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**BEWARE E-COMMERCE, M-COMMERCE IS
EMERGING**

Beware E-Commerce, M-Commerce Is Emerging

Shikha Wadhwa

Assistant Professor, I.B. College, Panipat, Haryana, INDIA

Abstract – The World Wide Web is now a practical medium for customers, information seekers, business owners and entrepreneurs. The increase of the flexibility and power of wireless deals provides proper opportunities for rising up services to customers. In today's scenario of business mobile commerce or M-Commerce has entered in finance, services, retails, and telecommunication and information technology services. In these sectors, M-Commerce is not only being widely accepted but also it is being more used as a popular way of business. In this paper I try to provide an overview of the fundamentals about m-commerce and e-commerce. This paper attempts to help business managers, to understand the key elements and basic issues of m-commerce and to assess the impact of m-commerce on current and future businesses. In this paper I view M-Commerce are going beyond E-commerce. M-Commerce is doing all work which was done by E-Commerce by using mobile terminals over a wireless network. Finally, I'll look briefly into the situations of the mobile telephony market both in world and India.

Key Words: Mobile Commerce, Business Organizations, Wireless Technologies, E- Commerce

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INTRODUCTION

It seems like only yesterday that e-commerce revolutionized traditional commerce. The desktop computer promised to liberate you from the need to visit a retail outlet. We have evolved to the next stage of commerce. Now, transacting from the desktop computer seems more like a restriction than liberation. It is the era of "commerce everywhere." Handheld devices that can access the internet are revolutionizing "traditional" e-commerce. We call commerce on mobile devices "**mobile commerce or m-commerce.**"

The phrase mobile commerce was originally coined in 1997 to mean "the delivery of electronic commerce capabilities directly into the consumer's hand, anywhere, via wireless technology." Many choose to think of mobile commerce as meaning "a retail outlet in your customer's pocket."

Mobile is becoming the dominant means for accessing communications primarily because deploying mobile network is not only more cost-efficient but also mobile provides greater flexibility and convenience to its subscribers than landline telephone. In fact the main difference in M-commerce definition with E-commerce is that m-commerce uses the wireless net for performing financial, services and purchases. The booming popularity has forced the corporate world to develop a new commerce platform that can reach to masses. Mobile commerce has attracted massive traffic because of its unique characteristics. The user can change the service of any financial institute or banks if gets better product and service or user is unsatisfied with the service of the subscribing company. Mobile has played a giant role in communication technology through its versatility and

superiority. Software platform is essential for operating any mobile and this tool has revolutionized the communication world because of its functioning as a small computer. Despite of huge popularity of mobile commerce, it is yet in the initial stage and can be further expand in to all the fields, which affect the human life.

According to survey done in January 2013, 29% of mobile users have now made a purchase with their phones. Walmart estimated that 40% of all visits to their internet shopping site in December 2012 were from a mobile device.

PURPOSE OF STUDY

Mobile commerce has become the latest topic for today. Business organizations have been restlessly evaluating the revenue potential of the m-commerce market and developing business models to exploit the huge profit potential of this new market. So the main purpose of this paper is to:

- Provide an brief description about mobile wireless technologies
- Provide an overview of the fundamentals about m-commerce and e commerce.
- Understand the difference between m-commerce and e-commerce.
- Help businesses to define what benefits they could derive from mobile commerce.

- Show what are the categories of mobile commerce applications
- Understand the situation of the Indian mobile telephony market and m-commerce

RESEARCH APPROACH

In an attempt to learn as much as possible about the Mobile Commerce, I conducted in depth research to obtain most of the necessary data. I used secondary sources of data collection such as the Internet, websites, books and magazines etc.

DIFFERENCE BETWEEN E-COMMERCE AND M-COMMERCE

E-commerce known as electronic commerce, wherein online transactions are done by internet using laptop and desktop (computer). M-commerce known as mobile commerce, wherein transactions are done on a cellular and mobile device.

REVIEW OF LITERATURE

1. Mobile wireless technologies

According to Malladi et al. (2002), mobile wireless technologies consist of two aspects—mobility and computing. They claimed that mobile computing represents users' continuous access to network resources without limitation of time and location.

Wireless means that transmission of any form of data—text, voice, video or image—is conducted through radio waves, infrared waves or microwaves rather than using wires (Dubendorf, 2003).

Therefore, mobile wireless technologies is defined as any wireless technology that uses radio frequency spectrum in any band to facilitate transmission of text data, voice, video, or multimedia services to mobile devices with freedom of time and location limitation. The freedom of time and location is related to the concept of anytime and anywhere access that represents the two main characteristics of mobile wireless technologies: mobility and reachability (BenMoussa, 2005; Camponovo & Pigneur, 2003; Ng-Kruelle et al., 2002; Turban, et al. 2002).

2. Mobile Commerce: beyond electronic commerce

Electronic commerce has attracted significant attention in the last few years. This high profile attention has resulted in significant progress towards strategies, requirements, and development of e-commerce applications (Upkar, 2002 & Kalakota, 1999).

The growth forecast for both business-to-consumers (B2C) and business-to business (B2B) aspects of ecommerce over the next few years is phenomenal by any standard. One point that should be made here is that nearly all e-commerce applications envisioned

and developed so far assume fixed or stationary users with wired infrastructure, such as a browser on a PC connected to the Internet using phone lines or a Local Area Network (LAN). We envision many new e-commerce applications will be possible and significantly benefit from emerging wireless and mobile networks. We term these applications —wireless e-commerce or —mobile commerce. Mobile commerce is a natural successor to electronic commerce (Mahil, 2008 & Au, 2007).

M-commerce should not be viewed as e-commerce with limitations, but rather as a unique form of e-commerce with its own unique benefits (Scornavacca et al., 2006). Additionally, m-commerce is not a substitute for PCs. Rather; it is a new and a much more powerful way to communicate with customers. Ubiquity, intimacy, time sensitivity and location awareness are key concepts that make mobile commerce so different from e-commerce (Paavilainen, 2002).

While electronic commerce continues to see phenomenal growth, mobile commerce is still in its infancy. However, as wireless network grows, it is expected that emerging wireless and mobile networks will provide new avenues for growth in mobile commerce, create new business models for mobile operators and offer new applications to business and consumers (Coursaris and Hassanein, 2002, Kumar and Zahn, 2003).

According to the Gartner Group, consumer to business e-commerce will soon come from smart phones using mobile commerce technology. Many researchers suggested that next phase of electronic business growth will be in wireless and M-commerce (Ngai and

Gunasekaran, 2007, Smith, 2006, O'Connell, 2005, Matthew, et al, 2004, Urbaczewski, et al, 2003).

It is believed to be the next gold rush after e-commerce. Business organizations of different industries are rushing to stake a claim (Stafford et al., 2003).

However, m-commerce is many things to many people. Some people conceive m-commerce as an extension of ecommerce to mobile phones. Some people think it is another new channel after the Internet.

In general, m-commerce refers to any transaction with a monetary value that is conducted via a mobile telecommunications network. According to this definition, m-commerce represents a subset of all e-commerce, including both business-to-business and business to consumer. M-Commerce uses the internet for purchasing goods and services as well as sending and receiving messages using hand-held wireless devices. Wireless web applications will enable users with Internet enabled cell- phones.

M-commerce is emerging because of these reasons:

- Everyone carries their mobile phone all the time.
- Accessing the PC is cumbersome.
- The phone provides a fast way to look up something such as price, image, review etc. of products.
- The phone facilitates rapid purchase.
- Mobile devices do not have to be tied to a specific location.

VARIOUS MOBILE COMMERCE APPLICATIONS

Many more people have access to a mobile phone than to a computer and this means that m-commerce has the opportunity to connect not just big businesses but also small business and consumers on a massive scale. Mobile Commerce has gained increasing acceptance amongst various sections of society in last few years.

- **Mobile Ticketing:** Tickets can be sent to mobile phones by using B CODE technology or NFC1 technology. B CODE tech consists of sending text SMS which is scan able from the mobile phone display screen. Users are then able to use their tickets immediately, by presenting their mobile phone to the scanning machine at the ticket receipt spot.
- **Entertainment:** Entertainment has always played a crucial role in Internet applications and is probably the most popular application for the younger generation. Mobile commerce makes it possible to download game/image/music/video files at anytime and anywhere, and it also makes on-line games and gambling much easier to access and play. According to survey conducted by mobile mix, 102 million mobile users play games on their devices.
- **Mobile vouchers, coupons and loyalty cards:** Mobile ticketing technology can also be used for the distribution of 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 token.
- **Information services:** A wide variety of information services can be delivered to mobile phone users in much the same way as it is delivered to PCs. These services include:

- ❖ News
- ❖ Stock quotes
- ❖ Sports scores
- ❖ Financial records

- **Commerce:** Commerce is the exchange or buying and selling of commodities on a large scale involving transportation of goods from place to place. It is boosted by the convenience and ubiquity conveyed by mobile commerce technology. There are many examples showing how mobile commerce helps commerce. For example, consumers can buy products from a vending machine or pay a parking fee by using their cellular phones, and mobile users can check their bank accounts and perform account balance transfers without needing to go to a bank.

- **Health Care:** The cost of health care is high and mobile commerce can help to reduce it. By using the technology of mobile commerce, physicians and nurses can remotely access and update patient records immediately, a function which has often incurred a considerable delay in the past. Mobile technologies such as Laptops or Tablet PCs can be of great value in hospitals and healthcare facilities by allowing better access to critical information e.g. patient status, staff and patient location etc.

- **Traffic:** Traffic is the movement of vehicles or pedestrians through an area or along a route. The passengers in the vehicles and the pedestrians are all mobile objects, ideal clients of mobile commerce. Also, traffic control is usually a major headache for many metropolitan areas. Using the technology of mobile commerce can easily improve the flow of traffic in many ways. For example, a mobile handheld device can have the capabilities of a GPS, such as determining the driver's exact position, giving directions, and advising on the current status of traffic in the area. A traffic control centre could also monitor and control the traffic according to the signals sent from mobile devices in the vehicles.

BENEFITS OF MOBILE COMMERCE

By utilizing mobile commerce the user is simply and at every place and times, able to access his/her own data. The main advantage of M-commerce comparing to E-commerce also exists in. In fact while the use of E-commerce is provided only when the user is at his/her own home or workplace or in any other location he/she has to access media such as, Internet, TV.... M-commerce merely need the Mobile-phone. Within the pass of time the services and ample abilities of M-commerce are getting more popular and more complete than the E-commerce.

Generally, M-commerce has several major advantages to consumers:

- **Easy connectivity**

Great thing with Mobile Commerce is, it is available on an easy connection. As long as your network signal is available, it is easy that your mobile devices get connected over to internet. It not needed to look for modem and wi-fi connection anymore. Any number of transactions can be made with a single mobile network.

- **Time saving**

For making an m-commerce transaction it is not needed that the user needs to plug in his laptop or PC and wait for the system to reload. It is enough that you just hit a single button on your mobile device.

- **Convenience**

And obviously the convenience! It is obvious that with a handy device via m-commerce, convenience is assured. Wherever you are, with merely few clicks on your mobile device, it is pretty convenient to do shopping, banking and download your favourite media files.

- **Mass communication**

The wider your target audience, the sooner your business growth. Conducting business transactions via Mobile commerce helps in increasing the number of users. By connecting to a larger number of audiences you are able to generate higher sales and therewith enjoy increased profit returns.

MOBILE TELEPHONY MARKET IN THE WORLD

Mobile phones are no longer just a means of calling another person. In several countries, mobile devices are used to pay for merchandise, receive time sensitive information and send e-mail messages. There is no doubt that mobile technologies have the potential to bring changes to businesses and industries. Despite the recent economic downturn, the use of ICT services, such as mobile phones and the Internet, continues to grow worldwide.

List of countries using mobile phones

Rank	Country or region	Number of mobile phones	Population	% of population
-	World	Over 6.8 billion	7,012,000,000	87
01	China	1,150,000,000	1,349,585,838	85.21
02	India	867,800,000	1,220,800,359	70.72
03	United States	327,577,529	310,866,000	103.9
04	Brazil	265,741,000	192,379,287	134.2
05	Russia	256,117,000	142,905,200	155.5
06	Indonesia	236,800,000	237,556,363	109.28
07	Pakistan	125,012,860	178,854,781	69.90
08	Japan	121,246,700	127,628,095	95.1
09	Germany	107,000,000	81,882,342	130.1
10	Philippines	106,987,098	94,013,200	113.8

According to above figure, China's largest mobile carrier's total mobile subscribers increased to 1.15 billion in 2013. China has the potential to move quickly towards m-commerce. In India, Wireless subscriber base increased to 867.8 million in 2013. The number of mobile phone users in United States increased to 327.58(approx) million in 2013.

MOBILE TELEPHONY MARKET AND MOBILE COMMERCE IN INDIA

India is going through a telecom revolution, especially in the wireless telephony segment. Via, mobile phone users can be informed of different news such as stocks and financial markets, traffic, incidents, economical, cultural and sports. The growth of an infrastructure sector such as telecom has a multiplier-effect on the entire economy of the nation.

Globally in terms of mobile subscriptions, India is the world's second largest wireless market after China. With a subscriber base of more than 867.8 million, the mobile telecommunications system in India is the second largest in the world and it was thrown open to private players in the 1990s.

Government and several private players run local and long distance telephone services. Competition has caused prices to drop and calls across India are one of the cheapest in the world. The rates are supposed to go down further with new measures to be taken by the Information Ministry. The mobile subscriber base has grown from 33.69 million subscribers in 2004 to over 867.8 million subscribers as of March 2013.

Nevertheless in India, mobile commerce is still in the development phase as the use of mobile phones for carrying out transactions is very limited. However, the development is taking place at a nice speed and in the coming years, mobile commerce is most likely to make its presence feel as companies and businesses have started understanding the benefits of mobile commerce.

Some of the companies have even incorporated this technology. Airtel, ICICI, Reliance and some of the companies/businesses that are using this technology as their users are allowed to make limited purchases from their phones. For now, the users are mainly allowed to pay phone bills, utility bills, book movie tickets, book travel tickets with their cell phones. However, more services will be introduced in coming years. Security is one of the main concerns of Mobile Commerce as it's very important to offer secure transactions and this is the reason why M-Commerce is still in the development phase in India. For now, users are mainly allowed to do Mobile Banking i.e. to access the bank account with a cell phone in order to pay the utility bills. With the current rate of development, users will be soon allowed to purchase products, advertise, to take part in auctions and pay bills with the help of a cell phone, while they are on the move.

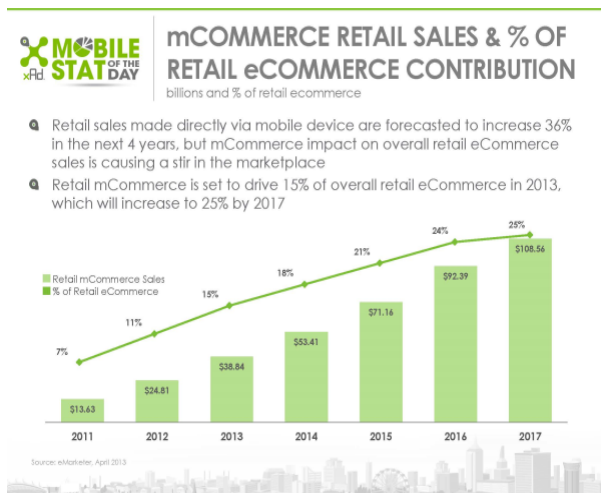
The last big trend, by far, is the rise in tablet commerce. With their larger screens and portability, tablets make it easier to navigate mobile e-commerce websites. These features make it no surprise that 55% of tablet owners use their tablets for online shopping, whereas only 28% of Smartphone owners shop on that device. According to eMarketer, tablet commerce is predicted to reach \$24 billion in 2013 and make up for more than 9% of all online sales.

CONCLUSION

Both the telecommunications industry and the business world are starting to see m-commerce as a major focus for the future. M-commerce applications and wireless devices are evolving rapidly in all sectors such as banking, entertainment and commerce etc. The ease of communication with goods and service presenters, in 24 hrs and without any location limitations, has caused an everyday popularity increase in mobile trading. There are a number of business opportunities and grand challenges of bringing forth viable and robust wireless technologies ahead for fully realizing the enormous strength of m-commerce in this Internet era and thereby meeting both the basic requirements and advanced expectations of mobile users and providers. The mobile Internet channel has opened up new possibilities. There is a big gap between technology's capabilities and the consumer's expectations. But, the good news is that problem areas like slow transmission speeds and high costs are being addressed by operators and equipment manufacturers. Now, mobile applications will become an integral part of their daily lives. **Benefits can m-commerce technology bring to retail**

- **A boost in sales.** 20% of online traffic to retailers comes from mobiles.
- **Increased awareness.** Increasing your online presence and attracting new potential clients.
- **Engagement.** Consumers spend 82 minutes a day on their Smart phones. That is 29,930 minutes a year that you could be using to chat personally with your consumer

Zara is a great example of m-commerce and mobile shopping. Their app offers their lookbook as well as an m-commerce shop. These apps are a great temptation for all fashion lovers and **m-commerce seems to be becoming more than just a trend, but almost a way of life for fashion commerce. If you aren't already on it, we highly suggest a move to the mobile side of retailing.**



This shows that the evolution of our now very mobile culture is bringing positive change to the way we make purchases. Mobile is not replacing desktop as an eCommerce channel, it's simply compounding overall retail eCommerce sales, and the positive effects are poised to continue. Last year, retail mCommerce contributed to 11% of overall retail eCommerce, and is set to contribute 25% by 2017. The more devices in use, the greater the opportunity to shop via popular mCommerce properties including Amazon, Etsy, and Walmart. This shows that e-commerce is going and m-commerce is coming.

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