
Role of Customer Attitude towards use of M-Commerce :

A Study of Higher Education Students



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The purpose of this paper is to investigate the role of customer attitude as one of the driver of buying behaviour on M-Commerce in the higher education sector in India.

The self-administered questionnaire was designed to collect the data. A sample of 161 students was taken for the research study. The major finding of the study is that the customer attitude is the influencing force towards use of M-Commerce in educational institutes which signifies that students in this sector are willing to buy online and update themselves through mobile apps.

The analysis represents one of the primary studies in Indian educational sector that focuses on the cause and effect relationship of Customer Attitude with M-Commerce in context to the higher education.

Keyword : Customer Attitude, M- Commerce, Higher Education Sector.

I. INTRODUCTION

Now-a-days, the needs of the younger generation are different. They shift frequently towards different apps of M-Commerce in case their expectations are not met. Thus, customer attitude is a challenging factor in determining their behaviour towards buying through M-Commerce. There is no single right way in which M-Commerce can be done in this competitive world, this paper offers some guidance to the dimensions that can be considered by youth pursuing Higher Education. Unlike the earlier work in the field of buying behaviour, here the focus is exclusively on the role of Customer Attitude in influencing buying behaviour of M-Commerce users. This study will analyse Attitude of Young higher education students in general using M-Commerce, as it advises the customer attitude as one of the effective driver of buying behaviour towards M-Commerce Apps available in the market. More importantly, this study would benefit the students and academicians. The effect of customer attitude on M-Commerce has been evaluated to propose strategies for the benefit of M-Commerce Industry in India.

- This research paper sets out to provide the following:
- An understanding about the Customer Attitude as a driver of buying behaviour.
- Exploring the relationship of Customer Attitude with M-Commerce in the higher education sector in India.

II. REVIEW OF LITERATURE

In order to assess the body of literature, an information search was made on the computerized databases like (Proquest, Emerald, Science Direct, EBSCO etc) together

covering the majority of the published literature in organizational and management research. The key words used for this search were M-Commerce drivers, attitude towards use, intention to use and buying behavior. Search was performed both at the level of individual constructs and combined. Approximately, 134 studies were conducted in past, having an underlined theme of M-Commerce, mobile Apps factors and sustainability starting from the year 1975 to 2017 of publications and out of which 32 studies which were closely relevant with the dealt topic, were selected and examined their significant contributions. Key focus and the findings of each research paper were extracted in the publication year in a chronological order, which is presented here in under.

Fishbein, M. and Ajzen, I. (1975) The study provides a background for understanding the relationship between attitudes, intentions and behaviors. The TRA (Theory of Reasoned action) is based on the assumption that human beings make rational decisions based on the information available to them, and the best immediate determinant of a person's behavior is intent, which is the cognitive representation of readiness to perform a given behavior (Ajzen and Fishbein 1980). According to the theory, the individual's attitude toward the behavior includes: behavioral belief, evaluations of the behavioral outcome, subjective norms, normative beliefs, and the motivation to comply.

Davis (1986; 1989; 1993) These studies brought a new concept of TAM (Technology Acceptance Model). TAM is one of the most powerful models explaining IT acceptance and use. TAM has proven to be among the most effective

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models in the information systems literature for predicting user acceptance and usage behavior. Research in psychology and TAM itself suggest that users' intention to use is the single best predictor of actual system usage. The intention to use (BI) is determined by one's attitude towards using. This attitude is determined by two specific beliefs perceived usefulness (U), the user's perception of the degree to which using a particular system will improve her/his performance, and perceived ease of use (EOU), the user's perception of the extent to which using a particular system will be free of effort.

Davis, F.D. and Venkatesh, V. (1996) This study validates the earlier theory given by Davis which supports the hypothesis that computer self-efficacy acts as an important determinant for accepting a new technology. The TAM Model is widely used to predict user acceptance and use based on perceived ease of use and perceived usefulness. In order to be able to explain user acceptance and use, it is important to understand the antecedents of the key TAM Constructs, Perceived ease of use and usefulness. This research presents one such step by modeling and empirically testing the determinants of perceived ease of use. This research presents interesting directions for future research.

Carlsson et al (2006) The study constructs their model on the basis of the technology acceptance model and their results indicate that the important factors for consumers' attitude and behavior intention about mobile commerce service are perceived usefulness, perceived interest, and perceived price.

Jinlou (2010) The study finds out five decision indexes which are the quality of commodity, price, purchasing risk, delivery and after sales service, and constructs a quantitative model of commodity utility based on these five indexes, and then builds up the series curve of consumption preference of online consumers which illustrates the consumers' attitude toward using commodity, preference and the decision-making behavior of online consumers.

Min, Q. and Shaobo, J. (2008) The study explains that user acceptance is one of the key fundamentals for development and success of mobile commerce (M-Commerce). The main constructs of this study were Cost, Trust, Privacy and user's Demographics. Consumer trust is recognized as one of the most important factors in the studies of both e-commerce and marketing. In other words, trust is an important positive attitude with respect to online purchasing behavior. In addition, since M-Commerce is still in its early development stage, many technical protocols, transaction standards, regulating policies, and payment systems need to be standardized. Therefore, trust is especially important for user acceptance. Earning user's trust is critical for M-Commerce's success. It is necessary to introduce the concept of trust into M-Commerce research, especially user's trust of M-Commerce's service providers.

Yung, S.Y. and Yung, M. L. (2009) The study was motivated by the need to understand the formation of customer trust in M-Commerce, an online survey was conducted to empirically investigate proposed factors affecting customer trust. The results showed that satisfaction significantly and directly affected customer trust towards the vendors on the mobile internet. In this research, web site quality (i.e. interactivity and customization) and vendor quality (i.e. responsiveness and brand image) were found to be important factors affecting satisfaction.

Park, S. Y. (2009) This study proposed an integrated theoretical framework of university students' e-learning acceptance and intention to use based mainly on the technology acceptance model (TAM). The objectives of the study were to analyze the relationship of university students' intention to use e-learning with selected constructs such as their attitude, perceived usefulness, perceived ease of use, self-efficacy of e-learning, subjective norm and system accessibility, and to develop a general linear structural model of e-learning acceptance of university students that would provide a school manager or an educator with implications for better implementing e-learning. The result of the study demonstrated that some TAM constructs had a direct and indirect effect on university students' behavioral intention to use e-learning.

Cruz, P. and Laukkanen, T. (2010) This study is based on adoption of mobile banking services is very important for improving their diffusion. Understanding the mechanism that drives consumers' intentions to use mobile banking services is of vital importance for marketers and marketing managers when developing services and communication strategies (Nysveen et al., 2005a). There are several unexplored dimensions related to the understanding of factors influencing mobile service usage (Nysveen et al., 2005b) and this research is based on an integration of various theoretical models and perspectives (TAM, TRA, DOI and resistance to innovation). This study presents an innovative model that captures a wider understanding of consumers' motivations in their resistance to mobile banking services in Brazil.

Chong, A.Y.L. et al. (2011) This study aims to investigate the factors that predict consumer intention to adopt M-Commerce in Malaysia and China. The work extends the traditional technology acceptance model (TAM) and diffusion of innovation (DOI) model, and includes additional variables such as trust, cost, social influence, variety of services, and control variables such as age, educational level, and gender of consumers. By comparing consumers from both Malaysia and China, this research is able to form a prediction model based on two different cultural settings. This research confirms the need to extend the traditional TAM and DOI models when studying technology such as M-Commerce. The results

from this study will be useful for telecommunication and M-Commerce companies in formulating marketing strategies.

Persuad, A. & Azhar, I.(2012) This study contributes to the growing literature on mobile marketing by examining the intentions of Canadian consumers to adopt innovative marketing services via the smartphone. The smartphone is seen as another key stage in the evolution of mobile marketing technology and practices because it has the capability to seamlessly integrate Bluetooth, location-based marketing, and other technologies with web-based and physical store marketing to produce superior consumer experiences. This study found that successful engagement of customers in mobile marketing requires that marketers focus their strategies and tactics around value creation; getting customers to engage with their brand in an authentic way; and respecting customers' shopping style, i.e. engaging customers the way they want to be engaged. Marketers must listen to their customers and develop appropriate strategies rather than simply adapting existing marketing strategies.

Jain, V. & Pant, S.(2013) The study identifies that Mobile usage has increased extensively in the emerging countries, especially India. It is the largest country in the world where the mobile users are increasing dramatically on a monthly basis. Mobile phones are primarily used by the young (Gen Y) in India and 50% of its population is under 25 years of age. This provides immense opportunities to marketers to cater to this segment. This paper explores the studies of different types of generations as it helps in understanding the emergence of Generation Y. The purpose of the study was to comprehend the nuances of Generation Y for effective mobile marketing. The authors found seven parameters, such as nature of communication, readiness to purchase, media consumption, nature of information related to brand, brand consciousness and classification of consumers, after extensively studying all the generations. These parameters vary in all the generations. They are very helpful in developing effective mobile marketing approaches. The authors found that Generation Y has high spending power, believes in amusement, has high aspirations and desires, and needs very creative, engaging and customized messages on the mobile phone.

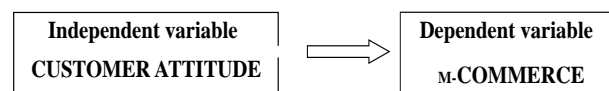
Yanh, H.C.(2013) This study integrates the theory of planned behavior ,the technology acceptance model ,and the uses and gratification theory to predict young American consumer's mobile app attitude, intent and use. Perceived enjoyment, usefulness, subjective norm and ease of use serve as significant predictors of young American consumer's attitude towards mobile apps .their actual use of mobile apps can be predicted by perceived usefulness, mobile internet use, mobile app intent, personal income, gender.

Agrebi, S. and Jallais, J. (2015) The aim of this study was to identify factors affecting the intention to use mobile

phones for purchasing and to propose solutions to boost this practice for two profiles of individuals :the purchaser and the non-purchaser. The Result revealed that first group of results revealed that the “perceived usefulness” of them-purchasing has a positive impact on the intention to use it. This finding is consistent with the work of Davis et al.(1989), Islam et al.(2013) and Shaw(2014) which indicated that the individuals' perception with regard to the improvement of the task performed is a predictor factor of m-purchasing using mobile phones.

Jain, et. al. (2015) This research is unique as Generation Y is studied extensively in the developed countries but not in the emerging countries such as India. In India 50% of the population is less than 25 years of age (Indian Defense Forum, 2012). It is an emerging segment of consumers that is tech savvy and uses mobile phones extensively. Authors have developed a framework on the basis of the empirical research that was carried out in different cities in India. It portrays the characteristics of generation Y and their communication approach primarily through mobile phones. Generation Y are independent, liberal, tech savvy and give high emphasis to pleasure. This study has provided the characteristics of Generation Y and explained their mobile use patterns. Generation Y also personifies the mobile phone as intelligent, dynamic and a smart individual as the usage is versatile and customized. This may help the marketers to effectively target the young consumers in India by who use mobile phones for marketing.

Figure 1- A Simple Theoretical Framework for linking Customer Attitude and M-Commerce



III. RESEARCH METHODOLOGY

Research design : Descriptive and Quantitative Research Design

Target Population : The research target population is higher educational institutes of Uttarakhand region, India.

Sample frame : The unit of analysis used in this study is on students of higher education institutes of Uttarakhand.

Sample Size : The Sample size of the study is 161 which is more than 10 times of the no. of items. (Hair et., al 1995).

Sampling Method : Convenience sampling is used for the data collection.

IV. ANALYSIS & RESULTS

1. Descriptive Analysis:

Descriptive statistics were computed to examine demographic and professional characteristics of the 161 respondents. The statistical software SPSS 21.0 was used for the descriptive statistics. The below mentioned table is the output of descriptive statistics which shows the mean and standard deviation value of consumer attitude for the

number of cases. This table shows that determinant is not nil which satisfy the condition of factor analysis.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
A1	4.9193	1.77121	161
A2	4.9503	1.61168	161
A3	4.9068	1.59609	161
A4	5.0621	1.63053	161
A5	5.0497	1.63096	161
A6	4.8447	1.58335	161
A7	4.9627	1.63893	161
A8	4.9565	1.62153	161
A9	4.9006	1.64395	161
A10	5.0248	1.63917	161

2. Kaiser-Meyer-Olkin (KMO) Test of Sampling Adequacy

The high value 0.86 of Kaiser-Meyer-Olkin Measure of Sampling Adequacy for Consumer Attitude is a statistic that indicates that factor analysis is useful for the data.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.863	
Bartlett's Test of Sphericity	Approx. Chi-Square	428.693
	Df	10
	Sig.	.000

The high value 0.96 of Kaiser- Meyer-Olkin Measure of Sampling Adequacy for M-Commerce is a statistic that indicates that factor analysis is useful for the data.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.960	
Bartlett's Test of Sphericity	Approx. Chi-Square	2432.369
	Df	45
	Sig.	.000

3. Factor Analysis

The Factor analysis was applied to test the validity of variables, classify and reduce the questions into sub-variables when possible, and calculate factor loadings. Specifically, the principal component analysis (PCA) was firstly performed to assess the underlying structure of the data.

Total Variance Explained for Customer Attitude

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.576	85.757	85.757	8.576	85.757	85.757
2	.318	3.181	88.938			
3	.277	2.770	91.708			
4	.193	1.934	93.642			
5	.150	1.504	95.147			
6	.128	1.280	96.426			
7	.117	1.170	97.596			
8	.092	.923	98.520			
9	.076	.760	99.280			
10	.072	.720	100.000			

Extraction Method : Principal Component Analysis.

All 10 factors of Consumer Attitude contributing to 1 factor which shows cohesiveness among the items.

Total Variance Explained for M-Commerce

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.471	69.411	69.411	3.471	69.411	69.411
2	.498	9.967	79.378			
3	.407	8.145	87.524			
4	.375	7.494	95.017			
5	.249	4.983	100.000			

Extraction Method : Principal Component Analysis

All 5 factors of M-Commerce contributing to 1 factor which shows cohesiveness among the items.

4. Regression Analysis

The value of R² represented in the below mentioned table is 45.1% of the variance which shows that there is a significant relationship between Customer Attitude and M-Commerce.

Regression - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.671 ^a	.451	.447	.74336159

a - Predictors : (Constant), REGR factor score 1 for analysis 1

V. CONCLUSIONS & DISCUSSION

Mobile Commerce, also known as M-Commerce which refers to buying & selling through wireless telecommunication networks. It is the advanced extension of e-commerce with unique advantages over other available technologies. Based on the literature studied, this paper explores customer attitude as one of the important variable towards the use of mobile commerce.

Mobile Commerce is receiving growing intention globally, from youngsters and youth population. In our research, we have focused on youngsters pursuing higher education with M-commerce usage. The aim of this research work is to investigate the effect of consumer attitude towards M-Commerce. The survey result shows that In India, Higher Education Students prefer buying through M-Commerce. These results can be useful to M-Commerce developers and practitioners to better understand M-Commerce, from the point of view of youth population, which is the most frequent user of M-Commerce now-a-days.

The analysis of the data gathered revealed that customer attitude has statistical significant influence on M-Commerce. Thus, It is concluded from the findings and discussion that customer attitude is one of the influencing factor towards the use of M-Commerce.

Annexure

Role of Customer Attitude towards use on M-Commerce
Investigating Higher Education Sector

Dear All,

This questionnaire is designed to collect information about how the Customer Attitude effects towards the use on M-Commerce.

We would request for your sincere and honest support to achieve the objective of this study. The information provided here would be used for academic purpose only.

(A) The following statements focus on Customer attitude towards use. Please mark your level of agreement with each of the statement :

1. Extremely Disagree
2. Strongly Disagree
3. Disagree
4. Neutral
5. Agree
6. Strongly Agree
7. Extremely Agree.

Name	:	
Gender	:	Male/Female
Age (In Years)	:	
Marital Status	:	
Habitat	:	Urban/Rural
Highest Educational Qualification	:	
Number of Family Members	:	

Customer Attitude Towards Use							
	Extremely Disagree	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Extremely Agree
	1	2	3	4	5	6	7
1. Shopping through M-Commerce is a good idea.							
2. I am favourable toward M-Commerce/mobile shopping.							
3. Shopping by M-Commerce/ mobile phone is a wise idea.							
4. I am positive about M-Commerce/mobile shopping.							
5. I like the idea of using M-Commerce to purchase products/services.							
6. Using M-Commerce for shopping is a pleasant experience.							
7. Using M-Commerce for shopping is beneficial for me.							
8. My general opinion for M-Commerce is favourable.							
9. Shopping through M-Commerce is appealing.							
10. Shopping through M-Commerce is involving.							

(B) The following statements focus on M-Commerce. Please rate this on the scale provided :

1. Never, Not even aware of its existence
2. Never, But I am aware of it
3. Once only
4. Rarely
5. Sometimes
6. Regularly
7. Always

	M-Commerce						
	Never, Not even aware of its existence	Never, But I am aware of it	Once only	Rarely	Sometimes	Regularly	Always
	1	2	3	4	5	6	7
1. How often you surf over Internet on your Mobile Phone/ Cellular Phone?							
2. How often you purchase online?							
3. How often you purchase using mobile apps?							
4. How often you make payments through mobile phone/cellular phone?							
5. How often do you think your use of M-Commerce is voluntary?							

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