

The Impact of M-commerce in Digitalizing India: A Case Study of Jaipur City

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Abstract—Digitalization has made a significant contribution in enhancing the efficiency and competitiveness of doing business, by reducing costs and increasing the convenience in using internet and mobile devices for various economic activities. The use of M-commerce is largely an integration of economic activities to influence the existing way of life. M-commerce is still in an embryonic stage and in order to make itself a huge success in Indian markets it needs to be in sync with the users expectation and actual delivery. This study has been carried out with a purpose to evaluate the impact of demographic factors on mobile phone users with reference to M-commerce usage, how it is continuously evolving and has a symbolic impact on our lifestyles. A survey was conducted among 230 respondents in Jaipur city and the results indicated that M-commerce has been most popular among users for online shopping and banking transactions. M-commerce is emerging as a biggest threat to the conventional channels of trade, hence business of all kinds need to invest in engaging their customers by adopting this platform to the earliest. Payment restrictions are a major hindrance in growth of M-commerce in India.

1. INTRODUCTION

Communication in the present day world has undergone a new breakthrough with over 900 million subscribers, India is viewed as one of the most competitive and challenging economic superpowers of the world. The expected growth in penetration of mobile phones by the end of 2017 is more than 21% as against 8% which is current[9]. "Mobile Marketing" being the new buzz word and m-commerce is viewed as the biggest threat to the age old Brick & Mortar Retailing. The transition has finally begun from retail to E-commerce and finally to M-commerce . Studies in the past suggest that significant increase in the disposal income of individuals in India has revolutionized the shopping behaviors of consumers. Mobile technology however provides the benefits of instant connectivity and localization thus helping consumers broaden the opportunities available and add business values to them[8]. The two major services which have been used more promptly via M-commerce have been banking and online purchases.

2. LITERATURE REVIEW

Lehner & Watson (2001) in their research study concluded that hex model listed by Straub & Watson (2000) may be a

valuable business model or a value chain instrument which helps in understanding and explaining mobile commerce from various research directions for each shareholder's point of view ; nevertheless this model has certain disadvantages also since it does not cover a wider field and major information about core industries .[1][5]

Okazaki (2005) in a research study has summarized the progress of the future directions of the M-commerce research. The future research should define clear process characteristics, the types of interactivities, which provide clear implications to audience regarding specific mobile service. There is a very little research which has addressed the question of interactivity in mobile devices, although it has been argued that mobile technology is an alternative way to connect to wireless internet.[4]

In the white paper by GS1 Mobile com group (2008) it was demonstrated that consumers are changing their behavior and expectations with regard to shopping and brand loyalty which is helping business and consumers to study the positive response which helps them to understand and convey their needs effectively and efficiently . The technological advancement in mobile phone has further helped business become more service oriented in what they do and provide customers with. Customization has further helped business in building better relationship with consumers.[7]

Deshmukh et. al(2013) in their study indicated how the transformation has taken in India from E-commerce to M-commerce being the second most populated country in the world. The mobile penetration is equally high but M-commerce is still at a very embryonic phase which is developing gradually and millions of consumers are opting the digital medium to purchase online, thus enabling a brand build itself digitally and cost- effectively.[6]

Gupta and Vyas (2014) in their study identified the factors affecting adoption of m-commerce. Changing youth perception, growing financial avenues, the newly introduced trusteeship model, and a rapid increase in the number of smart phone buyers are all driving forces behind growth of m-commerce. Lack of internet connectivity and awareness

among masses should be liberalized for further upliftment of this industry .[3]

Phukan Rinki (2014) in her study stated that M-commerce is popular in India mainly due to the feature of Mobility which is offered by the convergence of the mobile phone and the internet. Although at a very nascent stage mobile industry has a very strong hold in the Indian market. With the advancing technologies and innovative practices everyday new companies are coming up to offer new products and services[2]

3. RESEARCH METHODOLOGY

The present study pertains to finding the impact of M-commerce on the mobile phone users with reference to age and income and how it has influenced the Indian society. The research aims at studying three broad parameters which include, how the usage of m-commerce has gained impetus in recent years, issues which arise while using m-commerce and the impact of using m-commerce on our lifestyle. The demographic factors considered for the study include age & income. A structured questionnaire with 10 items was developed to collect the data on the variables in this study. Close ended questions were asked and the items were refined and paraphrased both in wording and contextual applications to make them appropriate to suit the research purpose. The area of study chosen was Jaipur city and the respondents belonged to different age groups with varied family and income backgrounds having different socio economic backgrounds to minimize bias. The demographic details of the respondents are depicted in graphical format (Fig. 1 & Fig. 2).The period of study was September to November 2014 and it was analyzed using one way ANOVA test in 95% confidence level for final interpretation.

3.1 Objective of the study

The main objective of the research study is to identify if there is any significant difference in usage of m-commerce among individuals in context of age and Income.

3.2 Hypothesis

H0: There is no significant difference of age and income on usage patterns of M-commerce.

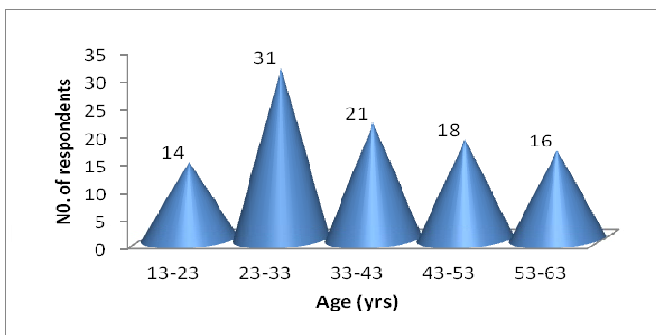


Fig. 1: Relation between Age and No. of respondents

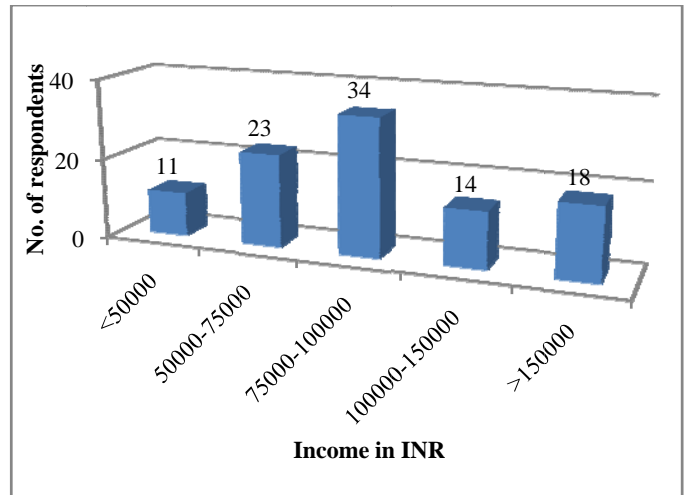


Fig. 2: Relation between Income and No. of respondents

4. RESULTS & DISCUSSIONS

The Fig. 3 depicts the use of m-commerce by consumers in different sectors. The maximum number of users opted for online shopping and banking services as their prime means of using m-commerce with 28% and 26 % respectively, 11% for using travel and ticketing services, 9% were keen in using the buy and sell services via various mobile applications followed by stocks market (6%), real estate (4%) and Matrimony (5%) respectively.

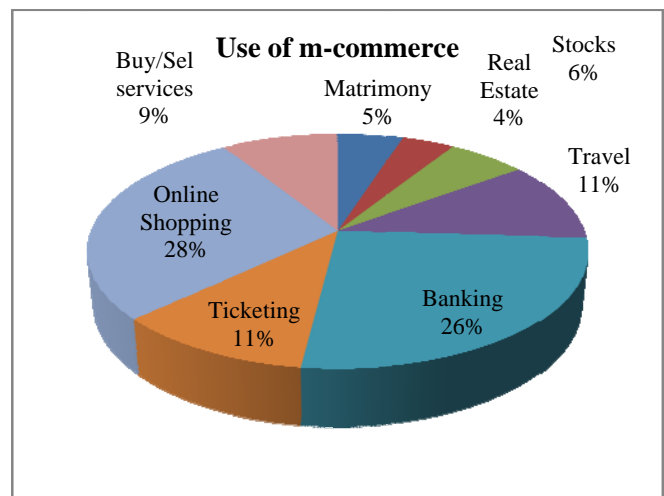


Fig. 3: Pie chart showing use of m-commerce in different sectors

Table 1 (Age)

ANOVA		Sum of Squares	Df	Mean Square	F	Sig.
Purpose	Between Groups	12.593571	4	4.648393	3.72982	Sig

	Within Groups	118.3964	95	1.246278		
	Total	120.99	99			
Helpful	Between Groups	20.29571	4	5.073929	3.34589	Sig
	Within Groups	144.0643	95	1.516466		
	Total	164.36	99			
Better	Between Groups	2.632143	4	0.658036	3.914265	Sig
Medium	Within Groups	25.95786	95	0.273241		
	Total	28.59	99			
Social	Between Groups	4.427143	4	1.106786	2.844603	Sig
Influence	Within Groups	36.96286	95	0.389083		
	Total	41.39	99			
Expenditure	Between Groups	11.35643	4	2.839107	3.623569	Sig
	Within Groups	74.43357	95	0.783511		
	Total	85.79	99			
Trust	Between Groups	18.830714	4	7.207679	3.504597	Sig
	Within Groups	195.3593	95	2.056414		
	Total	200.19	99			
Safety	Between Groups	9.692143	4	3.923036	3.245909	Sig
	Within Groups	114.8179	95	1.208609		
	Total	118.51	99			
No. of years	Between Groups	4.662857	4	1.165714	1.779083	N.S
	Within Groups	62.24714	95	0.655233		
	Total	66.91	99			
Phone Type	Between Groups	3.637143	4	0.909286	0.67957	N.S
	Within Groups	127.1129	95	1.33803		
	Total	130.75	99			

(* at 2.4972 .05 level (4,99)

The analysis produced a significant analysis of Variance [F(4,99)=2.4972, p <.05] indicating there was difference of **age** on purpose of usage of m-commerce among individuals [F(4,99) = 3.729, p = .057], m-commerce helpful to you personally [F(4,99) = 3.345, p = .017], Better Medium to use [F(4,99) = 3.914, p = .013], Influence of m-commerce on lifestyles [F(4,99) = 2.844, p = .054], Monthly expenditure [F(4,99) = 3.623, p = .028], Trust while using m-commerce [F(4,99) = 3.504, p = .015], How secure if using m-commerce [F(4,99) = 3.245, p = .008].

Table 2 (Income)

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig

Purpose	Between Groups	3.317836	6	0.552973	2.409472	Sig
	Within Groups	125.5922	93	1.350453		
	Total	128.91	99			
Helpful	Between Groups	4.202891	6	0.700482	3.557808	Sig
	Within Groups	116.7871	93	1.255775		
	Total	120.99	99			
Better	Between Groups	8.829145	6	1.471524	3.879901	Sig
Medium	Within Groups	155.5309	93	1.672375		
	Total	164.36	99			
Social	Between Groups	3.775103	6	0.629184	8.358023	Sig
Influence	Within Groups	24.8149	93	0.266827		
	Total	28.59	99			
Expenditure	Between Groups	3.903187	6	0.650531	3.613885	Sig
	Within Groups	37.48681	93	0.403084		
	Total	41.39	99			
Trust	Between Groups	7.33129	6	1.221882	1.448341	N. S
	Within Groups	78.45871	93	0.843642		
	Total	85.79	99			
Safety	Between Groups	6.992953	6	1.165492	0.561037	N. S
	Within Groups	193.197	93	2.077388		
	Total	200.19	99			
No. of years	Between Groups	4.573268	6	0.762211	0.622149	N. S
	Within Groups	113.9367	93	1.225126		
	Total	118.51	99			
Type of	Between Groups	2.549981	6	0.424997	0.797512	N. S
Phone	Within Groups	49.56002	93	0.532903		
	Total	52.11	99			

(* at 2.21 .05 level (6,99)

The analysis produced a significant analysis of Variance [F(4,99)=2.212, p <.05] indicating there was difference of **income** on purpose of usage of M-commerce among individuals [F(4,99) = 2.409, p = .049], M-commerce helpful to you personally [F(4,99) = 3.557, p = .019], Better Medium to use [F(4,99) = 3.879, p = .035], Influence of M-commerce on lifestyles [F(4,99) = 8.358, p = 4.31E-05], Monthly expenditure [F(4,99) = 3.613, p = .026].

Since the results for both the variables namely age & income are found positive hence the null hypothesis is rejected. Both the variables have a significant effect on the usage pattern of M-commerce among mobile phone users .

5. CONCLUSIONS

1. A larger chunk of population among all age groups is welcoming the M-commerce way to make alterations in their personal & business ways .
2. The customer centric and service oriented business have realized that mobiles are the most easiest and empowered medium to connect, thus helping a consumer in saving his time and broaden his horizons, thus the conventional channels are being replaced through a better medium called M-commerce .
3. Mobile wallets have become a new fad in country wherein the pre stored amount gets automatically deducted against the billed amount, thus saving on time and surpassing the use of credit / debit cards and providing additional benefits of reward points .
4. Security in m-payments is one of the major concerns for consumers using the M-commerce domain. The challenge is to minimize the number of third parties by unifying payment solutions and maximize security operations by creating a secured platform based on existing standards .
5. It's an economic euphoria, where buyer and seller both are witnessing a blistering pace of growth in M-commerce technology . For some of the well known players of E-commerce industry namely flip kart & rival snap deal claim themselves to be M-commerce companies witnessing a growth in the mobile app transactions by 50% & 60 % respectively.

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