

Factors Affecting Smartphone Purchase Decision: An Empirical Study

Dr. Meenakshi Katyal¹

¹Assistant Professor,

Department of Management Studies,
Bhagat Phool Singh Mahila Vishwavidyalaya,
Khanpur Kalan, Sonipat

I. INTRODUCTION

A smartphone is a mobile phone which sends and receives telephone calls, receive and store messages, have camera, calendar like any other cell phone but it also have advanced mobile operating system which combines features of a personal computer operating system with other features useful for mobile or handheld use. Indian governments recently announced its plan to make society cashless and push towards online transactions. After that many mobile apps were launched. Even the government of India launched its mobile apps BHIM. This paper aims to find the factors affecting user's dependency on smart phones in Haryana (India). Through this paper, we will know about different applications (apps) developed by developers and how much vital these apps have become. Further this study will try to find the impact of user's demographic profile on these factors. The customers' feedback is taken by using questionnaire. The results will be analysed using ANOVA and factor analysis techniques.

Smartphone is a mobile device which is more than merely make and receives phone calls, text messages, and voice mail. The basic feature of a Smartphone is able to access to the internet. It can also access digital media such as picture, music and videos. Also, Smartphone needs to have the ability to make use of small computer programs called applications or apps (Weinberg, 2012). From 2007 to 2010, there are more than 300,000 of mobile apps being developed and forecasted to have \$35 billion of revenue by 2014 (International Data Corporation, 2010). With the increasing development in technology and telecommunication sector, numbers of Smartphone users around the world is increasing. In Malaysia, some of the popular Smartphone brands are such as Apple, Samsung, HTC, Sony, Motorola, Nokia, and LG. Among these Smartphone brands, Samsung Galaxy and Apple iPhone have the strongest competition in the market. In the third quarter of global Smartphone market 2012, Samsung successfully overstepped Apple, according to a Reuter's poll (The Star (a), 2012). Factors such as compatibility, social influence, price and relative advantage is tested as well by Chew (2012). Liew (2012) tested variables such as entertainment, convenience, social needs, social influence and dependency. With lots of possibilities that could affect consumer decision in purchasing Smartphone, it is essential for marketers to understand which impact on the purchase

decision. But which factors have the greatest impact on the consumer purchase decision?

II. LITERATURE REVIEW

The consumer Behaviorism model suggested that consumer's purchase behavior generally passes through 5 stages, before and after the actual purchase, include needs recognition, information search, evaluation of alternatives, purchase decision and post-purchase behavior (Kotler and Keller, 2012). Decision making can be categorized into 3 different types, nominal decision making, limited decision making and extended decision making.

According to Mr. Afrizal, the head of Ericsson Consumer Lab South East Asia & Oceania, "In Malaysia, non-Smartphone are still popular among consumers but Smartphone is expected to become more dominant in the market," (Avanti, 2012). A study by global information and measurement company Nielsen shows that there will be an increasing number of Smartphone users in Malaysia, where 79% of mobile users plan to purchase a Smartphone (My Sin Chew, 2012). International Data Corporation (IDC) Asia Pacific whereas indicate that, from 30% in year 2011, Smartphone market share are expected to increase up to 35% in the year 2012 in the Malaysia's mobile phone shipments (The Star (b), 2012). In addition, Malaysia's Smartphone users among the internet users are expected to increase significantly from 47% to 73% (Avanti, 2012). It shows that there is a large opportunity in the Smartphone market in the near future and Smartphone producer should cope this opportunity well. But what factors drive consumer purchase decision in Smartphone purchasing? In Malaysia, the majority of Smartphone users are aged from 25 to 34, high educated and full time employment with RM5000 income or more, according to a report on year 2011. In addition, the highest rate of internet usage using the Smartphone falls in the age group 25 to 34 years old (41%) and 18 to 24 years old (38%), which is generally the Generation Y (Enterprise News, 2011). Thus, this research will look into the Generation Y purchase decision toward Smartphone, due to Generation Y holds the highest Smartphone owning and usage rate. The most important usage of Smartphone for users is for browsing (41%), social network (37%), musics (63%) and using the internet on a further device (49%) (Enterprise

News, 2011). A study indicates that the key motivating factors for future Smartphone users are internet surfing (39%), upgrade from current devices (34%), and applications (29%) (Enterprise News, 2012). Also, the most important criteria that affect the Smartphone purchase decision is the trend in community (35.6%), followed by needs (34.4%) and software (33.1%) of the Smartphone (Osman, 2012). In the study by Ding *et al.* (2011), a few variables are tested such as social needs, social influence, convenience, and dependency. Social needs, social influence, convenience and dependency are also tested in a study by (Suki and Suki, 2013). Brand is the most valuable asset for a company, where it represents a product or service means to consumers. Brands are more than just names and symbols. It is also the element of relationship between company and customers (Kotler and Armstrong, 2010). The brand name has directly influenced customer's perception toward the quality of the offering. When customers are satisfied, they generate word of mouth and it will lead to others to be interested and choose the brand (Azad and Safaei, 2012).

III. NEED FOR THE STUDY

Since the use of telecom service play a major role worldwide and in india. In India, it has been introduced many years before, but there and then its use was only limited, through the study of various reviews I am keen to find the factors affecting customer's purchase decision of smartphones .

IV. OBJECTIVES

- 1) To find the factors affecting customer smartphone purchase decision.
- 2) To analyse the impact of demographic factors affecting consumer's smartphone purchase decision.

V. RESEARCH METHODOLOGY

In this research paper descriptive study has been used. To achieve the objectives sample of 300 customers using smart phones was taken and the tool used to analyse data are SPSS and MS-excel. The data was collected from various region of Haryana using convenient sampling was done. The data was collected using primary data in the form of questionnaire that is filled by the customers. The secondary data was collected from internet and other resources.

VI. DATA ANALYSIS AND FINDINGS

Factor analysis is a good way of identifying latent or underlying factors from an array of seemingly important variables. In a more general way, factor analysis is a set of techniques, which, by analyzing correlations between variables, reduces their number into fewer factors, which explain much of the original data, more economically. (Nargundkar, 2005)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sample Adequacy.	.866
Approx. Chi-Square	1467.468
Bartlett's Test of Sphericity df	171
Sig.	.000

Measures of Sample Adequacy such as Bartlett's test of sphericity (approx chi-square is 833.126, degree of freedom is 171, significance is 0.000) and KMO value (0. 686) showed that data were fit for factor analysis. Principal Component analysis along with Varimax rotation method was used for extracting factors and seven factors were retained on the basis of eigenvalues and variance explained. Eigenvalue represents the total variance explained by each factor.

Rotated Component Matrix^a

18_I always talk about smartphones with my friends.	0.85 7	Factor 1
8_Having Smart phones means having phone and computer both.	0.82 7	
7_I prefer to carry a Smart phone than a laptop.	0.80 3	
1_Smart Phones are more convenient and useful than normal mobile phones.	0.78 4	
17_I search for information about smartphone from time to time.	0.74 8	Factor 2
4_Smartphones has wide range of functions and services.	0.74 7	
15_Smartphone can fulfil my want and needs in current life.	0.74 4	
3_The quality of smartphone is acceptable, as I can enjoy other free services (e.g. e-mail, voice-mail & Skype) wherever I want.	0.72 9	
19_I always recommend my friends to buy/use smartphone who don't use.	0.72 9	Factor 3
12_Smartphone is compatible and fit with my needs.	0.70 8	
13_Smartphone is compatible and fit with my lifestyle / working style.	0.67 3	
2_Smart phones are more fashionable, stylish and trendy.	0.66 9	
10_I use Smart phones for my work and study.	0.64 8	
14_Smartphone fit with my habits of using cell phones.	0.62 5	
6_Smart phones helps me in completing my tasks more quickly.	0.59 5	
11_I cannot do anything in my work and study without Smart phone.	0.59 2	
5_Smartphones have bigger screen and keyboard, which makes it easier to use.	0.57 2	Factor 4
9_Smart phone usage in my daily life is quite high.	0.52 1	
16_Friends and family helps me in making decision for buying smartphone.	0.48 7	

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 6 iterations.

The standard practice normally used is that all the factors with an Eigen value of one or more should be extracted. Table 1 clearly shows values more than 1 (in other words, a factor must explain at least as much of the variance if not more, than a single original variable). Thus cumulatively explained 60.925% of the total variance. All the statements with factor loadings greater than 0.40 were considered in the extracted factors is decided, the next task is to interpret and name the factors. This is done by the process of identifying the factors that variables. The rotated factor matrix is used for this purpose.

NAMING OF FACTORS All the factors have been given appropriate names according to the variables that have been loaded on each factor. 1: Usefulness, factor-2, features, factor-3 as loyalty and factor-4 as advantages.

RELIABILITY STATISTICS

The reliability statistics by using cronbach's alpha is measured for the four factors obtained after factor analysis. The value comes out is .783 which interprets that the reliability of data is very strong.

Cronbach's Alpha	N of Items
.783	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected It Total Correlation	Cronbach's Alpha if Item Deleted
USEFULNESS	12.01	4.309	.732	.676
FEATURES	11.69	4.849	.558	.753
LOYALTY	12.52	3.826	.577	.741
ADVANTAGES	12.06	3.615	.576	.750

VII. CONCLUSION

The results for consumers' response from different demographics factors shows that there are certain factors which impact smartphone purchase decisions. Important features which are responsible for smartphone purchase are: usefulness of the smartphone. Features of the smartphones also plays important roles. Majority of the customer become loyal towards certain brands which also affect purchase decision. Smartphone manufacturers need to understand this and can apply the relevant variables and factors to make strategies and tactics. The organizations can categorise the products on these factors basis. The results can also be used by smartphones manufacturing companies to identify the target customer segments.

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