

Emergence of M-Commerce in India

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Abstract

Mobile Commerce or m-commerce can be referred as a wireless electronic commerce in which user can be involved in any kind of transaction including buying and selling of goods, seeking services, transacting and transfer of money over mobile devices using wireless internet (Singh & Islam, 2015). Mobile Commerce is also known as M-Commerce. M-Commerce is the buying and selling of goods and services through wireless handheld devices. M-Commerce is the process of paying for services using a mobile phone or personal organizer. M-Commerce is the use of mobile devices to communicate, inform, transact and entertain using text and data via a connection to public and private networks. M-commerce is nothing but use of mobile devices to transact, communicate and entertain (Shettar, 2016). M-commerce is defined as 'the ability to purchase goods anywhere through a wireless Internet-enabled device. Primary mobile communication exists through web-enabled wireless phones. M-commerce was born in 1997 when the first two mobile-phones enabled Coca Cola vending machines were installed in the Helsinki area in Finland. India is the second largest mobile and online market in the world. The numbers of internet users in India are expected to cross 666.40 million in 2023. M-commerce is going to play an important role in every sector of life in future. With heavy competition in the markets, emerging players, different marketing strategies and more consumer awareness gives a boost to the m-commerce growth. M-commerce is such a technology which offers new business opportunity to enterprises and consumers within reach, even as barriers to its development fall away. Increasingly people are using mobile applications instead of web applications. Mobile commerce is next generation mode of business. The present study attempts to analyze the concept of m-commerce and review of literature on m-commerce. Also studied the services and application of m-commerce and factors affecting the growth of m-commerce in India.

Keywords: M-Commerce, E-Commerce, India.

Introduction:

Mobile Commerce or m-commerce can be referred as a wireless electronic commerce in which user can be involved in any kind of transaction including buying and selling of goods, seeking services, transacting and transfer of money over mobile devices using wireless internet (Singh & Islam, 2015). Mobile Commerce is also known as M-Commerce. M-Commerce is the buying and selling of goods and services through wireless handheld devices. M-Commerce is the process of paying for services using a mobile phone or personal organizer. M-Commerce is the use of mobile devices to communicate, inform, transact and entertain using text and data via a connection to public and private networks. M-commerce is nothing but use of mobile devices to transact, communicate and entertain (Shettar, 2016). M-commerce is defined as 'the ability to purchase goods anywhere through a wireless Internet-enabled device. Primary mobile communication exists through web-enabled wireless phones. With the growing momentum of wireless revolution and M-Commerce explosion, it is evident that mobile devices are becoming a critical component of the new digital economy. M-Commerce is a type of e-commerce conducted through mobile devices such as mobile phones, personal digital assistants (PDAs) and other devices with a wireless connection. It is also said that it is the next generation wireless E-commerce that needs no wire and plug-in devices. Mobile commerce is usually called as 'M-commerce' in which user can do any sort of transaction including buying and selling of goods, asking any services, transferring ownership or rights, transacting and transferring money by accessing wireless internet service on the mobile handset itself (Chib, 2011)

History:

M-commerce was born in 1997 when the first two mobile-phones enabled Coca-Cola vending machines were installed in the Helsinki area in Finland. The machines accepted payment via text messages (SMS). The first mobile phone-based banking service using SMS was launched in 1997 by Merita Bank of Finland. 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 by Radiolinja (now part of Elisa Oyj). Two major national commercial platforms for mobile commerce were launched in 1999: NTT DoCoMo's i-Mode Internet service

in Japan and Smart Money in the Philippines. Mobile-commerce-related services spread rapidly in early 2000. Norway launched mobile parking payments, Austria offered train ticketing via mobile device and Japan offered mobile purchases of airline tickets. The first conference dedicated to mobile commerce was held in London in July 2001. The first book to cover mobile commerce was Tomi Ahonen's *M-profits* in 2002. The first university short course to discuss mobile commerce was held at the University of Oxford in 2003, with Tomi Ahonen and Steve Jones lecturing (Golden & Regi, 2013).

Table 1.1
No. of Internet Users

Sr. No.	Year	Users (Million)
1	2015	259.88
2	2016	295.39
3	2017	437.40
4	2018	483.00
5	2019	525.30*
6	2020	564.50*
7	2021	601.00*
8	2022	634.90*
9	2023	666.40*

Source: Statista 2019. *-Projected.

As the number of mobile internet users is increasing by years to years, mobile users in India are becoming more data hungry. In 2018, the number of mobile internet users rose to 12% from in the previous year. These changes can be attributed to the fact that with the improving mobile infrastructure and the availability of improved high speed 3G and 4G connectivity, people are shifting to apps and internet for most of their activities (Shettar, 2016). India is the second largest mobile and online market in the world. The numbers of internet users in India are expected to cross 666.40 million in 2023. One of the main reasons for this popularity is internet facility in mobile at feasible rate. In today's economic scenario, business and public sector are utilizing large number of cell phones. Even mobile phones/smart phones can be used for payment. Reliance also offers the above discussed services. Kenyan Pesa, an open wallet system, works for rapid growth in M-commerce service in India.

Objectives of the Study:

1. To understand the basic concepts of M-Commerce.
2. To analyze the literature on M-Commerce.
3. To study the Services and Applications of M-Commerce.
3. To study the factors affecting growth of M-Commerce.

Methodology:

The present study is quantitative in nature and based on secondary data. The secondary data which were required for this study have been collected from the published and unpublished sources. The data have been collected through the sources such as, books, Journals, Periodicals and reports.

Review of Literature:

The different aspects of Mobile Commerce have been covered by several scholars. It is widely discussed in various research publications some of them have been reviewed in this section.

Du & Li (2019) explores the knowledge structure, development and the future trend of mobile commerce for researchers. They identify the main technology and models to improve customer satisfaction and adoption behavior in the background of the new era which provide decision support for practitioners. Compared with the existing literature reviews of mobile commerce, they make a set of knowledge maps to show the future trend of mobile commerce and analyze visual results based on I-model. **Shamsi & Afjal (2017)** made an attempt to identify the issues for the future growth of M-commerce with its present volume transactions in India and highlighted critical challenges before M-commerce would become an asset for common people. They observed that customized and innovative services, right regulation and right models will drive the future M-commerce and it will occupy large segment in Indian market. **Gupta & et.al (2016)** elaborates M-commerce is able to penetrate Indian market really or not, problems and issues with M-commerce in India and stopping M-commerce to expand its growth and help the people to connect to the global business. They found that, 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. **Naware Archana (2016)**

in her paper entitled M-commerce in India sheds light on the M-Commerce, its applications, advantages, disadvantages and the growth of M-Commerce in India. **Mishra & et.al. (2016)** finds that there is a lot of scope for M-commerce services in India. M-commerce is complex in nature and includes changing procedure in market and is in infancy stage in India. Suggestions for future research and implications to service providers and policy makers discussed. **Shettar (2016)** tried to provide an overview of the fundamentals concepts of M-Commerce and summarized the different technologies used for Mobile Commerce, different services and applications of Mobile Commerce and also Mobile Internet Users in India. She found that, M-Commerce market grows in India because so many growth drivers are favorable in India and 71% of the estimated 371 million mobile internet users in India will belong to urban area. However, the rural area still holds an enormous potential to drive the future growth of mobile internet in India. **Kaur & Singh (2016)** analyses the significant growth of Mobile commerce in India. They conclude as mobile commerce needs some development inspecific area like secure transaction, better shopping experience and enhanced graphics. **Goi (2016)** reviewed the M-Commerce in Malaysia. He found that with the implementation and development, as well as users' acceptance and satisfaction, M-Commerce is growing rapidly in Malaysia. **Singh Aarti (2016)** identifies the progress and future impact of M-commerce in e-commerce. She Concludes as M-commerce helps in improving relationship with customer and provide helpful environment to do business transactions and business online. **Sharma (2016)** highlights the key characteristics of the E-Commerce and M-Commerce and the demand for these into the present scenario. The present study also evaluates the difference between the E-Commerce and M-Commerce. **Manpreet Kaur (2015)** brings out the facts about the feasibility of M-commerce today, its growth and the strength and opportunities, the weaknesses and threats lying ahead. The study found that, many companies in India started using mobile for doing Business, Financial sector, Telecom sector, Banking and Real Estate are some of the sectors using mobile commerce. The study conclude as, there has been tremendous growth in wireless technology in the last decade. **Tarandeep Kaur (2015)** evaluates the position of E-commerce and M-commerce in India which will be further helpful for increasing productivity in India. The study concluded as,

customized and innovative services, right regulation and right models will drive the future E-commerce and M-commerce in India. **Dhingra & et.al (2015)** identifies the progress and future direction of M-commerce. They found that, today mobile is not using for sending message or calling but it also used for other ways like web browsing etc. The study concludes as, the technology used in M-commerce based on Wireless Application Protocol (WAP), M-commerce helps in improving relationship with customer. **Satinder & Niharika (2015)** identifies facts about the feasibility of M-Commerce in India and its growth and the strength and opportunity, weakness and threats lying ahead. **Singh & Islam (2015)** made an attempt to delineate the diffusion of m-commerce in India, factors affecting growth & adoption and transition from e-commerce to m-commerce in Indian context. This paper also discusses the benefits and drawbacks of m-commerce to business players in India. **Gupta & Vyas (2014)** elaborates the factors affecting the adoption of M-Commerce and how M-Commerce is developing in India. They conclude as, still there is lot of work, which is to be done for M-Commerce. Internet connectivity and mobile networking is still not accessible to entire population. **Mandaliya (2014)** introduces the process of online transactions using mobile phones, its benefits and counterparts as well as the level of adoption of the m-commerce by the people and concludes as m-commerce explores the future opportunities and the challenges for the m-commerce. **Golden & Regi (2013)** concludes the future of m-Commerce seems extremely bright because several experiments are going on to introduce the upgraded version of mobile likely to emerge with the evolution of 4G mobile technology. **Hameed, & et. Al. (2010)** presents a review of mobile commerce business models and their importance for the creation of mobile commerce solutions. They found that, the strategic level focus and understanding of business models for mobile commerce enables adopters to focus on developing innovative value added solutions that exploit the commercial benefits of mobility. **Hsieh (2007)** overviewed the fundamentals about m-commerce and made an attempt to help business managers, particularly those without IT background, to understand the key elements and basic concepts of m-commerce and to assess the impact of m-commerce on current and future businesses as well as to identify new business opportunities. **Antovsky & Gusev (2002)** describes the factors that affect the introduction of a

successful M-Payment system - and use these factors to examine whether the J2ME technology is suitable for building such successful M-Payment systems.

Concept: M-Commerce:

“Mobile Commerce is any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated or completed by using mobile access to computer-mediated networks with the help of an electronic device.” This definition provides for a differentiation of Mobile Commerce from other related fields such as Electronic Commerce, Electronic Business and Mobile Business (Chib, 2011).

Lehman Brothers - “M-commerce is the use of mobile devices to communicate, inform transact and entertain using text and data via a connection to public and private networks.”

Ovum -“The core of mobile E-commerce is the use of a terminal (telephone, PDA, PC device or custom terminal) and public mobile network (necessary but not sufficient) to access information and conduct transactions that result in the transfer of value in exchange for information, services or goods.”

Scope of M-Commerce:

M-commerce provides instant connectivity between mobile users irrespective of their geographical location and time of the day. With enormous growth of wireless and mobile technology and rapid penetration of mobile phones in developing countries worldwide, the scope of m-commerce has increased vastly. With the advent of super fast 4G access technology that ensures high speed data transfer rates, m-commerce is opening up new vistas of digital media applications. 4G technology, equipped with WiMax and UMTS standards for high speed mobile broadband internet connectivity, supports mobile multimedia application delivery at far greater bandwidths. So, it is now possible for mobile users to watch their favorite TV programmes or download and view famous movies in their mobile devices any time. The scope of m-commerce is all pervasive, and is gradually engulfing all aspects of lives of modern day citizens. Ranging from mobile banking, mobile browsing and mobile ticketing up to mobile marketing, mobile advertising and mobile computing, m-commerce is gradually becoming an important part of both corporate world and common people. With the prices of mobile phone decreasing exponentially

and the number of different mobile applications increasing, more and more consumers will indulge in m-commerce applications and soon it will become the preferred choice of the digital business world.

Table 1.2
Scope of M- Commerce

Scope of Mobile Commerce				
Mobile Customer Services	Mobile Content Delivery	Mobile Marketing & Advertisement	Mobile Enterprise Application	Mobile Governance Services
1. M- CRM 2. M- Banking 3. M- Payments 4. M- Auction 5. M- Share Trading	1. M- Radio 2. M- TV 3. M- Games 4. M- Movie 5. M- Study Material	1. M- Shopping 2. M- Coupons 3. M- Ticketing 4. M- Marketing 5. M- Advertisement	1. M- ERP 2. M- Cloud 3. M- Business Intelligence 4. M- Social Networking	1.M- Bill Payment 2.M-Tax Payment 3.M- Health Services 4.M-Judicial Services 5.M-Agri Services

Services and Applications of M-Commerce:

- 1. Mobile Ticketing:** Mobile Ticketing is the process where the customers can order, pay for, obtain and validate tickets from any location and at any time with the help of Mobile Phones. Tickets can be booked and cancelled on the mobile device with the help of various apps. Delivery of tickets to mobile phones can be done in the form of SMS or by MMS. Mobile ticketing is used in many applications like Airline, Cinema, Railway and Bus and Concert or Event ticketing.
- 2. Mobile ATM:** With the introduction of mobile money services for the unbanked, operators are now looking for efficient ways to roll out and manage distribution networks that can support cash-in and cash-out. Mobile ATM has been specially engineered to connect to mobile money platform and provide bank grade ATM quality.
- 3. Mobile Money Transfer:** It refers to payment services which are performed by using a mobile phone. With the help of this service anybody can transfer money from one person to other by using a mobile phone.
- 4. Mobile Content Purchase and Delivery:** Nowadays mobile purchase and delivery mainly consists of the sale of ring tones, wallpapers and games for mobile phones. The

revolutionary change in mobile phones, leads in increasing the purchase and delivery of full length music tracks and video. The download speeds also changed with 4G networks and it makes possible to buy a movie on a mobile device in a couple of seconds.

- 5. Mobile Information and Extended Packaging Services:** A lots of information services can be delivered with faster speed to mobile phone users in much the same way as it is delivered to PCs. These services include News, Stock quotes, Sports scores, navigation, weather reporting, Traffic reporting etc.
- 6. Mobile Banking:** Nowadays all banks and financial institutions use m-commerce to allow their customers to access account information and make transactions such as purchasing stocks, remitting installments, receive notifications, transfer money to other banks. Mobile Banking services are as follows;
 1. Mini statements and checking history of account.
 2. Checking the balance and recent transactions in account.
 3. PIN provision, change of PIN, transaction information and reminder over the internet.
 4. Cash in and Cash out transactions on an ATM.
- 7. Mobile Brokerage:** Stock market services offered via mobile devices are known as Mobile Brokerage and it becomes more popular. They allow the customer to react to market development in time from their physical location.
- 8. Mobile Vouchers, Coupons, and Loyalty Cards:** M-ticketing technology can also be used as vouchers, coupons and loyalty cards. These items are represented by a virtual token that is sent to the mobile phone. A customer presenting a mobile phone with one of these tokens at the point of sale receives the same benefits as if they had the traditional printed token. Stores may send coupons to customers using location based services to determine when the customer is nearby.
- 9. Mobile Browsing:** Using a browser (WWW browser) on a mobile device customer can shop online without having to be at their personal customer.

Factors Affecting M-commerce Growth in India:

- 1. Affordable cost of Smartphone:** Low cost mobile internet-enabled devices like smart phone or tablets are available through local companies. Number of consumers is increasingly using these mobile phones to search information and shop online. This is fruitful form-commerce growth.
- 2. Various Mobile Apps:** India ranks second in app download, overtaking US and only behind China. With increasing use of internet and affordable mobile devices, users are showing interest in various mobile applications. In 2018, across 194 billion mobile apps were estimated to be downloaded from 178 billion downloads in 2017. While this represents a relatively modest increase, the figure is a 35% increase over 2016's total.
- 3. Industrialists open mobile platforms:** With huge amount of investment in e-commerce sector new avenues for m-commerce are open. Apart from traditional formats of retail, new online business segments are growing up such as real estate, taxi booking, classifieds, healthcare and even grocery.
- 4. Affordable rate of Mobile Internet:** With falling rates of data plans and advent of 4G services has made internet consumption affordable in present times. Telecom companies are providing large range of inexpensive data plans, as a result of low mobile data tariff users are encouraged to use mobile internet more and it leads to increase in m-commerce.
- 5. Growing Internet population:** The number of mobile phone internet users in India at 391 million in 2018 and the estimated growth of 500 million in 2023. This indicates the potential of internet use in India and as this figure increases, potential for growth of m-commerce industry will also increase.

Table 1.3
Number of Mobile Internet Users (Millions)

Sr. No.	Year	No. of Internet Users
1.	2015	242.9
2.	2016	281.8
3.	2017	351.6
4.	2018	390.9
5.	2019	420.7*
6.	2020	448.2*

7.	2021	469.3*
8.	2022	486.7*
9.	2023	500.9*

Source: Statista 2019. *-Projected.

- 6. Business from tier II, III cities:** Most of the big brands are not present in tier 2, 3 cities. With the availability of low cost internet enabled mobile devices, youngsters buy their preferred brand online and with increasing penetration of 3G/4G services in tier 2, 3 cities the sales is expected to increase. This is important factor contributing to growth of m-commerce growth in India.
- 7. Mobile Payments:** After cash on delivery (cod), mobile payments are becoming alternative to cash, credit or debit cards. Customer can use mobile devices to pay for services and transfer money as well. Payment can be made through sms, data connection and therefore increasing scope of m-commerce.

Conclusion:

In India M-Commerce is adding an important value to the businesses. Key drivers of M-Commerce include adoption of variety of mobile and smart phones, rising impact on middle class customers. These factors have increased the strength for M-Commerce in India; it has lead to newer opportunities. By considering the discussion on M-Commerce people are using mobile applications for utility bill payment, fund transfer, booking tickets and reservations, and so on. Innovations and low cost of smart phones, reduced mobile internet plans, busy life of people have attracted the people to do transactions on mobiles. Now a day's Smartphone's are developed to overcome the limitations of M-Commerce. Mobile applications are also developed to give more security to the transactions. M-commerce is going to play an important role in every sector of life in future. With heavy competition in the markets, emerging players, different marketing strategies and more consumer awareness gives a boost to the m-commerce growth. M-commerce is such a technology which offers new business opportunity to enterprises and consumers within reach, even as barriers to its development fall away. Increasingly people

are using mobile applications instead of web applications. M-commerce is next generation mode of business.

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