

Hardship of M-commerce in India: Problems, Issues & challenges

Chandan Gupta, Prof. Anil Chandhok, Dr. Manu Gupta,

¹Assistant Professor, Quantum School of Business, Roorkee

²MMIM, MM University, Mullana, Ambala

³Assistant Professor, J.V Jain College, Saharanpur

Abstract: Electronic commerce has connected us to the global business and trade and now the shift from e-commerce to mobile commerce have paved the way to connect all the customers using Smart phones to the Global market. Though e-commerce and m-commerce are not only frontier for doing global business and trade but yet they offer multiple benefits to the business, government and consumers on massive scale. It is not only the companies, organizations, and communities in India who are doing business using E-commerce but now with the advance technology are gradually shifting to M-commerce. Individual entrepreneurs are also adopting M-commerce for doing business. It is the next generation wireless e-commerce that needs no wire and plug-in devices. It is gaining increasing acceptance amongst various sections of the society. The need for mobility seems to be a primary driving force behind M-Commerce applications such as Mobile Banking, Mobile Entertainment and Mobile Marketing etc. The tremendous growth in the use mobile phone and the demand of Indians shows that major Indian population has adapted to mobile phone and advancement in mobile technology and its usage as now mobiles have become smart and is not limited for making basic phone calls, messaging or playing games but can be used virtually in every sector of human activity whether it is private, business or government. **M-commerce is at nascent stage in India.** Although people have started using e-commerce but still they hesitate to use m-commerce because of different problems and complexity of the mobile applications such as security issues, payment problems and awareness about M-commerce applications and its usage techniques etc. The purpose of this research paper is to provide an extensive penetration to answer the following questions:

- Is M-commerce is able to penetrate Indian market really or not.
- To find out the problems and Issues with m-commerce in India.
- What is stopping m-commerce to expand its growth and help the people to connect to the global business?

Keywords: M- commerce, E- commerce, mobile applications, Problems & issues in M-commerce in India, Future challenges in M- commerce.

I. Introduction

The Information technology (IT) and telecommunication technologies (TCT) convergence has given the by-product i.e. M-commerce which can also be regarded as extension of E-commerce to wireless mediums. This convergence provides and enables some unique services which is not possible in E-commerce.

Internet + E-commerce + Wireless = M-commerce

Scope of M-commerce encompasses almost every walk of life like the field of content, entertainment, travel; banking and marketing. Generally M-commerce applications are of two categories:

- Content Delivery: It includes consultation, notification, order confirmation, feedback and trackers
- Transactions: it includes purchasing, making payments, checkouts, data entry & maintenance.

We can say M-Commerce is online anywhere, anytime and on any device and is providing new business opportunities. ‘Smartphone penetration in India will increase from 8% by end of 2014 to more than 21% in 2017 ensuring that large population is commerce ready’ says K.Gupta, analyst, e-business & Channel strategy, Forrester researcher. Today there are about 44 million users of smart phone in India whose rate are growing at 150% per year.

Mobile commerce is still in its development phase in India primarily used for basic banking, purchase of railway tickets, payment of utility bills etc. But its presence is being felt in the business world. various companies like ICICI, Reliance, Airtel, Tata etc are using this technology or commerce platform to help and facilitate their customers for various functioning & services these are changing the size and style of our wallet. Mobile commerce offers various benefits like ubiquity, personalisation, flexibility, distribution, instant connectivity and immediacy. The coming world will be able to shop using a handheld computing device, PDA, Wearable computer or Smart device in virtually any place- Malls, Restaurants, Hotels, Airport etc. Ease of Internet access and navigation are the critical factors that will result in rapid adoption of M-commerce.

Researchers observed that customized and innovative services, right regulation and right models will drive the future Ecommerce and M-commerce and it will occupy large segment in Indian market.

There are about 121 million internet user i.e. internet penetration is only about 10% in India in comparison to US and China where it is about 81% and 36%. The price economisation by the broadband providers has given a consistent pace to the rise of Internet users.[16] and this number is expected to touch 1.2 billion with monthly growth of 0.71% by 2015 according to the press release of TRAI, dated 29 May 2013. and will become the second largest mobile market after China.[17].

Characteristics of M-commerce

- **Mobility:** Users can carry their smart phones or other compatible devices such as Tablets, PDA, etc easily and can perform the different M-commerce functions
- **Ubiquity:** Information can be accessed easily and in a real-time environment.
- **Varied users:** M-commerce has varied users from elementary school students to Grandpas, at varied locations.
- **Ambidextrous:** People use M-commerce for work & Play i.e. for Business purpose and for personal fun.
- **Willingness:** People are willing to pay for mobile services.

II. Literature Review

Mobile commerce after E-commerce in India

E-commerce is growing at a fast pace in today's scenario. It is not only used for purchasing orders of electronic goods but also for other goods so there is need for development of E-commerce protocols that can ensure confidentiality, integrity & reliable exchange and atomicity. [1] People around the world are now making use of communication centric and computing centric devices for electronic communication facilities in their daily lives, which involves a formal interaction between the parties who have never met before. Thus these communication networks have facilitated remote working & conduct business by creating other virtual shared environments.[2] M-commerce is a wireless network and covers all types of trades whether it is Business to Business (B2B), Business to Consumer (B2C) and Consumer to consumer (C2C). The increased demand of trade and commerce has forced the corporate world to introduce a new platform for commerce which can reach the masses and M-commerce having unique characteristics over E-commerce have attracted massive traffic.[3] Mobility is an advantage of M-commerce over the E-commerce as M-commerce has broken the location barrier to access media such as T.V, Internet etc. M-commerce with its ample abilities is getting more popular & more complete compared to E-commerce. M-commerce has several advantages to the users which they do not get from E-commerce.[4] Today corporate conduct online business in four major areas i.e. secure distribution & information, online banking & Billing, Corporate purchasing & value chain trading, direct marketing, Selling & services[5] Practitioners & academicians have also attracted towards M-commerce & after 2000, research activities have increased significantly which makes us to believe that M-commerce is pervasive. M-commerce research and avenues for researchers will definitely sprout in future.[6] Mobile commerce services and their usage have now become burning issues among marketing scholars & information systems. Now many service providers want to take advantages of the business opportunities offered by M-commerce so they are making substantial investments in M-commerce business. Value added services in M-commerce have become a toll to take competitive edge in the market place for eg: Mobile banking represents additional services in financial sector which adds mobility to internet banking used over fixed networks.[7] Mobile commerce has the potential to bridge the digital divide as it has the opportunities to connect businesses, small organizations and consumers and allow to reach one another easily than ever before.[8]

M-commerce issues in India

(Gupta & Vyas, 2014) M-commerce is complex to adapt for Indians as it is at an emerging level in India. Now Indian users have started using M-commerce for web access, surfing & a few times shopping. They have also focused on how M-commerce has evolved & is developing in India along with some benefits & drawbacks of M-commerce in India.[9] (Batra & Juneja, 2013) In their research they listed the issues faced by the M-commerce industry and also discussed about the internet speed, security issues to pay online & make purchases that are not sufficient in India.[10] (Tandon Mandal & Shah, 2012) further extended the research & explored the possible issues in M-commerce and discussed the challenges associated with wireless technology protocols like GPRS, WAP, UMTS.[11] The rapid growth of emergence of m-commerce makes it difficult to analyse the technological problem associated with it or introduced, specially the privacy issues & security issues related problems [12] Security issues specially where exchange of money is involved is a challenge both for the user & the M-commerce service provider because M-commerce is not possible without a secure environment.[13] Trust of the business operator & clients on the use of the internet for doing business is another hurdle due to which they

revert back to the traditional methods of doing businesses. Educating the users using E-commerce is the most crucial element but still it is in its infancy stage. Programmes like Trojan horse which can be easily sent to remote computers with the help of email attachment can by-pass the authentication & authorisation mechanism used in E-commerce supposed to be the greatest threat to the online commerce platform [12](Varshney G & Madan P, 2010) they have stressed on the need of mobile user views to be involved in the design of mobile devices and also the collaboration of handset manufacturers and software engineers providing M-commerce platform.

III. Current scenario of Mobile commerce In India

The number of telephone subscribers in India increased from 996.49 million at the end of Mar-15 to 1006.96 million at the end of June 2015, registering a growth of 1.05% over the previous quarter. This reflects year-on-year (Y-O-Y) growth of 6.79% over the same quarter of last year. The overall Teledensity in India is 79.98 as on 30th June, 2015.

Trends in Telephone subscribers and Teledensity in India



Subscription in Urban Areas increased from 577.18 million at the end of Mar-15 to 584.21 million at the end of Jun-15, and Urban Teledensity increased from 148.61 to 149.70. Rural subscription increased from 419.31 million to 422.75 million, and Rural Teledensity also increased from 48.37 to 48.66 during the same period. Out of the total subscription, the share of the Rural areas declined from 42.08% at the end of Mar-15 to 41.98% at the end of Jun-15. With a net addition of 10.91 million subscribers during the quarter, total wireless (GSM+CDMA) subscriber base increased from 969.89 million at the end of Mar-15 to 980.81 million at the end of Jun-15, registering a growth rate of 1.13% over the previous quarter. The year-on-year (Y-O-Y) growth rate of wireless subscribers for Jun-15 is 7.20%. Wireless Tele-density increased from 77.27 at the end of Mar-15 to 77.90 at the end of Jun-15. Wire line subscriber base further declined from 26.59 million at the end of Mar-15 to 26.15 million at the end of Jun-15, registering a decline of 1.66%. The year-on-year (Y-O-Y) decline in wire line subscribers for Jun-15 is 6.69%. Wireline Teledensity declined from 2.12 at the end of Mar-15 to 2.08 at the end of Jun-15. Total number of Internet subscribers has increased from 302.35 million at the end of Mar-15 to 319.42 million at the end of Jun-15, registering a quarterly growth rate of 5.65%. Out of 319.42 million, Wired Internet subscribers are 19.21 million and Wireless Internet subscribers are 300.22 million.[18]

Wireless Subscribers	
Total Wireless Subscribers	980.81 Million
% change over the previous quarter	1.13%
quarter Urban Subscribers	562.95 Million
Rural Subscribers	417.85 Million
GSM Subscribers	930.92 Million
CDMA Subscribers	49.89 Million
Market share of Private Operators	91.75%
Market share of PSU Operators	8.25%
Teledensity	77.90
Urban Teledensity	144.25
Rural Teledensity	48.10

Source: The Indian Telecom Services Performance Indicators April - June, 2015

IV. Problems & Issues in M-commerce in India

Mobile commerce in India is still at nascent stage or embryonic stage & companies are still in experimentation stage for growth of M-commerce. Though M-commerce could provide convenient and hassle free environment for companies and for customers, yet there are many reasons people are not using M-commerce so widely:

Lack of Awareness & Personal Touch: Today people in India are using smart phones but still they are not aware about the applications in smart phones and what they can do with their smart phones. They feel insecure while making money transaction over mobile phones. It would be correct to say that it will take a while for business and consumers to accept M-commerce. Since the consumers do not get face to face customer services so it is less personal and hence people tends to avoid its usage. In India huge numbers of consumers have tendency to purchase offline as they do not believe in returning policies through M-commerce.

Usability problem and language barrier: One of the major issues in adaptability of M-commerce is limited storage capacity of devices, small size screen and keyboard etc. Large screens and use of colours can enhance usability but at the expense of battery life which is another issue as smart phone requires regular charging. The language problem is another major issue in usability of M-commerce since all our country people are not well versed with English language. Also user interface is often difficult to use. Use of graphics is limited in various M-commerce applications.

Technical limitations and low internet connectivity: In India we have insufficient bandwidth as the demand is increasing day by day. Also the major issue that service providers are facing is licensing of 3G and 4G. In India transmission & power consumption limitation are quite often. The other technical limitation covers poor reception in buildings, multipath interface, and distance limited connections. India is a big country with variety of weather and terrain which too is hindrance in technical advancement.

Security Issues: Consumers fears for their privacy using M-commerce as it is easier for information to get stolen. Also the speed of internet does not allow user to make payment efficiently that is why many times order remains pending and many times cancelled. People in India are technology lovers but not users. As all the smart phones does not have security software available which makes them vulnerable to the threats of hacking, phishing and identity theft. In India concept of crypto accelerators and biometric authentication is also in initial stage making transactions less secure.

Internet Infrastructure: In India we observe that internet infrastructure is growing rapidly yet the amount of investment & technology needed is not sufficient for huge populated country like ours. The infrastructure is needed to increase the speed & security which is also major hindrance to security related problem faced by the business and customers.

V. Future Challenges in M-commerce

Next generation future mobile commerce will allow user to do any sort of transaction including buying and selling of the goods, asking any services, transferring the ownership or rights, transacting and transferring the money by accessing wireless internet service on the mobile handset itself. Presuming its wide potential reach all major mobile handset manufacturing companies will make WAP enabled smart phones and providing the maximum wireless internet and web facilities covering personal, official and commerce requirement to pave the way of m-commerce that would be very fruitful for them. It will be such that broad reaches ability/ Ubiquitous computing will allow people to be contacted anywhere and at any time. It should be convenient and provides instant connectivity also localization of products and services-knowing where the user is located at any given time shall be provided. Next step in M-commerce should be regarding security which will be Very personal-Device owner and exclusive access to the contents/services and the service providers which keep the identity of the owner.

VI. Conclusion:

In the previous few years it has been seen that the potential of M-commerce has paved a way to new emerging practices for businesses in today's world and India is also showing the positive prints of adaptation of M-commerce platform for the same. The increasing demand of M-commerce applications in India shows that it has penetrated the Indian market but still M-commerce is at nascent stage in India and is evolving every passing day. And some barriers like lack of user trust and awareness in M-commerce and m-commerce technology, usability problems & language barriers, low internet connectivity, technical limitations and doubts about security and lack of widely accepted standards can little hinder the growth of m-commerce in India. But from now the mobile commerce technology will become more secured as the M-commerce service providers are spending more to protect their customer's security and privacy from intrusions and hacking. Now Government is also developing internet infrastructure which is needed to increase the speed & security which is also major

hindrance. Thus overcoming these problems & issues no one can stop m-commerce to expand its growth and help the people to connect to the global business.

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