

# A Study the review of Customer Perception on M- Commerce Adoption

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**Abstract** - The term "mobile commerce" was first used in 1997 by Kevin Duffey to announce the Global Mobile Commerce Forum. Mobile Commerce services are evolving rapidly due to the coming together of mobile service providers, banks and payment service providers to offer more products and secure transactions through mobile networks. In recent years, diverse societal groups have begun to accept mobile commerce more and more. Its expansion can be ascribed to demographic & technological changes that have impacted many facets of social & cultural behavior in the modern world. In India, more consumers are switching to mobile commerce to achieve better and faster transactions thanks to the applications' impressive growth. A significant portion of the Indian populace is being encouraged to adoption m-commerce by the introduction of low cost smart phones, high speed internet access, and free internet services.

**Keywords** - Mobile commerce, E-commerce, Perception, M-Commerce Services, Types

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## INTRODUCTION

When two parties exchange anything of value, they are engaged in commerce. Anything the two parties deem valuable can be seen as "anything" in this context. Bartering for goods & services was the primary mode of exchange in former times. Eventually, the introduction of currency was made to enable the exchange of goods & services on a more widespread basis. Currently, the globe is in the middle of an Information Revolution. The information revolution has had a significant impact on the process through which economic value is created & extracted. Getting access to, understanding, and pricing information has never been easier than it is right now.

Regional markets are becoming global ones. Land, labor, and capital are being replaced by knowledge as the primary source of wealth. E-commerce (electronic commerce) was born as a result of technology advancements in the computer and Internet fields, which resulted in streamlined, efficient, rapid, & accurate business procedures that boosted productivity and consumer satisfaction. As a result of streamlined procedures, firms were able to cut their production and transactional costs, increasing their profits significantly. Mobile Commerce, or M-Commerce, is a new research & application area that has emerged as a result of the proliferation of wireless & mobile networks. Because of this, the scope of M-Commerce is much broader than a single business transaction. A variety of applications of M-Commerce can be found in the text messaging, mobile payment, financial & banking services, logistics, buy/sell of

goods & services, and information services sectors & Wireless client relationship management so on.

## THE CONCEPTUAL BACKGROUND AND PERSPECTIVE

The terms "commerce" as well as "business" seem to have transcended their dictionary meanings & acquired new significance since the advent of the Internet economy, making it imperative to establish working definitions of these terms before defining the mobile aspects of commerce (M-Commerce) & distinguishing them from the mobile aspects of business (M-Business). In this section we further differentiate between the terms "electronic" and "mobile", so as to clarify the respective concepts by showing their similarities and highlighting their differences.

### E-Commerce

E-commerce is buying and selling of products, services by business and consumers through an electronic medium, without using any paper documents. E-commerce, stands for electronic commerce, on the internet, it pertains to a website, which sells products or services directly from the site using a shopping cart or shopping basket system and allows payments through cards, e-banking, cash on delivery. Customers can shop from the convenience of their own homes or offices, and have their purchases delivered to a loved one who may be thousands of miles away. It helps businesses reach national & international markets at cheap operational

expenses & provides easy access to a rapidly expanding online community with unlimited shelf space for products & services. Rapid adoption of E-commerce is largely dependent on the accessibility & usability of the internet. E-commerce in India can only grow in popularity if people feel comfortable making purchases online. Online shopping has numerous advantages, but some people still choose to avoid it because of several issues, such as privacy & security worries, doubts about the quality of goods and services, delivery delays or failures, and the inability to examine items up close.

### Mobile Commerce

Mobile Commerce is known as M-Commerce. M-Commerce are used to buy and sell goods by using the wireless devices like cell phones, personal digital assistants and other handheld devices that have operated with Internet access. Using M-Commerce, we have access to cutting-edge mobile programmes and lightning-fast services, and may do so from any location, at any time. The same portable tool serves as our primary telephone & account dashboard. Mobile commerce (M-commerce) is a special case of electronic commerce (E-commerce). We are no longer restricted by distance or time and may instead obtain the information whenever we need it. It's the outcome of blending two rapidly developing tendencies, namely online shopping and ubiquitous computing. It offers new avenues for doing business because it can be accessed from any location at any time using any device.

### EVOLUTION OF MOBILE COMMERCE

Indian mobile commerce is booming at a rapid rate. A whopping 143.2 million people, according to TRAI (2013), usage their mobile phones to access the internet. Electronic commerce paved the way for the emergence of mobile commerce. In a nutshell, e-commerce is "the purchasing & selling of goods & services online" (Kalakota & Robinson, 2001). Recently, e-commerce has gained prominence. E-commerce apps that have been created so far assume that users are primarily stationary and have access to a wired network, such as a PC. Involved in the internet via a local area network (LAN). Wireless mobile networks allow for a wide range of new E-Commerce applications. 'Wireless E-commerce' or 'Mobile Commerce' are the terms used to describe these applications. As wireless internet customers and mobile phone operating systems have improved, mobile commerce has spread to every corner of the globe. The way people conduct their financial transactions is fast changing as a result of the rise of M-Commerce. Mobile commerce was the subject of a study by Tiwari, Buse, & Herstatt in 2006.

To paraphrase the author, there are a number of distinguishing characteristics of M-commerce that set it apart from other forms of commercial transactions, including: universality; speed; accessibility;

localization; instant connectivity; proactive functionality; & straightforward method of authenticating. The term "ubiquity" refers to the ability of users to access services & conduct transactions regardless of their physical location.

- Customers find this feature appealing because they can purchase things at any moment, i.e., without having to wait.
- It is now possible for businesses to tailor their offerings to the location of the customer using GPS (Global Positioning Services) or other positioning technology.
- GPRS (General Packet Radio Service) has made it possible for mobile users to stay connected at all times. This feature is beneficial to the end-users because it saves them time.
- M-commerce provides enterprises with the opportunity to use push marketing, which allows customers to opt-in to get information about new products & services by SMS.
- It's now a lot easier to verify your identity thanks to the Subscriber Identity Module (SIM) & Personal Identification Number (PIN).

### GROWTH OF MOBILE COMMERCE

The merging of mobile service providers, banks, & payment service providers to offer more products & secure transactions through mobile networks is transforming the mobile commerce industry. Mobile commerce is open to anybody with a cell phone & mobile connection, whereas e-commerce is restricted to PC users. A growing number of people are using and owning mobile devices at a rate that is more than 4 to 5 times that of a personal computer. Customers can now utilize their mobile phones to pay for taxi fares & recharge prepaid phone cards thanks to the expansion of Mobile Commerce options.

### THE CONCEPT OF MOBILE COMMERCE

In order to be classified as "Electronic Commerce," a product or service must be offered for sale or purchased electronically, via a computer-mediated network in exchange for money.

This definition appears to be too restrictive, as it fails to take into account the possibility that only a portion of a transaction can be completed electronically, rather than requiring that the entire value chain be processed electronically. An additional problem is that placing too much emphasis on the monetary aspect ignores the commercial nature of marketing measures and after-purchase services, two crucial aspects in commercial transactions. Marketing measures include everything from advertising products and services to completing sales transactions after the product or service has been delivered to the customer. The second category

works with a larger definition of e-commerce, "Electronic commerce (e-commerce) is any transaction conducted over a computer-mediated network that involves the transfer of ownership or rights to use goods or services. For example, "free software downloads" are examples of completed transactions that may be free of charge.

- **Current trends in M-commerce**

As per the report of Business news daily July 03 2014<sup>10</sup>, there is steady increase in mobile technology development in recent years due to which many small businesses have made mobile commerce a priority, enabling their sales through mobile websites and providing wide range of opportunity and solution to consumers and help them to adopt mobile devices with the ever grown adoption of mobile commerce. Many big players in market are begun to see mobile commerce as an alternative for growth of their business. Various surveys have found that still many of the consumers have never made a mobile purchase and those who have made a purchase are not regular user of mobile commerce applications. Still today consumers are facing difficulties in entering their credit card information for making purchases through Mobile commerce even the text coming to them for usage is hard for them to understand.

Mobile is now primary access point to online retails for most consumers says Andrew Lipsman vice president of marketing & insight at Comscore as a result U.S retailers are rethinking how to deliver the online shopping experience.

- **Future trends in M-commerce**

India is the 2nd most populated country in the world, 7th largest country by geographical area and 3rd largest pool of technical human power. With the acceptance of free market policies in 1991 by Indian government, impact of globalization has lead to growth in trade and bigger investments in Indian market which results that India has become the fastest growing free market economy. In India the percentage of both the users of E-commerce and M-commerce is growing higher as more vendors are entering into the market. As per the PWC report<sup>11</sup> – The users of E-commerce have now started to see M-commerce as the most preferred route to make payments with the help of mobile wallet. It is also expected that 4G services will be launched in 2015 which will lead to increase internet penetration i.e. it is likely to take a significant leap, which will definitely give another boost to mobile commerce. The changing pattern in the lifestyle and a wide range of shopping choices will lead the buyers to prefer online channel over physical channel as it will save their time and paved a way to compare prices over a wide range of product and services.

Further financial express report stated that (FE Online | New Delhi | August 20, 2015 8:57 PM) with the increasing users of smart phones in the country the Electronic commerce firms have started focusing on

Mobile commerce as India has registering 131 per cent outpaced growth in global app usage. The downloading of apps have increased in India by 5 times in the previous three years i.e. from 2012 to 2015 and around 9 billion apps had been downloaded in 2015 as compared to 1.56 billion applications that were downloaded in the year 2012 at a CAGR of 75%.

The Leader of India Technology and e-Commerce Sector & Partner, PwC11, Mr. Sandeep Ladda stated that "At present 75,000 direct jobs has been created by the App economy in India, and it has high potential as the expected figure will reach to 6, 00,000 jobs over a period of time. It is also estimated that by the year 2016, India App ecosystem will be in the range of US DOLLAR -330 mn (INDIAN RUPEES -2,000 cr.). It is assessed that India will reach on first position in terms of largest number of software development professionals. Presently India has around 300,000 professionals working on mobile app development and India has gained the second rank in the world largest Android developer community.

By the year 2016 it is expected that the average data usage per subscriber will be doubled and will cross a number of 200 million users of smart phones, driving 4G services in India and smart phones will continue to drive growth of mobile apps and will gain popularity as a medium for the same. The estimations show that Indian Internet users will cross the figure of 503 million by 2017, comparing 278 million Internet users as figured out in October 2014. Further the giant players of the industry like Junglelee Games, Google and IBM, etc. besides many companies and entrepreneurs who are associated with the production, development or consumption of Mobile Apps converged at „Apps India 2015“ - An International Conference on Mobile Applications to brain storm on both current and future trend of Mobile apps.

### **M-COMMERCE SERVICES - CONCEPT**

Implementing Wireless Technology on GSM / CDMA to provide M-Commerce Services Infrastructure. Various businesses provide a pre-built infrastructure for the introduction of M Commerce Services like:

- a. Banks and Financial Institutes
- b. Cellular Operators
- c. Government
- d. Loyalty Providers
- e. Various Corporate

M-Commerce Infrastructure integrates front end applications, like **Wireless Point of Sale Terminals**, Micro Finance, vCash, **e-purse**, Bill Payment, Prepaid Top up Vouchers, Vending Machine operation, e-Governance etc. offered by different organizations with backend applications offered by other organizations, required to establish the working model. Being a manufacturer, E Cube India offers

different hardware to support the applications desired by the client.

## APPLICATIONS OF M-COMMERCE

The term "mobile commerce" refers to a growing subset of electronic commerce in which customers & suppliers communicate and transact business using mobile & wireless networks and devices. Several mobile devices & wireless/mobile networks facilitate the uptake of M-Commerce services & applications. However, the operational performance of M-Commerce services & applications is impacted by the limitations of mobile networks & devices, thus these limitations must be taken into account during the design & development phases. Understanding what mobile shoppers need is crucial when developing M-Commerce services and apps. Additionally, M-Commerce services & applications should be categorised according to the features they offer mobile customers. Two important groups emerge from this type of categorization: directory services, and transaction-oriented software. In this study, we discuss how M-Commerce services and applications in India might be adopted, analysed, and have an impact. Based on research into user wants and needs, a categorization of M-Commerce services & applications, and the limitations of mobile & wireless computing technologies, this method takes into account all of these factors.

Using a mobile device such a smartphone, tablet, or laptop computer to buy and sell products or services with the help of a financial institution is known as "mobile commerce." The following are examples of mobile commerce:

- a) Travel and Ticketing
- b) Movie Ticketing
- c) Bill payments to utility and service companies
- d) Merchant & Retail Transactions
- e) Money Transfer

## 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:

- **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 colors 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:** Consumer's fear 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.
- **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 moment for business and customers to adopt Mobile commerce. Since the consumers do not get face to face

## LITERATURE REVIEW

**Abdul R. Ashraf et al. (2021)** For businesses looking to expand into new markets, m-commerce (mobile-to-commerce) is becoming increasingly vital. A major difficulty for multinational mobile retailers (m-retailers) is making sure their websites are properly managed in several different countries. Value dimensions are examined, as well as the effects of hedonic and utilitarian motivations on intention and habit, and the competing roles of conscious (intentional) and unconscious (habitual) m-commerce use drivers in developed (& developing) countries are examined in this task, which advances cross-national research on m-retailing. M-commerce readiness is examined in this study as a moderating factor in motivation, intention, and habit, as well as their effect on m-commerce use. M-shoppers in advanced (early) readiness stages are more likely to be hedonism-motivated (utility-motivated) when using m-commerce and are more likely to use it intentionally/consciously (habitually/unconsciously) based on data from 1,975 shoppers in nine countries across four continents (Australia, Bangladesh, Brazil, India, Pakistan... As a result of the findings, multinational companies can determine whether to standardise or adapt their m-shopping experiences when expanding internationally.

**Feng Yang et al. (2021)** This study investigates how customers' impulsive buying behaviour (IBB) in the context of mobile commerce (m-commerce) is influenced by their perceived values (utilitarian & hedonic values). Furthermore, we consider interpersonal influence to be a moderator and examine the effect it has on the relationship between the perceived value of the consumer and the IBB they have in place. 199 people were surveyed in China for this study. According to the findings, environmental cues have a considerable impact on consumers' perceived values (i.e., their perception of utilitarian & hedonic value) and their IBB is directly impacted by consumers' perceptions of hedonic value. The connection between IBB & hedonic value perception and interpersonal influence is also important. Consumer IBB can be induced by m-commerce retailers using these findings.

**Mufadhzil, Y. Alversia et al. (2021)** During the COVID-19 pandemic, this study aims to evaluate how browsing motivation affects consumers' desire to buy impulsively (UBI). When it comes to online impulsive buying, this study looked at the factors of the stimulus–organism–response (S-O-R) framework and motivation theory to analyse the factors of the setting, interpersonal impact, visual appeal, portability (PB), and reaction. Study participants were also asked to rate their impulse-buying propensity as a moderator of their association between browsing motivation and the desire to make an impulse purchase. We gathered data from 368 people via an online survey and used SEM-AMOS to analyse it. To conclude, it appears that different circumstances have an impact on people's browsing motivation in different ways. However, whereas utilitarian browsing (UB) influences

consumers' want to buy impulsively negatively, hedonic browsing (HB) influences consumers' desire to buy impulsively favorably. In addition, impulsive purchasing tendency (IBT) considerably modifies the link between browsing motivation & customers' desire to buy impulsively.

**Zoran Kalinić et al. (2021)** There has been a dramatic increase in the number of m-commerce service providers and consumer and academic interest in the business over the past few years. Providers must identify the elements that influence m-commerce customer satisfaction if they hope to maintain their clients' business. So the goal of this study is to identify and rank the most important predictors of m-commerce customer happiness. In addition, the paper provides a process for designing & selecting parameters for artificial neural network models in technology acceptance assessments. 224 m-commerce service users were surveyed. SEM & ANN techniques were used to get the findings. An ANN model was created using a multi-layer perceptron. For the ideal ANN model, one hidden layer and sigmoid activation functions in both layers were shown to be optimal, while the number of hidden nodes must be calculated to use a recommended rule of thumb. Mobility & trust were also shown to be the most important factors in m-commerce customer happiness. Although prior customer satisfaction studies had not examined mobility as a factor, the study's findings have substantial implications for both academia & businesses because of this. The study's recommendations for ANN model architecture & parameter choices, as well as a proposed technique for ANN model design, are noteworthy outcomes.

**Reeti Agarwal et al. (2021)** People in India have been increasingly utilising smart phones in recent years. As a result of this trend, ever more customers are using mobile devices to carry out their everyday routines. The m-commerce business in India has enormous potential as the country's smartphone adoption and use increases. In order to make the most of their m-commerce initiatives, organisations need to know how their target customers view m-commerce and what influences their use of m-commerce. A total of 519 people from the study's target audience participated in the research. Respondents' replies led to the development of a SEM based on their perceptions of m-commerce ease of use, perceived utility, personal innovation, & social influence. Customers' current use habits have a major impact on their future use intentions. Age was a factor in the link between current use and future use (used as a control variable).

**Veljko Marinkovic et al. (2017)** Mobile commerce customer happiness is the focus of this research, which aims to identify statistically significant determinants of customer satisfaction and to

examine the moderating effects of customization on the links between customer satisfaction and its predictors. A total of 224 people took part in the study. The model's validity was verified via the use of confirmatory factor analysis, and its main effects and interactions were determined through the use of moderated regression analysis. Customers' contentment was found to be strongly influenced by factors such as trust, perceived utility, portability, & enjoyment. Two interaction effects were found to be statistically significant, as well: customisation reduces the impact of mobility on customer satisfaction while increasing the impact of trust. It was conducted in a single timeframe and in a creating nation where m-commerce is yet not widely adopted. New variables should be included in future models. The comparison of different age or gender groups would also be helpful. Marketing strategies for m-commerce providers should focus on emphasizing the mobility aspect of m-commerce, in especially its utility to consumers or its security, according to the research. It is imperative that m-commerce operations be developed & altered in order to better satisfy the interests & desires of consumers. Only a few research have examined how happy m-commerce customers are. Trust, social influence, perceived usefulness, mobility, & perceived enjoyment are all possible antecedents of satisfaction in the developed model. The moderating role of personalization is examined in new detail.

## CONCLUSION

Mobile commerce is attracting practitioners & academics. Particularly, studies on mobile commerce have grown in number and scope from the year 2000. The retail industry pioneered the shift from brick-and-mortar stores to online marketplaces and, more recently, mobile payment systems. According to reports from reliable sources in the retail sector, online purchases only constitute a small percentage of overall retail revenue. This suggests that the potential for mobile commerce is substantial, with many untapped markets, such as the financial sector, the healthcare industry, the entertainment industry, and on-demand service providers. As time goes on and new solutions are developed, mobile commerce is expected to explode in popularity.

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