.

Attitude	Mean	Standard deviation
The services Smartphone provides to you is high	3.89	.962
Smartphone functional capability is high	4.26	.836
Smartphone fulfils your esteem need	3.99	.784
Smartphone helps you to connect with the world	4.08	.981
Smartphone fulfils your all emergency need	3.38	.929
Your perception towards Smartphone is positive	3.38	.826
Smartphone is better than regular phone to provide services	3.79	.742
Your satisfaction level is high towards Smartphone	3.65	.796

Smartphone provides high services.
Services provided by Smartphone ranged from strongly disagree to strongly agree having average on 3.89 with standard deviation of .962 that shown in Appendices 4.15, showed that more than half of the respondents showed agree than the respondents showed strongly agree, whereas 10 percent showed neutral followed by 8 percent and 3 percent showed disagree and strongly disagree respectively.

High functional capabilities of Smartphone.
Functional capabilities of Smartphone ranged from strongly disagree to strongly agree with mean 4.26 and standard deviation.836 that classified into 1 to 5 categories. high functional capability of Smartphone (Appendices 4.16) state that majority (87 percent) of the respondents felt strongly agree & agree about the capabilities of Smartphone followed by 10 percent felt in neutral, and 1 percent & 2 percent respondents felt strongly disagree and disagree respectively about the statement. Findings again revealed that majority of the

consumers showed positive attitude so it could be said that the capabilities of Smartphone is absolutely high.

Smartphone fulfills your esteem need

Smartphone's capability of fulfilling esteem need varied from 1 to 5 with average 3.99 & standard deviation was .784 which given in Appendices 4.17, explored that more than 35 of consumers showed agree than the consumers showed strongly agree that Smartphone fulfills their esteem need, only 13 percent, 4 percent, & 1 percent felt neutral, disagree and strongly disagree respectively. Therefore, it could be told that Smartphone was able to fulfill consumers esteem need.

Smartphone helps to connect in the world.

Different consumers purchased Smartphone for different purposes; some respondents used Smartphone for connecting in the world, so the ability of Smartphone for connecting in the world ranged from 1 to 5 with average 4.08 and standard deviation of .981 that was shown in appendices 4.18, presented that 80 percent respondents showed positive agreement with the Statement whereas 11 percent felt neutral, 7 percent were not agree and 2 percent were showed strongly disagree

Smartphone fulfills your all emergency need

Smartphone fulfills emergency need verified from 1 to 5 likert scale of average being 3.38 with standard deviation of .929 that presented in 4.19 referred that majority (82 percent) of consumers were agree & strongly agree about the statement followed by 13 percent felt neutral,4 percent disagree & 1 percent strongly disagree.

Perception towards Smartphone is positive

Positive perception towards Smartphone varied from strongly disagrees to strongly agree having average 3.38 with standard deviation of .826 was shown (Appendices 4.20) showed that 46 percent consumers were agree, 4 percent strongly agree, 36 percent neutral, 12 percent disagree and only 2 percent strongly disagree.

Smartphone is better than regular phone to provide services.

The average was 3.79 with standard deviation of .749 that was shown (Appendices 4.21) referred that only 26 percent respondents were disagree about the statement but majority (62 percent) respondents were neutral and only 16 percent felt strongly agree & only agree with the statement.

Satisfaction towards Smartphone.

Consumers satisfaction towards Smartphone was categorized from highly dissatisfied to highly satisfied with mean 3.69 and standard deviation of .765 shown (Appendices 4.22) revealed that only 9 percent consumers were dissatisfied, 28 percent felt in neutral category and most (63 percent) of the consumers were showed that they were satisfied on getting the services provided by Smartphone. Findings again explored that consumers who owned the Smartphone were satisfied.

From the above discussion the overall findings could be drawn that, as most of the respondents felt agree and strongly agree about these attitude related statement so consumers attitude towards Smartphone usage was positive and they felt satisfied to use their Smartphone properly.

10.4. Considerable attributes for purchasing Smartphone Index

There are many factors that consumers consider at the time of purchasing Smartphone. As people are different from each other so the appealing attributes are also different to pursue consumers. In this study some attributes were taken as influencing factors to purchase Smartphone such as Brand image, functional features & apps, outlook & appearance, power supply, operating system, service, camera resolution, durability, compatibility etc. These attributes affect consumers to purchase particular brand of Smartphone. This study considered 100 respondents as sample that has idea and used Smartphone. So those respondents were able to provide attributes related information.

Table -5: Ranking the attributes that consumers consider when they purchase of Smartphone

Rank	1	2	3	4	5	Total	Rank
Score X	(SA) 5	(A) 4	(N) 3	(D) 2	(SD) 1		
Brand image XF	37 185	43 172	6 18	10 20	4 4	399	IV
Functional features & apps XF	30 150	52 208	12 36	4 8	2 2	404	II
Outlook & appearance XF	23 115	46 184	20 60	9 18	2 2	379	VIII
Power supply XF	27 135	40 160	20 60	13 26	0 00	381	VII
Operating system XF	23 115	49 196	17 51	10 20	1 1	383	VI
Price XF	18 90	30 120	35 105	14 28	3 3	346	IX
Service XF	40 200	42 168	10 30	5 10	3 3	411	I
Camera Resolution XF	37 185	40 160	12 36	7 14	4 8	403	III
Durability XF	30 150	34 136	21 63	15 30	0 0	379	VIII
Compatibility XF	25 125	50 200	15 45	8 16	2 2	388	V

Attributes consumers consider for purchasing Smartphone, these attributes or factors ranked from 1 to 10. On the basis of attributes scores respondents' ranked order the reason of their Smartphone preference given on the table 5.
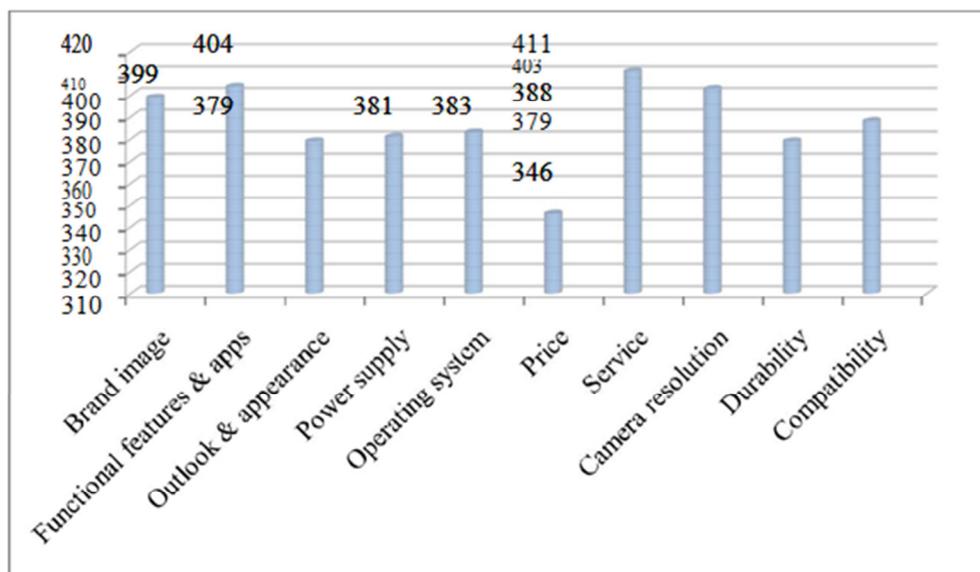
Graph -1: Attributes they consider for purchasing Smartphone

The following graph (1) represent that service got total 411 score and ranked first. The reason for that most of the consumers was hardly considered service as a factor to purchase smartphone. When consumers purchase Smartphone they might think about function & feature the Smartphone will provide. Functional features & apps carried 404 & ranked 2nd positions. Camera resolution got 403 and ranked third. Consumers considered the front & back side mega pixel of camera. In case of Smartphone Brand image played an important role to customers. Brand image got 399 score & ranked 4th positions. Consumers considered compatibility of product which got 388 score & ranked 5th positions. Consumers also given emphasis on the operating system for this reason operating system got 383 and ranked 6th positions. As Smartphone fulfilling all technologies related need of customers so power supply was a necessary factor and so for that power supply got 381 score & ranked 7th positions. Durability and outlook & appearance got equal marks 379& ranked 8th positions. If the outlook doesn't well then the consumers will not purchase Smartphone. At last consumers thought about price and ranked 10th .Actually consumers were agree to pay premium price if the product is well. Findings of the study showed that most of the consumers purchase Smartphone by considering the service providing capability of Smartphone.

10.5 Consumers recommendation others to use Smartphone.
The table showed that (Appendices 4.24) more than three tenth of consumers were affirmative to recommend others to use Smartphone than the percent of consumers who were showed negative to recommend others.

10.6 Problems consumers faced to use Smartphone.
Consumer's problems to use Smartphone ranged from 1 to 2. Consumers problems could be classified into two categories "yes and No" having average on 1.00 with standard deviation of .000. Presented about consumers problems to use Smartphone (Appendices 4.25) referred that 100 percent consumers faced problem to use Smartphone but they concluded that their problem was not on a major problem.
Types of problem consumers faces to use Smartphone.
Types of problems consumers faced to use Smartphone varied into 5 major categories with mean 3.07 and standard deviation was 1.38. The types of problems consumers faced (Appendices 4.26) showed that approximately half percent of consumers faced Battery longevity problem than the consumers who faced heat problem, the percentage of consumers who faced touch problem was less than 3 times of the respondents who faced hanging and others problems (28+18= 46) to use Smartphone.

10.7 Relationship between Socio- economic profile of Smartphone consumers and their attitude towards Smartphone usage (At a glance)
Table-6:Relationship between Socio- economic profile of Smartphone consumers and their attitude towards Smartphone usage .

Hypothesis	Result
H_a: There is a relationship between gender of Consumers and their attitude towards Smartphone usage.	Rejected (Table value >computed value)
H_o: There is no relation between gender of Consumers and their attitude towards	Accepted
Smartphone usage.	
H_a: There is a relationship between age of Consumers and their attitude towards Smartphone usage.	Rejected (Table value >computed value)
H_o: There is no relation between age of Consumers and their attitude towards	Accepted
Smartphone usage.	
H_a: There is a relationship between occupation of Consumers and their attitude towards Smartphone usage.	Rejected (Table value >computed value)
H_o: There is no relation between occupation of Consumers and their attitude towards	Accepted

Smartphone usage.	
H$_a$: There is a relationship between educational level of Consumers and their attitude towards Smartphone usage.	Rejected (Table value >computed value)
H$_o$: There is no relation between educational level of Consumers and their attitude towards Smartphone usage.	Accepted
H$_a$: There is a relationship between income level of Consumers and their attitude towards Smartphone usage.	Rejected (Table value >computed value)
H$_o$: There is no relation between income level of Consumers and their attitude towards Smartphone usage.	Accepted
H$_a$: There is a relationship between experience level of Consumers and their attitude towards Smartphone usage.	Rejected (Table value >computed value)
H$_o$: There is no relation between experience level of Consumers and their attitude towards Smartphone usage.	Accepted

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS
This chapter presents summary of findings, conclusions and recommendations of the study.

11.1 Summary of findings
The major findings of the study are summarized below:
11.1.1 Individual socio-economic profile of the consumers
Gender: Almost three fifth (58 percent) of the respondents were male as compared to 42 percent were female.
Age: Majority (87 percent) of the respondents were young aged as compared to 12 percent being middle and 1 percent old.
Occupation: Half (50 percent) of the respondents were student as compared to 20 percent being service,20 percent of being business and 10 percent being others.
Level of education: Majority (75 percent) of the consumers had graduate to post graduate level of education compared to 20 percent secondary and 5 percent primary level education.
Income level: Highest proportion (59 percent) of the respondents had low level of income while 27 percent and 14 percent of the respondents had medium and high level of income respectively.
Experience level: Most (63 percent) of the consumers had low experience level to use Smartphone, 22 percent had medium and 15 percent had on high experienced after using Smartphone.
11.1.2 Knowledge on Smartphone: 100 percent of the respondents had idea and used Smartphone respectively, 34 percent consumers used on Samsung, 28 percent Symphony, 22 percent used Walton, most of the consumers (63 percent) used for internet browsing & for variety of information,76 percent used Smartphone when they need and 62 percent respondents spent 2 to 4 hours on their Smartphone. So it could be told that consumers had sufficient level of knowledge on Smartphone.
11.1.3Attributes consumers consider for purchasing Smartphone
Service got total 411 score and ranked first. Functional features and apps got 404 and ranked 2. Camera resolution got 403 score and ranked 3 positions. Brand image ranked 4 and got 399 score. Compatibility got 388 score and ranked 5. Operating system ranked 6 by consumers' and got 383 score. Power supply got 381 score and ranked 7. Durability and outlook & appearance got equal marks and ranked 8.At last consumers were thought about the price and ranked 9.
11.1.4Attitude towards Smartphone
Approximately 70 of the respondents felt in favorable category followed by 25 percent in most favorable category and 5 percent in less favorable category.

11.1.5 Problems faced by consumers to use Smartphone

All (100 percent) of the respondents faced problems to use Smartphone but their problem was not on a major problems. 16 percent consumers faced on touch problem, 25 percent on Battery longevity, 13 percent on heat, 28 percent on hanging and 18 percent faced on others problems.

11.1.6 Relationship between the consumers' attitude towards Smartphone usage with their selected socio-economic profile

Gender, age, occupation, education level, income level and consumer's experience level On Smartphone had no relationship with their attitude towards Smartphone usage.

11.2 Conclusion

Smartphone is the best communication tool that involves caller and receiver for communicating virtually to each other. As a result a growing number of people in Bangladesh are purchasing and using Smartphone. The study has been explored to examine the consumer's attitude towards the usage of Smartphone. Today customers are treated as a king. They have number of alternatives to make purchase decision. Findings of the present study and the logical interpretation of other relevant facts prompted to draw the following conclusions. As this Study had conducted to these people who have idea and use Smartphone and most of the respondents of the study had used Smartphone for variety of information and they used mostly when they need Smartphone. At the time of purchasing Smartphone some factors influenced consumers such as Brand image, functional features & apps, outlook & appearance, power supply, operating system, price, service, camera resolution, durability and compatibility. Among these factors consumers firstly considered service to purchase Smartphone and ranked the highest position. Majority of the respondents felt in favorable category followed by one fourth of the respondents showed in most favorable category and 5 percent in less favorable category. This means overwhelming majority of the respondents had favorable to most favorable attitude towards Smartphone usage. Therefore, it may be concluded that in order to create more favorable attitude, Smartphone companies should give emphasis on developing functional capabilities and power supply system and lowering down price etc.The analysis showed that there was no significant relationship between socio- economic profile of consumers and their attitude towards Smartphone usage. Therefore, it may conclude that gender, age, occupation, education, income level, and experience level were not influenced consumers attitude to use Smartphone; they can buy and use the Smartphone if they have ability and the authorizing power to buy.

11.3 Recommendations

On the basis of understanding, observation and conclusions drawn from the findings of, it is the recommendations that are for the respective parties:

- Smartphone providing companies should give emphasis on developing its quality, functional features, durability, compatibility etc.
- Smartphone companies should provide better service to consumers & give much time to handle them.
- The concerning authority should take necessary steps to improve the quality of Smartphone so that companies can continue its good quality.

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Appendix-A
Sample of Interview Schedule for Collection of Data in assembly with the study

(English Version)

Topic: Consumer's Attitude towards the Use of Smartphone in Bangladesh: A Circumstantial Study on Rangpur Region.
It is cordially inviting you to occupy your precious time to filling the questionnaire as per your perception about using Smartphone. Your contribution in this regard will be highly appreciated and acknowledged to make this paper fruitful. The information you provide will be used for hypothetical purpose only and will be kept strictly trustworthy.

Thanking by,
Researchers

Please deliver your answer.
(Please give (√) and give more than one (√) where Applicable.)

1. Gender:

   1. Male   2.Female

2. Age:
   1.15-25   2.26-35   3.36-45   4.46 and above

3   Occupation:
.
1   Service   2. Business 3. Student   4. Others
.

4   Education Level:
.
   1. S.S.C   2.H.S.C   3.Graduate   4.Post graduate

5   Income Level:
.
1   Bellow 5000 2.5001-10000   3.10001-15000 4.15001-20000 5.Above 20000
.

6. Knowledge on Smartphone:

1. Have you any idea about Smartphone?

 1. Yes   2. No

 2. Do you use Smartphone?

 1. Yes   2.No

  3. Which brand of smartphone do you use?

1. Sony   2.Samsung 3. HTC 4.Apple 5.Symphony 6.Walton 7.Micromax

8. Nokia 9.others.

4. How many years have you used Smartphone? (**Experience level.)**

1. One years.

2. More than one years but less than two years.

3. More than two years but less than three years.

4. More than three years but less than four years.

5. More than four years but less than five years.

6. More than five years.

5.   Excluding voice calls for which purpose do you use the Smartphone Mostly?
   1. Internet Browsing 2.Variety of Information 3.Music and Entertainment

   4. Talk and Text 5.Camera 6. Studying 7.Read PDF/others 8.Others.
6. When do you use your Smartphone mostly?

 1. Morning   2.Afternoon 3.While working   4.Before sleeping   5.When you need.

7. How much time do you spend on your Smartphone daily?
   a. Below 2 hrs (0) b.2 hrs to 4 hrs c.4 hrs to 6 hours d.6 hrs to 8 hours e.8 hrs or above

7. Which attributes you consider mostly to purchase smartphone?

Smartphone Attributes/factors	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Brand image					
Functional features & Apps					
Outlook& Appearance					
Power supply					
Operating system					
Price					
Service					
Camera Resolution					
Durability					
Compatibility					

8. What is your overall Attitude after using Smartphone?

Please indicate your degree of agreement or disagreement regarding Smartphone usages….

SI	Attitudinal Statements	Degree of agreements				
		SD	D	N	A	SA
1	The services Smartphone provides to you is high					
2	Smartphone functional capability is high					
3	Smartphone fulfils your esteem need					
4	Smartphone helps you to connect with the world					
5	Smartphone fulfils your all emergencies need					
6	Your perception towards Smartphone is positive					
7	Smartphone is better than the regular phone to provide services					
8	Your satisfaction level is high towards Smartphone					

SA=strongly agreed, A= Agreed, N= Neutral, D= Disagreed, SD= Strongly Disagreed

9. Do you recommend others to use Smartphone?

   1. Yes   2.No

10. Have you faced any problem to use smartphone?

   1. Yes   2.No

11. If yes what types of problem you have faced?

     1. Touch 2.Battery longevity 3.Heat 4.Hanging 5.Others

12. What is your overall opinion regarding Smartphone?

………………………………………………………………………………….

………………………………………………………………………………

13. Please give your valuable opinion to develop the quality of Smartphone

Appendix-B
1. Socio-economic profile of the Smartphone's consumers.
Graph 1.Categories of consumers according to their Gender
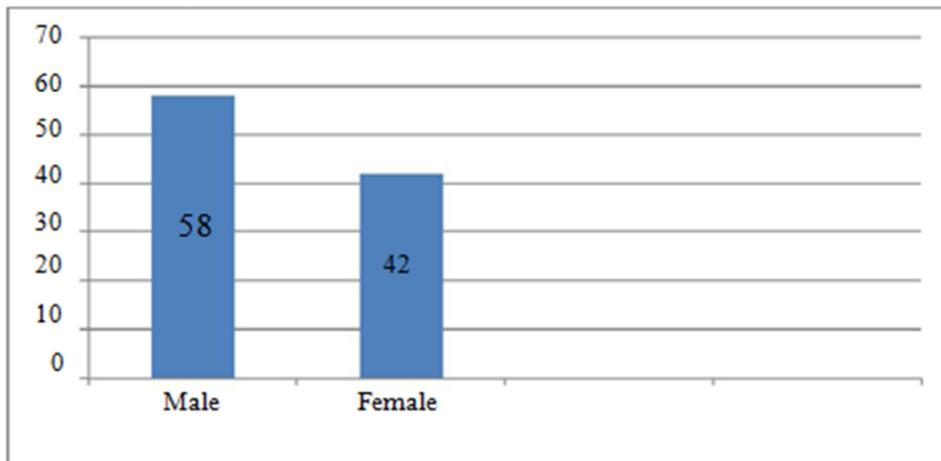
Graph 2.Categories of consumers according to their age
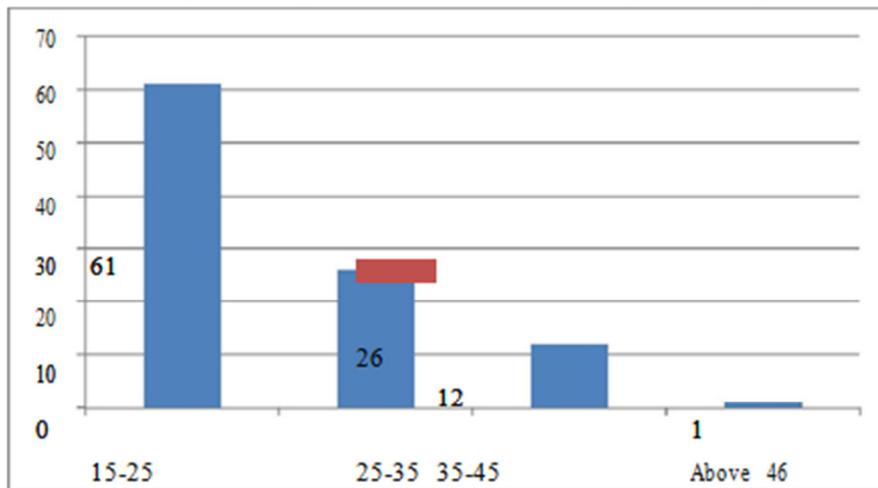
Graph 3.Categories of consumers according to their occupation
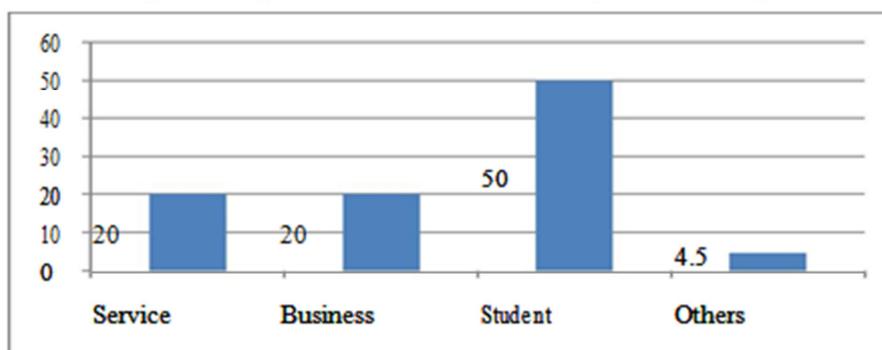
Graph 4.Categories of consumers according to their level of education
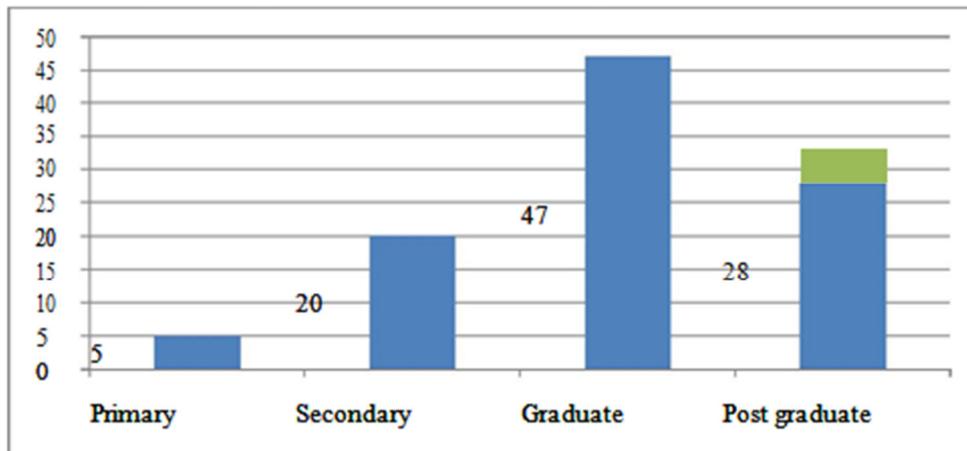
Graph 5.Categories of consumers according to their level of income
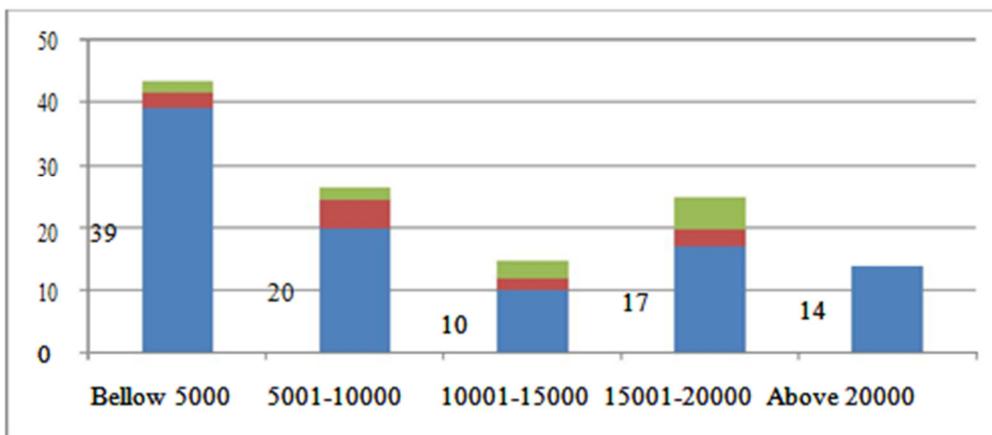
Graph 6.Categories of consumers according to their level of experience.
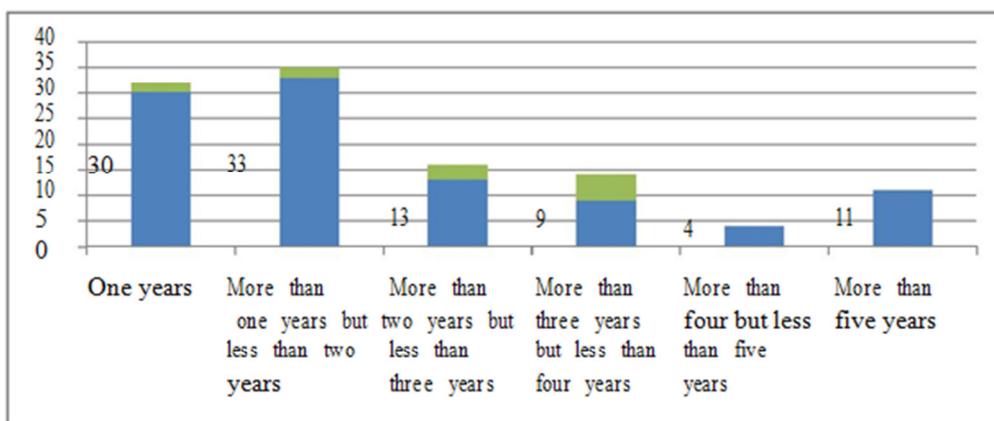
2. Knowledge on Smartphone

Graph 7.Idea about Smartphone
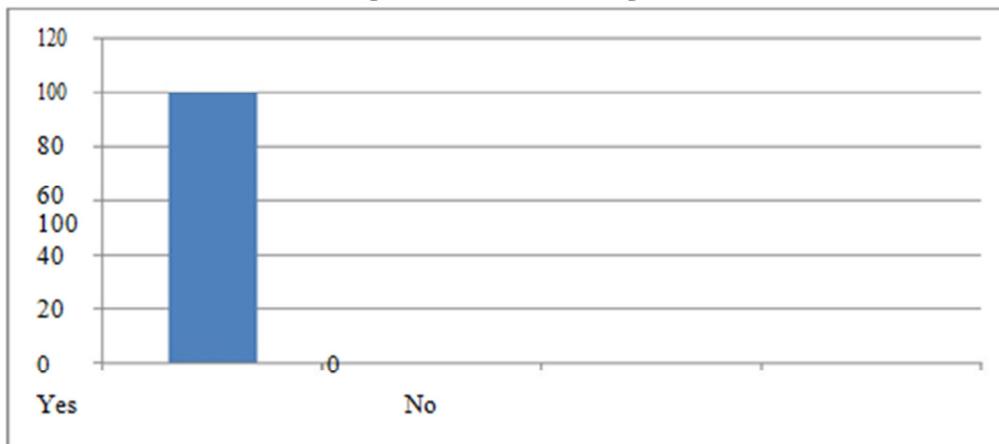
Graph 7.Use of Smartphone
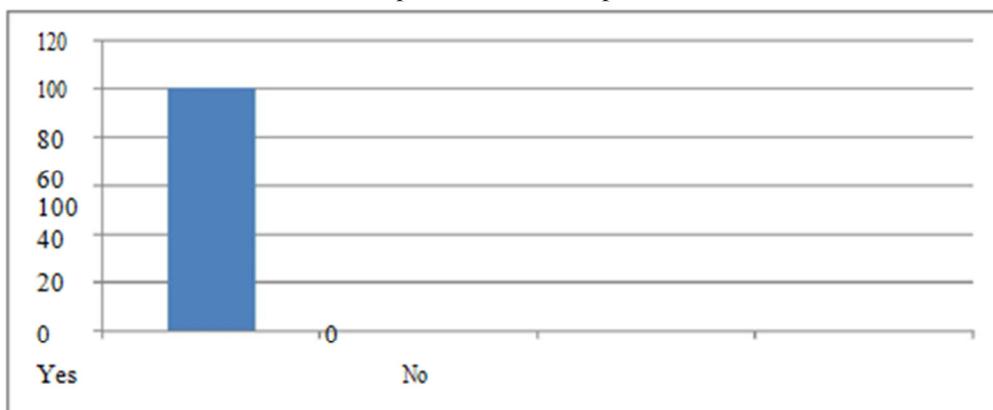
Graph 8.Brand of Smartphone consumer's use
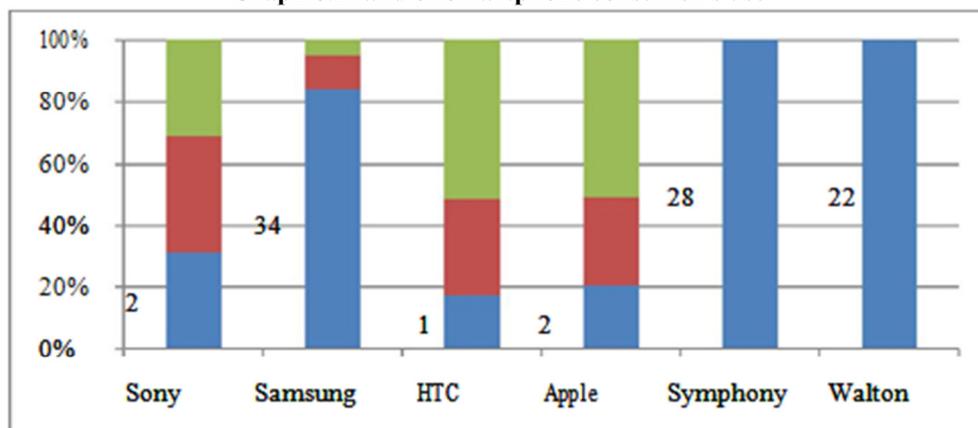
Graph 9.Excluding voice calls, purpose to use Smartphone.
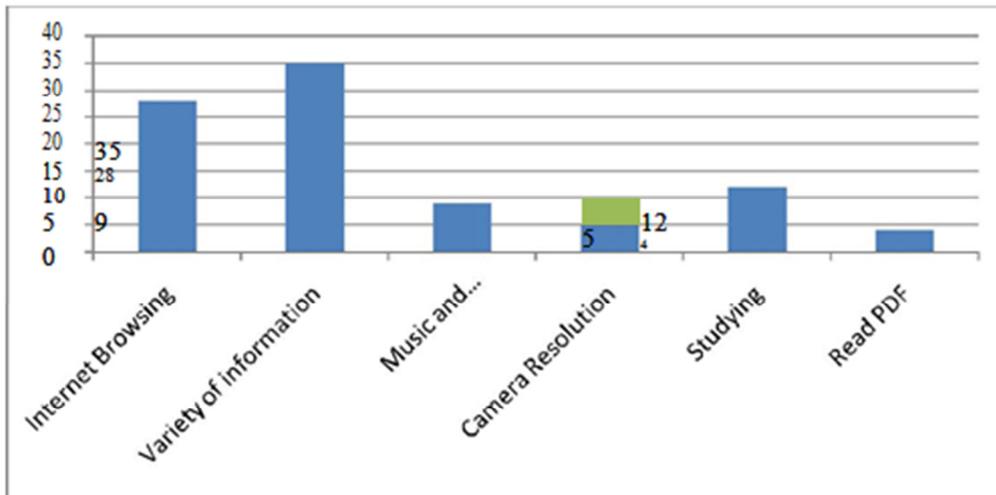
Graph 10.Time to use Smartphone mostly.
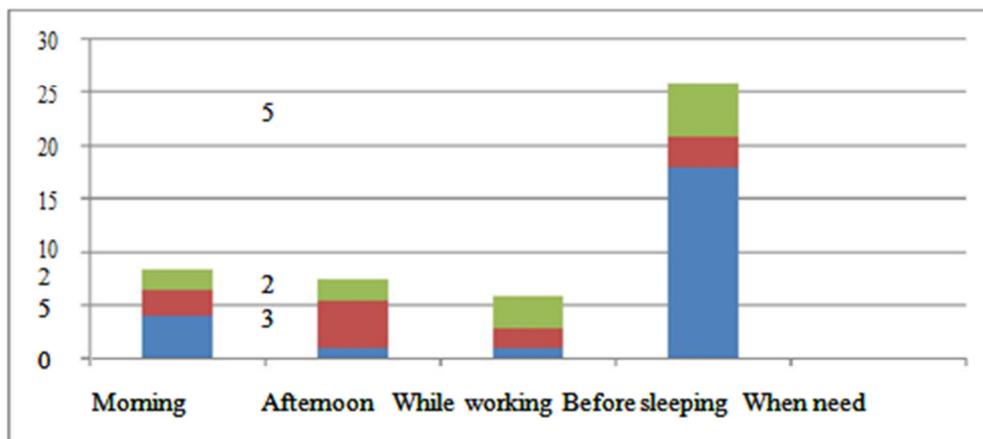
Graph 11.Time spent on Smartphone daily.
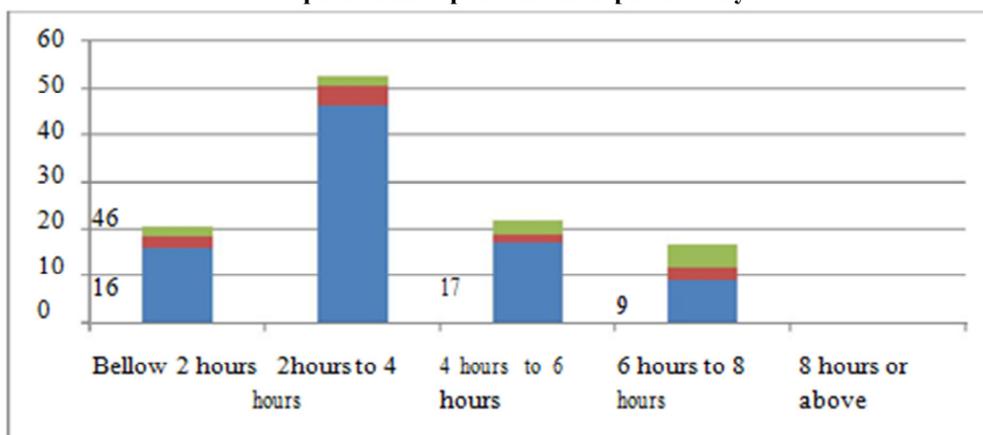
3. Attitude towards Smartphone usage

Graph 12.Service provided by Smartphone is high.
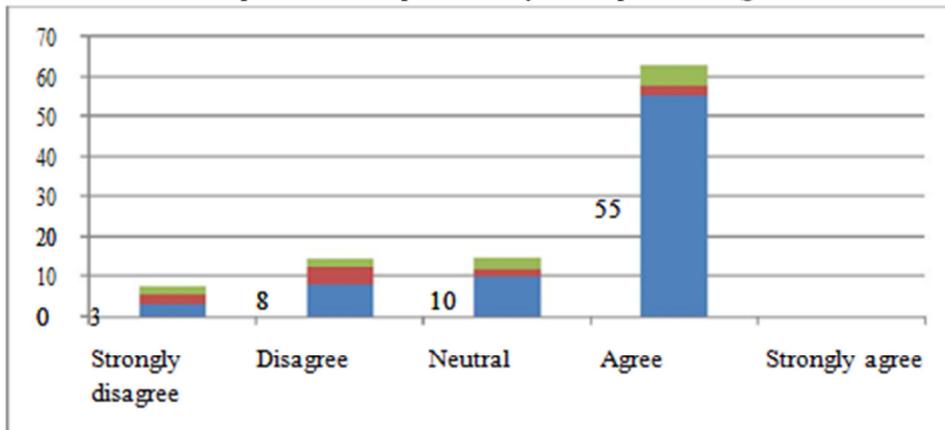
Graph 13.Smartphone functional capability is high.
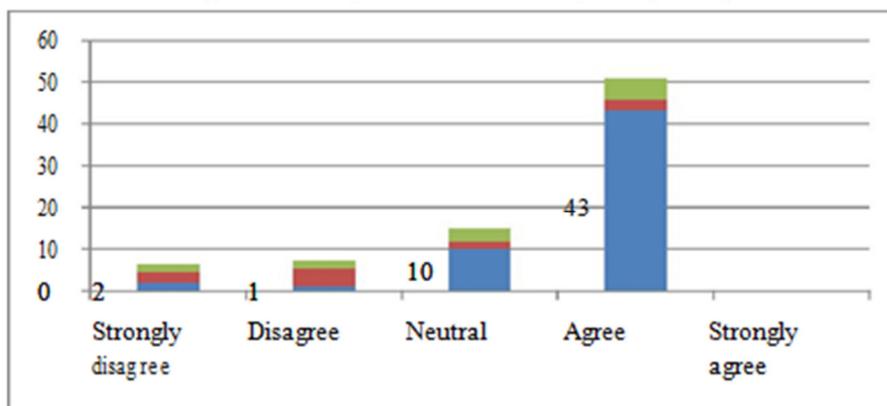
Graph 14 Smartphone fulfills esteem need.
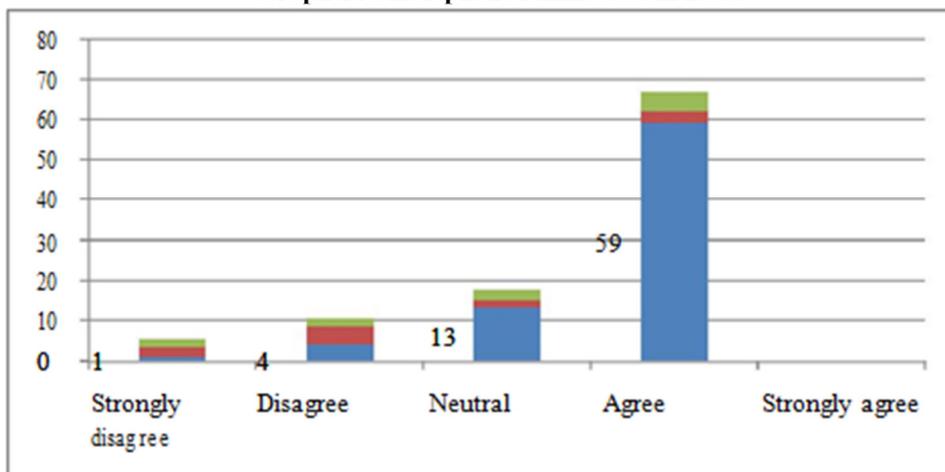
Graph15. Smartphone helps to connect with the world.
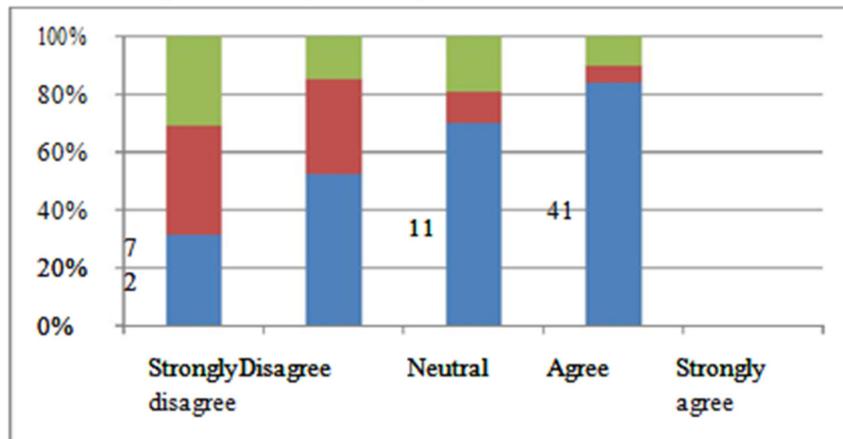
Graph16.Smartphone fulfills all emergency need.
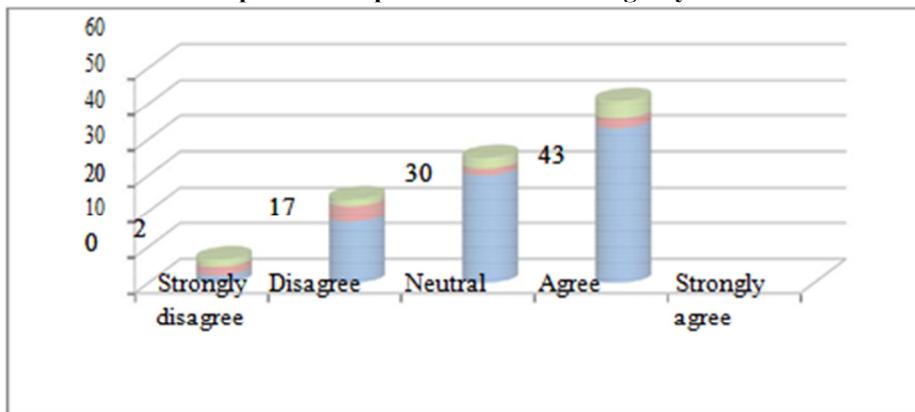
Graph 17.Consumer's perception towards Smartphone is positive.
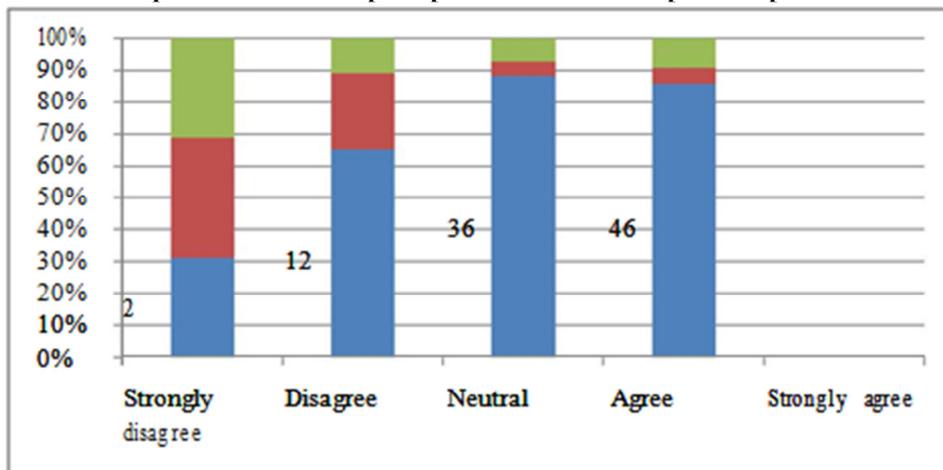
Graph 18.Smartphone is better than regular phone to provide services.
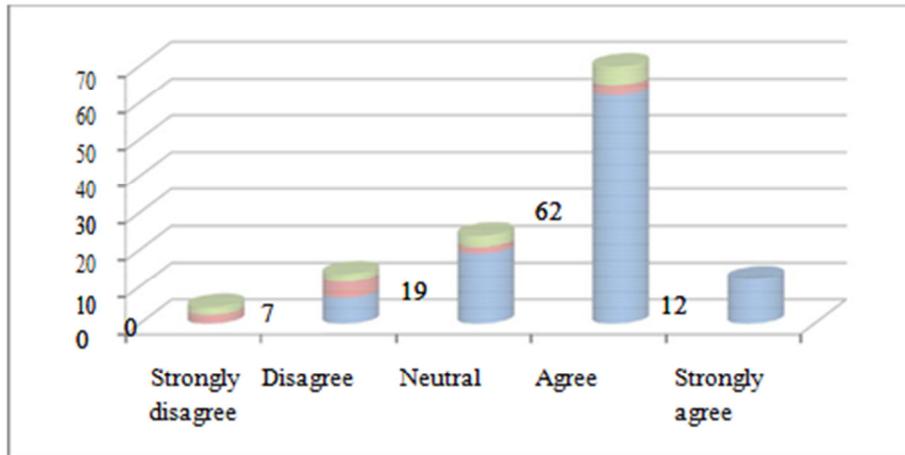

Graph 19.High level of satisfaction towards Smartphone.
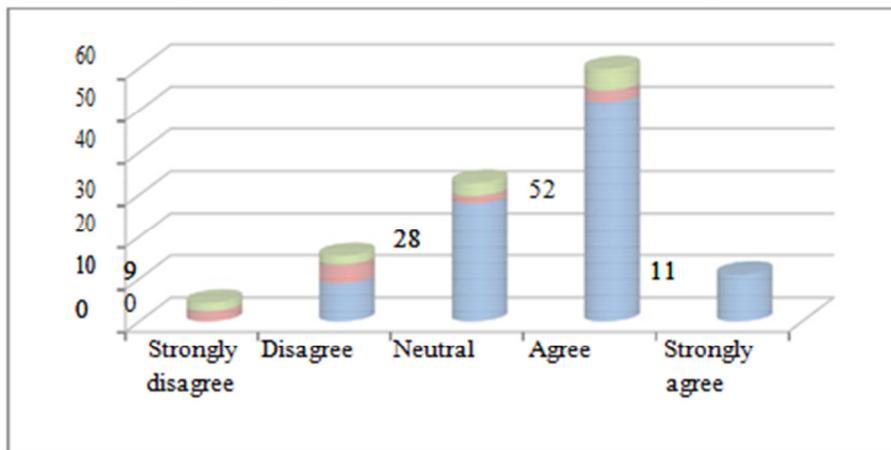
Graph 20.Consumers recommended others to use Smartphone.
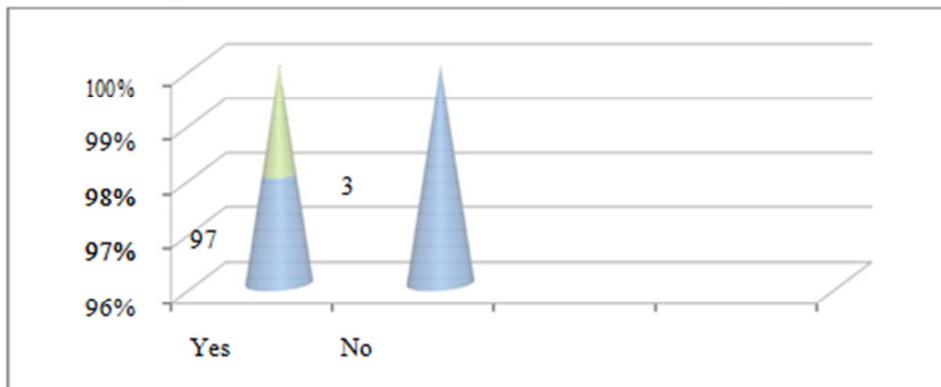
Graph 21.Consumers faced problems to use Smartphone.
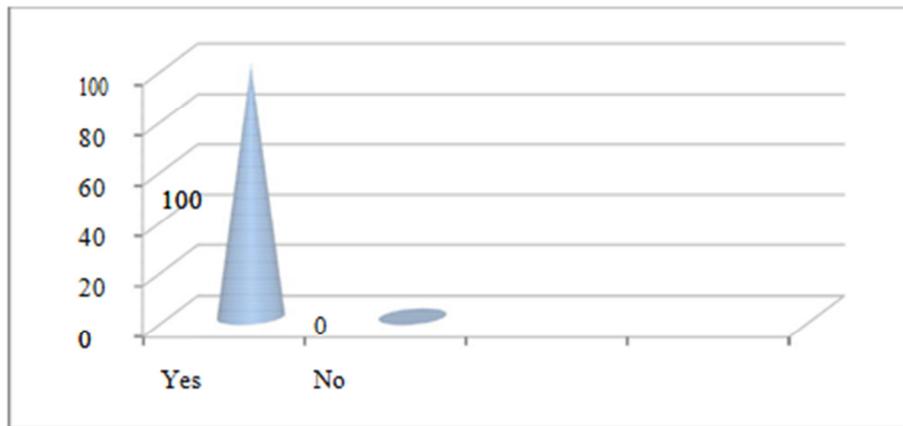
Graph 22.Types of problem consumers faced to use Smartphone.

Appendix-C
Correlation Matrix of the dependent and independent variables (N= 100)

Variables	GEN	AGE	OCU	EDU	INC	EXP	ATT
GEN	–						
AGE	-.363**						
OCU	.264**	-.315**					
EDU	.070	.083	-.171				
INC	-.351**	.364**	-.609**	.008			
EXP	-.302**	.057	-.179	-.135	.218**		
ATT	.028	-.075	-.017	0.038	-.086	-.104	

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed) GEN-
Gender
AGE-   Age   OCU-
Occupation   EDU-
Education INC-Income
level

EXP- Experience on Smartphone

ATT- Attitude towards Smartphone usage