



Review Paper

## M-Commerce: A Revolution in India

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### Abstract

*Mobile commerce, also known as m-commerce is a process of performing business transactions using mobile and other handheld devices which are connected through wireless network called WAP. Buying and selling of goods and making mobile payment over internet, booking online tickets, downloading games, audios and videos, using unlimited online softwares, getting mobile tickets and many more are part of mobile commerce. This new trend of commerce is rephrasing the business and changing the emerging trend drastically. Today technological advances, speed of new technologies, reducing geographical constraints and rising power of consumers and their ability to get what they want, when they want it and from whomever they want. When we talk of technology internet has made the most remarkable advancements in last few years.*

**Keywords:** M-commerce, E-commerce, WAP, Technology, Flexibility, PDA.

### Introduction

M-commerce is sale and purchase of goods over the internet by the use of mobile phones. It refers to WAP enabled smartphones equipped with Bluetooth technology provides users the facility to conduct business transactions. Wireless handy devices are like cellular phone or tablets. It is known as next generation M-commerce, which enable users to access the internet without requiring a place to plug in. This technology is called wireless application protocol (WAP). M-commerce is fast gaining prominence as it is very easy and convenient. The ease of access, cost effectiveness and features like anytime anywhere has ultimately been motivating factors for the growth of M-commerce in India. There are around 371 million mobile internet users in India and this figure is rapidly increasing day by day. Mobile commerce is the new choice of modern world. It is gaining acceptance mostly by all the sections of society. This acceptance and growth can be witnessed socially and demographically. Applications of M-commerce like M-banking, M-shopping, M-entertainment also saves a lot of time which is boon for modern people who are so busy in their fast paced lives.

M-commerce was born in the city of Helsinki. Mobile commerce was first introduced in Helsinki when a coca cola vending machine operated through mobile phone was set up. First phone based banking service was launched in Marita bank in 1997, which later on enabled payment through text message and thereby paved the way for m-commerce. In 1998, the first sales of digital content as downloads to mobile phones were made possible when the first commercial downloadable ringtones were launched in Finland. In the 2000 Mobile commerce related services spread rapidly. Norway launched mobile parking payment. Austria offered train ticketing through

mobile device. Japan offered mobile purchased of airline tickets. PDA and cellular phones have become so popular that many businesses are beginning to use mobile commerce as a more efficient way to communicate with their customers. In order to exploit the potential mobile commerce market, mobile phone manufactures such as Samsung, Sony, Blackberry and iphone are working with carriers such as AT and T wireless, Verizon wireless, Vodafone, Telenore, NTT DoCoMo, Bharti Airtel, sprint Nextel corporation and Reliance Communications are developing WAP enabled smart phone and offer complete range of telecom service. Smart phones offer fax, email and phone capacities.

There are new trends reshaping the world. Mobile commerce is sometimes described as a wireless extension of wired electronic commerce which is easily accessible anytime from anywhere. Products and services like M-shopping, M-ticketing, Mobile money transfer, Mobile banking, Mobile ATM, Location based services etc; are the factors which are making M-commerce so popular day by day. Mobile commerce (M-commerce) is a part of electronic commerce, which includes all e-commerce transactions, carried out using a mobile (hand held) device. M-commerce is the way of doing business in a flexible way, by making the transaction anytime from anywhere. M-commerce depends on the availability of mobile connectivity. We have become used to making mobile phone calls anywhere, at any time in the same way consumers are able to shop using a hand held device, PDA, mobile and Tablet, wearable computer or smart wireless devices. M-commerce offers multiple advantages like ubiquity, personalization, flexibility, and distribution, instant connectivity, immediacy. There are many ways in which consumers of India can be benefited from advancement of M-commerce.

M-commerce provides instant connectivity between mobile users irrespective of their varied geographical locations. Mobility implies portability like users can carry mobile everywhere with them and do anything, anywhere in real time using mobile devices and broad reach refers that M-commerce has no geographical constraint by sitting at any corner of the country users can place order online and the ordered stuff is delivered to the users place safely on time. Mobile commerce is based on wireless mobile communication system, which utilizes cellular technology. Applications of Mobile commerce provide flexibility, convenience and ease of use.

M-commerce provides services like mobile entertainment, travel ticketing, booking, games, product locating, searching, wireless reengineering, mobile financial applications, healthcare services, shopping almost everything online using Apps etc.

### Applications of M-commerce

**M-Shopping:** Mobile shopping is the process of purchasing goods and services through mobile devices. Almost all big retailers offer online shopping options to their customers. Presently the highest boom is in this sector. People spend more time on mobile phones than desktop computers main reason is its mobility and portability feature. Shopping using mobile phone has become easy and smooth. Best quality, trendy, reasonable products are easily available through M-shopping on mobile with secured mobile wallet payment system.

**Entertainment:** Entertainment is also one of the important features of Mobile commerce. Playing online games, watching online videos and listening songs on smart phone devices played an important role in development not only for entertainment industry but also for M-commerce industry. Entertainment applications have captured a major share in mobile commerce market and in future this may become the dominated part of mobile commerce. India is a country full of youth. All the features and services of Mobile commerce entertainment is possessing popularity among youths.

**Education:** It is also one of the main available applications of M-commerce. One can access lot of contents without any time and location constraint anytime anywhere using hand held devices. Many of the online journals, books, research papers and articles have their dedicated application help the students in their education and learning.

**Travel and Ticketing:** With the introduction of internet enabled fast speed smart phones, mobile users have started booking online tickets easily. Booking tickets has become easy these days. Be it for railways, road or air travelling through mobile ticketing apps tickets for any medium of transport can easily be booked. Indian Railways launched official mobile application which helps consumers to check train, schedule, availability, booking, cancellation and other related functions. There are many apps for road transport booking like Ola cab, Ubar, Jugnoo etc... Almost all airlines have their mobile

applications for various mobile platforms to provide facility to their customers.

**Banking Apps:** Mobile banking is an integral part of mobile commerce. Many banks provide online banking facility. Mobile banking services can be classified in two categories transaction based and non transaction based. Online facilities like Fund transfer, Micro payment, Bill payment, Tax payment, Request for check, Request for mini statement, various statements etc facility can be availed. Mobile banking services are provided by all leading banks like Axis, Bank of Baroda, and SBI etc<sup>1</sup>.

### Review of Literature

Batra and Juneja<sup>2</sup> have conducted their research on mobile commerce in India. It focuses on issues faced by M-commerce Industry. He has quoted some definitions of Lehman Brothers, Ovum and Forrester. Many aspects of Mobile commerce had been discussed. They deeply studied the sales and available users of smart phones in India. According to him main growth drivers of m-commerce in India are Instant connectivity, Personalization factor, Mobility factor, Immediacy, Localization etc.

They very much emphasised and focused on available mobile commerce application in India like entertainment, ticketing, e-auction, travelling, m-shopping etc. To summarize their research M-commerce has tremendously changed the life of users. Entire world is just one touch or one click away. They have discussed the benefits but not discussed about the security issue and speed which plays very important role in online transactions.

Tandon<sup>3</sup> as per his study the field of wireless network combined with mobile technological advancement continues to make lives of the common citizens easy, smooth and comfortable. Mobile commerce continues to impact the global business environment, technologies and applications exponentially. He also discussed the benefits like ease of use, personalization, anytime anywhere and cost-effectiveness along with drawbacks like security and low speed constrain.

Tiwari<sup>4</sup> M-commerce is defined as “any transaction involving the transfer of ownership or rights to use goods and services, which is initiated and completed by using mobile access to computer mediated networks with the help of an electronic device.” As per research Mobile commerce is not only frontier for doing global business and trade but also offers multiple benefits to the business, government and consumer on massive scale. Many companies and organisations in India are adopting M-commerce to keep pace with changing trend and demand. M-commerce is in very early stage in India although encouraging figures of mobile users and increasing internet subscribers show advancement in mobile technology and its usage is not limited for making basic calls and sending messages but there are ample of tasks and function which can be performed by using M-commerce application.

Miraze, Asadollahi, and Jahanshahi<sup>5</sup> have proposed a study about mobile wireless technologies and relationship between E-commerce and M-commerce, what factors drives consumers and business for E-commerce and M-commerce, fundamentals and applications of E-commerce and M-commerce. They have stated various definitions of different authors along with facilities like travel, ticketing, education, health care and shopping provided by M-commerce. They discussed the scenario of M-commerce in China, Brazil and India between 2010 and 2011. Also suggested M-commerce providers to improve user interface and measures to eliminate pitfalls related to Mobile commerce.

Sujata P. Deshmukha, Prashant Deshmukh and G.t. Thampi<sup>6</sup> have conducted the research on Mobile commerce in Indian context in which they described first about E-commerce is how it is growing rapidly in India. They stated how about the multiple benefits being offered by E-commerce first then what M-commerce is all about and how fast M-commerce is surpassing E-commerce. Benefits of M-commerce consists of reduced prices of smart phones, mobility feature, easiness of use, easy availability of internet, tech savvy youth population they also discussed the kind of services and facilities telecom companies are providing these days to make use of E-commerce and M-commerce smooth. They also stated about the prevailing challenges in India like security issues, speed and language barrier. A feature of E-commerce and M-commerce was also highlighted in detailed in research paper. At last research paper ended with conclusion with the statements that there no doubt about the popularity of E-commerce and M-commerce and steps being taken by RBI.

**Objective of the Study:** This research shall focus on factors affecting the use of M-commerce in by Indian consumers. As the concept of M-commerce is new to India, still it is in growing stage so the objective behind conducting this research is to know the influencing factors which make consumers use M-commerce: i. To study the factors of M-commerce. ii. To study the emerging trends in Indian business. iii. To Study various platform of M-Commerce.

## Research Methodology

Primary and secondary data collection both the research methodologies are used in this study. Primary data is collected by interviewing some management students as well as the faculty members of management colleges. Our secondary data collection is mostly internet based study combined with few articles, management journals, online research reports and books on M-commerce.

## Findings

There is already widespread penetration of m-commerce in India. Due to many factors the use of m-commerce has increased by Indian consumers in India. Indian users have high

expectations from mobile web world. One of the major expectations is faster loading of pages in comparison to desktop website. Around 71% of the Indian smart phone users prefer website to load as faster as the regular website. i. India the second largest smart phone market globally, is expected to witness manifold growth in the numbers of smart phones to over 650 millions in next four years, according to a study by networking solutions giant Cisco. ii. As per report from IAMAI the country is estimated to have 371 million mobile internet users by June 2016. This excessive use of mobile internet is due to decline in average selling price. iii. 71% of the 371 million of mobile internet users belong to the urban area in India. iv. Around 65% of the Indian population in in the age group of 15-35 years. Since youth is the early adapters of the latest technologies so this is predicted as a very positive sign for M-commerce industry<sup>7</sup>.

## List of m-commerce in India

**Online Stores:** Presently the lifestyle of the people is extremely busy specially in cities as male and female both are working , both are busy with their work and commitments, they are left out with only a little spare time. With wide availability and usage of smart handheld devices people find internet as the easiest medium to fulfil their needs and requirements. M-commerce makes the shopping procedure much easy as all the sites are available there on mobile, just one touch away, which gives users facility to shop online anything, anytime, anywhere. All these features have made online shopping so immensely popular. Few best online shopping Apps are mentioned below: i. Amazon.in, ii. Flipkart.com, iii. Snapdeal.com, iv. Koovs.com, v. Yepme.com, vi. Jabong.com, vii. Myntra.com, viii. Askmebazaar.com, ix. ebayinc.com, x. 10. Voonik.com<sup>7</sup>.

**Mobile Banking:** Mobile banking service is provided by a bank or other financial institution on a 24 hour basis. Transactions of Financial and Non-financial nature are performed in mobile banking. The types of financial transactions which a customer may transact through mobile banking include obtaining account balances and list of latest transactions, electric and other bill payments and fund transfer and many other functions are performed under mobile banking<sup>1</sup>. Some mobile banks in India are: i. hdfcbank.com, ii. icicibank.com, iii. onlinesbi.com, iv. axibank.com.

**Mobile Wallets:** Mobile wallet is mobile payments mechanism under which mobile user opens a mobile wallet account in a partner bank and deposit some money in the account which can be used for making online payments. Issuing bank registers the mobile number and gives a mobile wallet account number to the user. While making payment the user enters the account number in the mobile phone and sends the bank via SMS, bank checks available balance in mobile wallet account if balance is sufficient account is debited from that much requested amount.

A mobile wallet, is gaining day by day in India. One important feature on mobile wallet in user need not to have a bank account specially in developing countries like India where still many citizens do not have a bank account can open their account in mobile wallet partner banks and can make easy online and offline payments. Here are few mobile wallet companies in India. i. PayTM, ii. Momoe, iii. PayUmoney, iv. Mobikwik, v. Citrus, vi. State Bank Buddy, vii. Citi MasterPass, viii. ICICI Pocket, ix. HDFC Chillar, x. LIME

## Boosting Factors of M-Commerce

Mobile commerce is characterized by some special features that generate certain advantage which is rapidly making it popular over conventional form of commercial transactions.

**Mobility:** Mobile commerce enables users to do online transaction with their mobile phones which are very handy, so they can easily shop, play, download, make payment read online anytime and anywhere.

**Ubiquity:** Ubiquity means usage of online services and carrying of online transactions is not affected by the user's geographical location. This enables a user to even compare real prices with the online while shopping in market.

**Wide reach:** Wide reach is also one of reasons of remarkable boost of Mobile commerce in India. The penetration of M-commerce in Indian population is much more than the services like Radio, Television and Computer. People of all levels and categories are using mobile phones and availing mobile services nowadays. Mobile phones and internet provides fast connectivity to the user and its reach is also very high as compared to other traditional commerce.

**Fast connectivity:** Feature of GPRS (General packet radio service) mobile devices is offering consistent connectivity and services, which help people to remain always connected with others. This feature brings consistent connectivity and services, which help people to remain always connected with others. This feature brings convenience to the consumers. Geographical location is no more a constraint nowadays. All credit goes to Mobile commerce and its fast connectivity.

**Real Time Service:** It is the possibility of real time of services. Some services require real time data means quick and critical data. Under which time and quickness matters a lot. For example in case of stock market a broker need a real time data in a very fast manner.

**Localization:** Mobile positioning technologies, such as GPS (Global Positioning System), enable companies to offer services and goods to the user based on the current location. Tracking and reaching to customer has become quite easy. So, the localization feature of Mobile commerce meets the consumer's requirement and localizes the contents and services.

**Personalization:** Mobile devices are carried for personal use by an individual, that's why they are ideal for personal information. Mobile technology provides the benefits to send personalized messages to different people and various groups. Mobile database have become a primary requirement for providing personalized services and compiling personalized information.

**Easy access to Smartphone:** The Smartphone industry has developed manifolds which have led to massive production of Smart phones at low prices. So smart phones are not at all expensive and common people can easily afford it. With the advancement of technology and cut throat competition amongst the mobile companies customer and getting best quality, highly featured smart phone on a very reasonable and affordable price. Mobile companies are attempting to increase their market share by providing best products and services at good prices. This is one of the features which led to the growth of M-commerce in recent years.

**Low rate of mobile internet services:** The mobile internet packs are now available at cheap rates unlike the past times when they were so expensive that only affluent people could afford them, 4G, 3G and 2G services are available at cheap rates which are within the reach of common people; this is also a major factor for the growth of M-commerce in India. Major network providers like Vodafone, Airtel and Idea bring new schemes of mobile internet to attract consumers. As Idea and Airtel are offering very attractive and tempting 4G internet plans for the consumers at very low rates.

**Ease of use:** Wireless devices like mobile give the freedom to do the things like booking tickets, shopping, and making hotel reservations, playing games, paying bills downloading videos and files etc., anytime anywhere. In India 65% population is young and new generation wants fast action and processing, features of M-commerce enable them to easily perform all the required tasks with ease<sup>8</sup>.

## Limitations Related to M-Commerce

**Security:** The very main issue related to M-commerce is security. Users have doubt in mind while making online payment as they need to share the information related to debit/credit card over the internet. Another threat is of hacking and virus. Hackers may hack the device and steal all personal and important information from mobile. Viruses also damage the handset if the security measures are not proper.

**Language barrier:** In India most of people are not well versed with English language, so for them it is not possible to do transactions through mobile due to this language barrier. This is also one of the major issues.

**Lack of awareness:** M-commerce is popular in cities only not in rural areas. Even today many people in India are not aware of mobile phones and internet. Those who are aware are

still hesitant regarding buying online, making payment online, how to return if not satisfied with delivered one. Moreover people still have suspicions and reservations regarding services offered by M-commerce.

**Data transmission rate:** Speed is one of the biggest issues of M-commerce. Common users still get the speed of 2mbps for 3G and 4G network mobile phones, although data transfer at 14.5mbps can be attained but the charges for such service are very high.

**Lack of network coverage:** Network coverage is also a big also. Many time users don't get connectivity at many geographical locations without coverage using M-commerce is just not possible.

**Low graphical resolution:** Products and offers are not very clearly visible on mobile in comparison to desktop or laptop. Youngsters are ok with it but middle aged and old aged people do not find the graphical resolution very convenient to look upon and work<sup>8</sup>.

## Conclusion

India is experiencing a boom and a kind of revolution in business sector. Smartphone's and internet have changed the online shopping scene in India completely. The companies by adopting M-commerce can transform the business completely but the opportunity is yet to be tapped due to many constraints. As illiteracy and low speed of internet are the major constraints which need to be resolved fast to make optimum use of this technology. M-commerce has made the online trading and shopping so easy and fast like never before. People can access their bank accounts, book tickets and do other stuff and manage their uncountable work easily. M-commerce is a real revolution in India business sector.

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