



CONSUMERS' BEHAVIOURAL INTENTION TOWARDS INFORMATION TECHNOLOGY ADOPTION IN MOBILE PHONE USAGES IN CHENNAI

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ABSTRACT

Mobile phones are almost a necessity in today's busy world. Mobile phone use has grown rapidly since the first mobile call in 1973 to become the most universal technology in the world, with more than four billion people (well over half the global population) connected. Mobile communication technologies have penetrated consumer markets throughout the world. Mobile phone is no longer considered as a novelty, popular throughout the world. Several new and complex functions have been added in the mobile phone to make smoothed the consumers' lifestyle and to make consumer life easier. The main purpose of the survey is to determine the customers' behavioural intentions toward information technology adoption in using mobile.

Key Words: Awareness, Genders' perception, Perceived risk, Satisfaction, Behavioral Intentions, etc.

INTRODUCTION

Mobile phones are almost a necessity in today's busy world. Mobile phone use has grown rapidly since the first mobile call in 1973 to become the most universal technology in the world, with more than four billion people (well over half the global population) connected (Simon Bransfield-Garth, 2010). Mobile communication technologies have penetrated consumer markets throughout the world. According to International Telecommunication Union (2011), there are 6 billion mobile users in the world, i.e. equivalent to 87 percent of the

world population and is a huge increase from 5.4 billion in 2010 and 4.7 billion mobile subscriptions in 2009. Mobile Factbook 2012 predicted that mobile subscribers worldwide will reach 6.5 billion by the end of 2012, 6.9 billion by the end of 2013 and 8 billion by the end of 2016.

OBJECTIVES OF THE STUDY

Mobile phone is no longer considered as a novelty, popular throughout the world. Several new and complex functions have been added in the mobile phone to make smoothed the consumers' lifestyle and to make consumer life easier. Users can place orders, buy products or services and play online games through this new service by using a mobile phone at any time and in anywhere.

SCOPE OF THE STUDY

The impacts and factors influencing the consumers' behavioral intentions to use mobile phone technologies are undeniable. Thus, the current research focuses to fill these research objectives in the current body of literature, specifically in the developing countries' context (Chennai, India), by examining and validating empirically the critical factors that consumers' behavioral intention toward information technology adoption in mobile phone usages in Chennai. The study provides enhanced information about challenges and issues that faced by the mobile phone usages in Chennai. Moreover, important components that may improve the satisfaction of customers toward information technology adoption toward mobile phone usage will be identified. By understand these important attributes and weaknesses, relevant parties such as customer service providers, manufacturers can better understand requirements for the success development of mobile phone usage and continuously take proper actions to enhance information technology adoption toward mobile phone usage.

RESEARCH FRAMEWORK

The study emphasizes in evaluating the consumers' behavioral intentions toward adoption of information technology in the usage of mobile phone in Chennai. The research model is slightly modified from the Technology Acceptance Model (TAM) with perceived risk, awareness, genders' perception, perceived ease of use, satisfaction, which was determined on the consumers' behavioral intentions in mobile phone technologies. Many researchers have investigated and agreed that perceived ease of use is valid constructs in understanding an individual's intention to adopt Information System (IS) (Guriting and

Ndubisi, 2006). However, depending on the specific technology context, additional constructs are required to better reflect the application of emerging technologies.

SAMPLE SIZE AND DESIGN

The main purpose of the survey is to determine the customers' behavioural intentions toward information technology adoption in using mobile. The target of this survey focused users of mobile phones. The sample size of the survey is including the number of respondents who come from various environments.

The primary data were collected through a questionnaire. The sample respondents were selected under the convenience sampling method. Totally 600 questionnaires were distributed, and 570 were collected back, out of which 552 were found complete and usable.

FACTOR ANALYSIS

Factor analysis is an exploratory statistical technique used to identify a small number of factors that can be used to represent relationships among sets of interrelated variables and is summarized the structure of set of variables. Factor analysis attempts to bring intercorrelated variables together under more general, underlying variables. More specifically, the goal of factor analysis is to reduce “the dimensionality of the original space and to give an interpretation to the new space, spanned by a reduced number of new dimensions, which are supposed to underlie the old ones” (Rietveld and Van Hout. 1993), or to explain the variance in the observed variables in terms of underlying latent factors” (Habing. 2003) Thus, factor analysis offers not only the possibility of gaining a clear view of the data, but also the possibility of using the output in subsequent analyses (Field. 2000; Rietveld and Van Hout 1993).

The Kaiser –Meyer- Olkin (KMO) measure of sampling adequacy is an index used to examine the appropriateness of factor analysis. The KMO statistic varies between 0 and 1. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is high values (between 0.5 and 1.0) indicate factor analysis is appropriate. A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliability factors. Kaiser (1974) recommended accepting values greater than 0.5 as acceptable and values below 0.5 imply that factor analysis may not be appropriate. Further more, values between 0.5 and 0.7 are mediocre. Values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are superb.

The Eigenvalue is the total variance explained by each factor. Any factor that has an Eigenvalue of less than one does not have enough total variance explained to represent a unique factor, and is there disregarded. In this approach, only factors with Eigenvalues greater than 1.0 are retained. An Eigenvalue represents the amount of variance associated with the factor. Hence, only factors with a variance greater than 1.0 are included. Factors with variance less than 1.0 are no better than a single variable, since, due to standardization, each variable has a variance of 1.0. If the number of variables is less than 20, this approach will result in a conservative number of factors.

Bartlett's test of sphericity is a test statistic used to test the hypothesis that the correlation matrix is an identity matrix. For factor analysis to need some relationships between variables and if the R-matrix were an identity matrix, then all correlation coefficients would be zero. In other words, picture a correlation matrix: all items are perfectly correlated with themselves (one), and have some level of correlation with other items. If they are not correlated with the other items, then they can't be part of the same factor. Therefore, Bartlett's test values to be significant i.e have a significance value less than 0.05.

Table 1: Results of statistics associated with factor analysis for variables

Factors	KMO Values	Eigen Values	Bartlett's test Sig.
Awareness	.869	62.491	.000
Genders' perception	.815	53.129	.000
Perceived ease of use	.906	72.378	.000
Perceived risk	.853	58.001	.000
Satisfaction	.807	55.302	.000
Behavioral Intentions	.827	66.068	.000

Source: Computed Data

From the above factor analysis table 1, Kaiser –Meyer- Olkin (KMO) measure of sampling adequacy value of awareness is 0.869, which falls into the range of being ‘great’ and is associated with 62.491 eigenvalue are likely to be significant ($p < .05$) in Bartlett’s measure test. The KMO value of genders’ perception is 0.815, which falls into the range of being ‘great’ and is associated with 53.129 eigenvalue are likely to be significant ($p < .05$) in Bartlett’s measure test. Perceived ease of use value of KMO is 0.906, which falls into the range of being ‘superb’ and is associated with 72.378 eigenvalue are likely to be significant ($p < .05$) in Bartlett’s measure test. The KMO value of perceived risk is 0.853, which falls into the range of being ‘great’ and is associated with 58.001 eigenvalue are likely to be significant ($p < .05$) in Bartlett’s measure test. With respect to satisfaction and behavioral intention, the

KMO values are 0.807 and 0.827, which fall into the range of being ‘great’ and are associated with 55.302 and 66.068 eigenvalues are likely to be significant in explaining information technology adoption in mobile phones ($p < .05$) in Bartlett’s measure test. For these data, the values of KMO which falls into the range of being great and superb, so, this study should be confident that factor analysis is appropriate and Bartlett’s test is highly significant ($p < 0.05$), and therefore, factor analysis is also appropriate.

FACTOR ROTATION ANALYSIS

Rotation is a method used to simplify interpretation of a factor analysis. The rotated component matrix is a matrix of the factor loadings for each variable onto each factor. Normally, factor loadings less than 0.4 are not displayed because this value is suppressed to measure. The suppression of loadings less than 0.4 and ordering variables by loading size also makes interpretation considerably easier because factors, which are removed less than 0.4 and the rotation of the factor structure had clarified things considerably.

Table 2: Factor rotation analysis for consumers' behavioral intention toward information technology adoption in mobile phone usages

Items	Awareness	Genders Perception	Perceived ease of use	Perceived Risk	Satisfaction	Behavioral Intention	Reli. α
Q5	.849						
Q3	.841						
Q1	.820						
Q6	.810						
Q4	.733						
Q2	.674						.87
Q10		.864					
Q9		.847					
Q12		.773					
Q11		.712					
Q7		.699					.80
Q15			.871				
Q16			.868				

Q18			.856				
Q14			.845				
Q17			.837				
Q13			.827				.92
Q22				.848			
Q21				.821			
Q23				.778			
Q24				.718			
Q20				.698			
Q19				.692			.84
Q30					.790		
Q29					.776		
Q26					.759		
Q25					.751		
Q28					.728		
Q27					.650		.83
Q34						.869	
Q35						.853	
Q31						.805	
Q33						.784	
Q32						.746	.87
Eigen Value	3.74	3.18	4.34	3.48	3.31	3.30	
% of variance	62.491	53.129	72.378	58.001	55.302	66.068	

Source: Computed Data

Extraction method: Principal component analysis.

Rotation method: Varimax with Kaiser Normalization

It is evident to table 2, factor rotation, analysis was conducted using principal components as the means of extraction and the varimax method of rotation. All the items were loaded with above .40 and loaded on their respective factors. But, during this analysis question 8 in genders' perception did not load in its respective factor. The results showed that there were strong convergence and supported the validity of the constructs. The last column

in table showed that the Cronbach alpha coefficient of all the constructs is greater than .80, indicating good reliability of the constructs.

CONCLUSION

The findings in these study offer into mobile companies or manufacturers about to understand the consumers' demand or expectations in making latest mobile phones. Enabling information technology adoption in mobile phones is another way that can make technological innovations a reality in their services. The study provides further evidence on the variables to measure the different dimension of consumers' behavioral intentions toward information technology adoption in mobile phones. Therefore, this study tested a total of five independent variables, and one dependent variable was tested. The results showed that, all five variables were significant such as awareness, genders' perception, perceived ease of use, perceived risk and satisfaction. In contrast with Pearson's correlation and regression analysis, the results showed that, only four variables were significant such as awareness, genders' perception, perceived ease of use, satisfaction and remaining variable were marginal significant. In this case, it would increase the consumers' confidence towards information technology adoption in mobile phones. Firstly, to increase the awareness among the consumers, the consumers need to be educated to increase the general mobile phone's self-efficiency and also to promote the newest mobile's features by launching direct awareness to the consumers. The significant of genders' perception found that mobile companies should consider in developing user-friendly mobile devices, which would be accessible for both young and elderly people. While perceived ease of use was strongly influenced in the study, mobile specialists must be designing a straightforward way for consumers to utilize mobile phone's technology and should also endeavor to maximize the convenience on newest mobile gadgets. Perceived risk major component that was proved in the study about consumers' concern towards latest mobile phone's demerits and mobile companies are requested via this study to make mobile phones in less risky with reasonable cost that would motivate consumers to use habitually. Finally, there was a strong potential for people who are using information technology effectively in latest mobile phones such as 3G, 4G in Chennai and mobile industry should be co-operating with governments, regulators and consumer groups to offer a wide range of tools to assist mobile phone users to manage their daily routines. The mobile telecommunications industry and mobile content providers are members of a scheme that would introduce user-friendly mobile gadgets in all respects.

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