M-Commerce in India: An International Buzzword

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Abstract

The telecom story in India has been a huge success when we talk of m-commerce. A 100 million plus mobile users is a dream came true for marketers. If that's not all the number of users is growing by as much as 3 million a month. The number is hugely in favor of m-commerce. So m-commerce is relatively new topic in the Indian market where a lot of research is to be conducted. The article primarily emphasizes on the global perspectives of m – commerce business in Indian market.

Keywords: M-commerce, i-Mode, iPhone, Smart money, Mobile wallet

1. Introduction

M-commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as cellular phone and personal digital assistants (PDAs). Known as next-generation e-commerce, **m-commerce** enables users to access the Internet without needing to find a place to plug in. The emerging technology behind **m-commerce,** which is based on the Wireless Application Protocol (WAP), has made far greater strides in Europe, where mobile devices equipped with Web-ready micro-browsers are much more common than in any other country.

Tiwari and Buse (2007) define **m-commerce** as any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer-mediated networks with the help of an electronic device.

One of the basic examples of **m-commerce** has to do with receiving sales promotions via the hand held device. The most common application would involve the service provider sending **text messages** to the subscriber that promote new product offerings, free trials on additional services, or other types of **promotional campaigns.** The subscriber is not charged a fee for the text message, and often can respond with a return text message without incurring any type of fee. Several major cellular services offer subscribers to opt into this type of m-commerce, or be excluded from receiving the messages.

Offers received through the use of m-commerce may be accepted and paid for using the hand held device. For example, if a customer chooses to respond to an offer, there are usually several payment options available. The most common option is adding a charge to the monthly invoice for services rendered. However, many companies that engage in m-commerce also offer the option of paying for the item by the use of a credit card that is linked to the SIM card on the hand held device.

2. History and Development of M-commerce

Mobile commerce was born in **1997** when the first two mobile-phone enabled Coca Cola vending machines were installed in the Helsinki area in Finland. The machines accepted payment via SMS text messages. The first mobile phone-based banking service was launched in **1997** by Merita Bank of Finland, also using SMS. In **1998,** the first sales of digital content as downloads to mobile phones were made possible when the first commercial downloadable ring tones were launched in Finland by Radiolinja. Two major **national commercial platforms** for mobile commerce were launched in **1999: Smart Money** in the Philippines, and NTT DoCoMo's **i-Mode** Internet service in Japan. **i-Mode** offered a revolutionary revenue-sharing plan where NTT DoCoMo kept 9% of the fee users paid for content, and returned 91% to the content owner. Mobile-commerce-related services spread rapidly in early **2000.** Norway launched mobile parking payments. Austria offered train ticketing via mobile device. 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. As of 2008, UCL Computer Science and Peter Bentley ran dedicated courses in mobile commerce at the Dept. of Computer Science, University College, London.

PDAs and cellular phones have become so popular now 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 manufacturers such as Nokia, Ericsson, Motorola, and Qualcomm are working with carriers such as AT&T Wireless and Sprint to develop WAP-enabled **smart phones,** which offer fax, e-mail, and phone capabilities.

Since the launch of the **iPhone,** mobile commerce has moved away from SMS systems and into actual applications. SMS has significant security vulnerabilities and congestion problems, even though it is widely available and accessible. In addition, improvements in the capabilities of modern mobile devices make it prudent to place more of the resource burden on the mobile device.

3. Review of Literature

To date, major e-commerce journals and some business journals have published special editions on M-Commerce. The first was in **Electronic Markets** in 2002, followed by **International Journal of Electronic Commerce, Decision Support Systems,** and **Journal of Business Research,** amongst others. The **focus** of these publications varied, from **technical** to **managerial** topics, and exemplified the complex nature of m-commerce cornponents.

A series of papers by **Barnes (2002a, 2002b)** were among the pioneering efforts in mobile research in general. He proposed preliminary frameworks for value-chain creation and wireless advertising, respectively. His works are purely conceptual, but his frameworks provided a useful foundation for those who subsequently undertook empirical explorations.

Needless to say, mobile Internet service adoption has been the most popular topic in the m-commerce research literature. Several empirical studies are available, including **Hung, Ku, and Chung (2003).** They conducted one of the most comprehensive studies of mobile Internet adoption, adopting **Davis's (1989)** Technology Acceptance Model **(TAM)** to **consumers' WAP adoption behavior** in Taiwan. From a theoretical point of view, the **TAM** has been the most frequently used base for m-commerce adoption, followed by the Theory of Reasoned Action **TRA (Fishbein and Ajzen, 1975)** and the Theory of Planned Behavior **- TPB (Ajzen, 1991).**

Nysveen, Pedersen, and ThorbjornserTs (2005) recent exploration become one of the most significant contributions to date on mobile Internet adoption. The study was carried out in Norway to examine cross-service comparisons via multi-group structural equation modeling. SMS-based marketing is another "main stream" of m-commerce research. For example, **Barwise and Strong (2002)** and **Tsang, Ho, and Liang (2004)** provided solid empirical evidence regarding "permission-based" advertising in the UK and Taiwan, respectively. On the other hand, although sporadic industry reports indicate actual use of **SMS campaigns,** there have been few attempts to investigate multinational firms' strategic perceptions of **mobile marketing.**

Okazaki (2005) has conducted a **qualitative interview** of 54 multinational firms' marketing executives operating in Europe. This study was based on **Roger's (1980)** new technology diffusion model, and found that multinational firms consider **branding** one of the most important attributes of **mobile advertising** adoption.

Few researchers have examined the specific nature of mobile Internet services, and their studies have been published in a rather sporadic way. For example, the literature is available in **mobile banking/finance (e.g., Brown et al., 2003), cross-cultural comparison (e.g., Lee et al., 2002), security issues (e.g., Petty, 2003),** and **location-based services (e.g., Kumar and Stokkeland, 2004).** Among

Kleijnen, de Ruyter, and Wetzels (2004) have published an interesting study of mobile gaming adoption in the Netherlands. They applied a series of sophisticated multivariate analyses to examine mobile garners', profiles. Their paper is one of the few empirical studies on this topic. In a later study, **Kleijnen (2005)** expanded her expertise into the more psychological aspects of new technology adoption, an approach that seems to provide insightful implications for future m-commerce research.

Research Studies on M-Commerce in India are very few and most of these are based on marketing trends. **Singh and Yammiyavar (2009)** have attempted to understand differences in micro and macro level applications. They observed that due to large cultural difference between India and western countries, implementing a macro level m-commerce product in India would mean excluding a major segment of Indian population. However, most major products launched in India have been implemented at Macro level only. The case studies presented in their paper provide inferences which prove that although macro level framework is focused on larger user segments the frequency of transactions that would be received by a micro level product makes it a better option of generating revenues.

Recently, **IndiQuest Research** conducted a study which reveals that MVAS and m-commerce in India could emerge as lucrative sectors due to factors such as increasing mobile subscriber base, higher disposable incomes, technological innovation, innovative service offerings and consumer preference. **(Acharya, 2010).** Today, consumers are seeking more than just basic services (voice services) from their service operators. The telecom companies, on their part, are attempting to develop offerings aimed at retaining existing

customers as well as attracting new patrons. It predicts that the Indian MVAS segment is expected to be worth USD 5.6 billion by 2011.

4. M-Commerce in India

Mobile phones have a higher penetration rate than the Internet in India and majority of the population are ready to embrace m-commerce in a big way. **Bheda (2010)** vouches that even though Internet has changed our lifestyles, the increasing popularity of the mobile phone and developments in mobile technology have heralded a new era in mass communication and commerce for the masses. A vast segment of the population who neither had a landline nor a bank account against their name has made a generation leap, and not only do they own a mobile handset, but are now well poised to transact on their mobile phone.Mobile Commerce services are evolving rapidly in India due to the coming together of mobile **service providers, banks** and **payment service providers** to offer more products and secure transactions through mobile networks. Mobile Commerce is open to almost everyone with a cell-phone and mobile connection. Mobile Commerce is expected to grow because the mobile usage and ownership penetration is more than 4 to 5 times than a PC and growing at a very fast rate.Increased mobile penetration and use of GPRS on handsets has resulted in the digital downloads market to cross **Rs.2.55 billion** by the end of March 2008. Monetary transfers or transactions through mobile phones are found to be much cheaper than traditional bank transfers as the transaction costs are much lower in the former. Inter-bank transfers services are also on the anvil. ICICI Bank Ltd, India's largest private bank, has already started offering all its services through mobile phones (called **mobile banking)** since January 2008. Standard Chartered bank has launched a service that enables money transfer from any ATM to any mobile phone across the country. The recipient receives a pin number on his or her mobile phone and the sender has to convey the order number to the recipient. Feasibility studies are being conducted to offer mobile commerce to **microfinance** firms to enable them collect payments from remote areas.

However, a few challenges are being faced by M-Commerce in India now. Security of transactions through M-Commerce is the biggest challenge. M-Commerce Services like the **mobile wallet,** which helps make payments at retail outlets through text messages have been hindered by the guidelines issued by the Reserve Bank of India due to security concerns. Mobile Payment Service providers like **Obopay Inc** and **mChek India Payment Systems Pvt. Ltd** are planning on services that would work within the RBI rescribed guidelines like bank account-linked services and mobile debit cards.

5. Uses of M-Commerce

In the current commerce industry, mobile commerce or M-Commerce in India has been entered in finance, services, retails, tele-communication 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/ commerce.

5.1 Finance Sector

Mobile Commerce works vastly in finance sector including all big and major financial institutes, banks, stock market and share brokers. Whenever any user needs money or wants any sort of banking and finance related services, he/she can access the services or register services via voice calling or via Short Message Services (SMS) services. VVAP based mobile handsets allow the user to access the official website of the institute.

User can transact money or transfer money, or pay the bill from its bank account using mobile commerce facilities. Banks also provide round the clock customer care services which can be used any time through voice calling. Some customer care services are also provides non-voice services on mobile that is known as insta-alert facility.

While in the stock market, the user can access the stock market quotes and get in live touch with current trading status on its mobile in two forms either voice (customer assistance') or non-voice (sms alerts) or both. The share broker sends market trends and tips of trading on their clients' mobile. Also broker can suggest the appropriate stock for intra-day trading to their users.

5.2 Telecommunication Sector

Mobile has played a giant role in communication technology through its versatility and superiority. The ubiquity and easy usage has further made it extremely popular across the globe. It has already surpassed the fixed phone in the world. Software platform is essential for operating any mobile and this tool has revolutionized the communication world because of its functioning as a small computer.

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. Besides this several bills can be paid using mobile and user can also check the available balance, the status of cheques, the status of requested processing and customer care support.

5.3 Service / Retail Sectors

Service and Retail sectors are also among the leading sectors, which have nurtured most from mobile commerce. M-Commerce has proved a major boon for these sectors. Several business dealings no matter how big or small are being finalized on the mobile phone. Customer would be able to book the order, can hire carrier/courier services and above all could also pay the dues related to it through mobile.

5.4 Information Sector

After the bursting of dotcom bubble, e-commerce has gone downwards to hell. But the evolution of mobile commerce has again worked as ambrosia for them. A separate sector has been evolved to exercise on this field for the IT experts. The webmasters have skillfully exploited this new area of IT-enabled commerce.

In the IT field, mobile commerce has been used massively to deliver financial news, stock updates, sports figures and traffic updates and many more onto a single handheld device 'mobile'.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. The assumption of mobile commerce is not so young as it mushroomed so early from adopting this technology. It initially begins with the use of wireless POS (Point Of Sale) swipe terminals and has since then made its way into cellular phones and PDA's (Personal Digital Assistants). The first enabling m-commerce technologies were presented through Wireless Application Protocol (WAP) and i-mode mobile Internet service. WAP builds on digital phone technology and first emerged on 2.5 G phone technology that allowed users to browse the Internet. This technology cemented the way of m-commerce, which has strongly developed on 3G-phone technology. Nokia has first introduced m-commerce application software Nokia toolkit version 4.0.

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.

6. Conclusion

The telecom story in India has been a huge success when we talk of m-commerce. A 100 million plus mobile users is a dream come true for marketers. If that's not all the number of users is growing by as much as 3 million a month. The numbers are hugely in favor of m-commerce.

A small text message has changed it all. When mobile phones were introduced not even the biggest telecom experts had predicted the impact of sms on Indian life. Relationships to reporting to just about every small communication is now textual. Now even payments and transactions through the sms. The future is here. So we can conclude m-commerce is the next future of India.

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