ABSTRACT

Mobile commerce (M-commerce) tools and its services are growing at a much faster pace in this digitized world. With half a billion mobile subscribers, emerging competition, innovative ways to attract customers way of doing business has undergone sea change by the use of mobile M-Commerce is an extension of electronic commerce. 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. There has been tremendous growth in wireless technology in the last decade. This advancement has changed people do business in mobile environment (M-Business). This is where M-Commerce step in which promises to allow shoppers to purchase goods and have services using mobile phones, wearable PCs and handhelds and in the same way brings challenges for both individuals and society. This paper is intended to bring out the facts about the feasibility of m-commerce today its growth & the strength and opportunities, the weaknesses and threats lying ahead.

Keywords: M-Commerce; Services; M-Commerce SWOT Analysis

INTRODUCTION

Recent user-centric technology, mobile and wireless communications provide high global penetration. In recent days, different types of systems are being applied for different application areas. While e-commerce continues to impact the global business environment profoundly, technologies and applications are beginning to focus more on mobile computing and the wireless web. Mobile technology is the most pervasive communications technology in the world. The phrase mobile commerce was originally coined in 1997 by Kevin Duffey at the launch of the Global Mobile Commerce Forum, 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 commerce is worth US$230 billion, with Asia representing almost half of the market, and has been forecast to reach US$700 billion in 2017. According to BI Intelligence 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 was from a mobile device. Bank of America predicts $67.1 billion in purchases will be made from mobile devices by European and U.S. shoppers in 2015. Mobile retailers in UK alone are expected to increase revenues up to 31% in FY 2013–14.

LITERATURE REVIEW

The spectrum used for the review of literature focuses upon the meaning, benefit and drawbacks & SWOT Analysis of M-commerce in India.

According to K.S. Sanjay (2007), Mobile network is less cost included and also gives a better flexibility and effectiveness to its subscribers than landline phone. M-commerce is also a substitute of
E-commerce, but the difference lies that M-commerce uses wireless networking. So it gives flexible and convenient experience.

Sujata P. Deshmukh, Prashant Deshmukh and G.T. Thampi states that M-commerce is subset of E-commerce, which includes E-commerce transaction carried out using a mobile device. Today transaction over internet, become an essential part of our daily life, but India is a land of many languages but only 2 percent of the Indian population prefers reading in English. If the content is in local language, it will not only ensure quicker adoption by the user but also will be an instant success.

Manjoor Amir, states that there are several benefits and advantages in adopting E-commerce. It is helpful for doing Transactions at home. It also gives an universally accepted quality, security and reliability of product so that major part of share can be increased by particular website.

Felicitta j.Gnana Jayanthi j.states that The SWOT matrix on m-commerce analyses and draws strategies to compete in an increasingly digital marketplace.

**OBJECTIVES OF THE STUDY**

Main objectives of this research paper are as follows:-

1. To find out what are the benefits are of M-commerce in India.
2. To find out what hurdles are going to faced by M-commerce industry in India.
3. To find out how M-commerce makes life easy in today’s world i.e. SWOT Analysis.

**Defining ‘M-Commerce’**

E-commerce normally means as transaction conducted over the internet. E-commerce is a large domain on conducting business over internet and E-retailing is a part of it. When we discuss on digitally / Internet enabled commercial transactions between organizations and individuals using latest web technologies as per the policies of the organization. The rapid growth of mobile telephony has provided a foundation for M-commerce namely E-commerce activities carried out via a mobile device, such as a cell phone it is called M-commerce. M-commerce also refers to the transaction conducted via mobile device or Wi-Fi network. The emerging technology behind m-commerce is based on the Wireless Application Protocol (WAP) architecture which includes use of other technologies such as SMS services over a number of carriers (Global System for Mobile Communications (GSM), Interim Standard 95 (IS95), Code Division Multiple Access (CDMA), Wideband Code Division Multiple Access (W-CDMA)), Bluetooth applications, 2G, 2.5G, 3G, Wi-Fi, IRDA etc. M-commerce covers terminals, standards, transaction models, middleware, or security; potential business models, methods; and design approaches to develop m-commerce applications.

**Services Available in M-commerce:**

**Mobile Money Transfer:** Money transfer is mainly done through the use of mobile phones. This was an initiative of a multimillion shillings company. The companies involved are Safaricom and Airtel.

**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. Unlike traditional ATM, sicap Mobile ATM have been specially engineered to connect to mobile money platforms and provide bank grade ATM quality.

**Mobile ticketing:** Tickets can be sent to mobile phones using a variety of technologies. Users are then able to use their tickets immediately, by presenting their mobile phone at the ticket check. Most number of users is now moving towards this technology.

**Content purchase and delivery:** Currently, mobile content purchase and delivery mainly consists of the sale of ring-tones, wallpapers, and games for mobile phones. The convergence of mobile phones, portable audio players, and video players into a single device is increasing the purchase and delivery of
full-length music tracks and video. The download speeds available with 4G networks make it possible to buy a movie on a mobile device in a couple of seconds.

**Location-based services:** The location of the mobile phone user is an important piece of information used during mobile commerce or m-commerce transactions. Knowing the location of the user allows for location-based services such as: Local discount offers, Local weather, Tracking and monitoring of people.

**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, Traffic reporting.

**Mobile Banking:** Banks and other financial institutions use mobile commerce to allow their customers to access account information and make transactions, such as purchasing stocks, remitting money. This service is often referred to as Mobile Banking, or M-Banking.

**Mobile brokerage:** Stock market services offered via mobile devices have also become more popular and are known as Mobile Brokerage. They allow the subscriber to react to market developments in a timely fashion and irrespective of their physical location.

**Auctions:** Over the past three years mobile reverse auction solutions have grown in popularity. Unlike traditional auctions, the reverse auction (or low-bid auction) bills the consumer's phone each time they place a bid. Many mobile SMS commerce solutions rely on a one-time purchase or one-time subscription; however, reverse auctions offer a high return for the mobile vendor as they require the consumer to make multiple transactions over a long period of time.

**Benefits of M-commerce in India**

As we know M-commerce market grows rapidly now a days, the numbers of Smartphone users are increasing regularly. M-commerce helps to works easily and smoothly in life schedule. Its benefits are as follows:-

**User friendly:** - Now a days websites are being designed so much user friendly. Its predict search option helps consumers to find more easily and rapidly for a particular product. Different classification of products variety helps for consumers to choose more exclusively between products.

**Easy to carry mobile device:** - Mobile device is easy to carry by user. It helps to avoid user to go physically to any particular shop as well as it also helps to user for avoid once of use of computer /laptops.

**Low internet connectivity area:** - M-commerce is also efficiently used where the internet connectivity is less and website is taking more time to upload or hit. Through mobile devices less internet data will be used, so it is also economical with comparison of using internet via computer devices.

**Secure transactions:** - M-commerce also gives an assurance of secure transactions, for the transaction, confirmation code is sent on the e-mail and mobile phone. And after filling this code the transaction will be processed, So that chances of wrong transactions are very less and unsecure transitions can be eliminated.
Condition of M-commerce in India

As we know mobile devices are becoming a part of our daily routine life, People use internet for various purposes which include: email, academic and financial information search, music and video on internet, chatting, online job search, gaming, booking tickets, hotel reservation, online news, internet telephony/video chat/voice chat, and online banking. E-commerce has touched every field of human life from information search to entertainment, job search & matrimonial site. Global mobile transaction volume from 2010 to 2017 (in billion U.S. dollars) This statistic shows the global mobile transaction volume from 2010 to 2013 with a forecast for 2017. The worldwide mobile volume in 2012 was 163.1 billion US dollars and is expected to grow to 721.4 billion U.S. dollars in 2017.

![Chart showing global mobile transaction volume from 2010 to 2017](image)

Source: Worldwide mobile transaction volume 2010-2017

Drawback of E-commerce in India

Each coin has two sides; M-commerce also has some hurdles for growth in India. Drawbacks of M-commerce market in India are as follows:-

**Lack of Internet Connectivity:** - In India, still internet connectivity is under the dark room; still broadband connection is not accessible at many places in India. Also 3G networks are not available at so many states.

**Language Barrier:** - In India, mostly people are not aware about the English language or not so good in English language. So that for the transaction over internet through mobile devices, language becomes one of the major factor to purchases, hire and sell a particular product or services.

**Less Graphic Resolutions:** - In comparison to computer/laptop, mobile devices are still less graphic resolutions, for that reason consumers are least interested to buy a particular product. In other words Product is not properly or exactly shown in mobile devices as compare to computers/laptops/notebooks.

**Lack of Awareness:** - Still in India people do not aware about the term M-commerce, In India literacy rate grew by 74.04%, but the world average literacy rate is 84% in 2011. People in India still afraid to adopt to purchase things online as well as they are feeling uncomfortable to buy a product through M-commerce.
Less Number of Mobile phone users: - In India total numbers of mobile phones are 1, 104, 48000; it is 90.47% of entire population of India but the world’s percentage of mobile phones is 97% in 31 Oct 2013. This figure explains that number of mobile users is less in India as compare to world number of mobile users. In India mobile network is not available in entire region; low connectivity problem is still faced by our Indian people in remote areas.

SWOT Analysis

SWOT Analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business venture. It identifies the internal and external factors that are favorable and unfavorable to achieving that objective. This SWOT analysis is being performed on M-commerce in order to identify its issues as weakness and threats so that more researches may be motivated and to direct the m-commerce in a more successful manner.

Strength: The strength of M-commerce is based on four factors: the anticipated ubiquity of devices, online access for a large portion of the world’s population, location sensitivity of the devices, and authentication and authorization capabilities. Varshney and Vetter argue that each of the levels in the framework which encompasses (i) Wireless (Network) Infrastructure, (ii) Mobile Middleware, (iii) Wireless User Infrastructure and (iv) Mobile Commerce Applications play a critical role in m-commerce success and deployment. GPRS and 3G offer ‘always-on’ connections to the InternetSo a mobile device can provide with continuous links to the Internet, e-mail, interactive touch screen experiences which provides innovative service delivery. High Quality-of- Service (QoS), Positioning services and location-aware services provide highly convenient and customized services. For wireless carriers, to recoup the costs of building next-generation wireless data networks, m-commerce represent new revenue streams. Using Bluetooth technology, much of this communication could even be between devices rather than people and advertisers will be able to team with carriers to deliver their message.

Weakness: Lack of data security and digital identity are the major weakness for wireless communications. Wireless Local Area Network (WLAN) present its own set of risks listed below:

- Antivirus solutions are difficult to implement
- Privacy in data transmission is not maintained
- WLAN transmission can be 'listened to' up to a mile away using inexpensive receivers
- Many existing WLAN installations do not use WLAN built-in encryption capabilities

Over the next decade, billions of people will gain access to mobile devices. Many of them will be functionally illiterate, and only a small percentage will be comfortable with English. A polyglot environment will place a large premium on language translation, clear interactions, and speech interfaces, but even after 30 years of research in these fields, sophisticated applications remain scarce. Recent Mobile devices are not as fast as a fixed connection, or have anything like the graphics or processing power of a PC and they are limited with memory and computational power. The small screen size of mobile terminals is also a major deterrent to many applications. Still, M-commerce relies on proprietary solutions and there are no standards for M-commerce.

Opportunities: Size and growth rate of the mobile market is the key driver of the mobile services market. “Third world” citizens will be able to communicate easily anywhere and engage in business without geographical limitations. Moore says the ‘payment gateways’, are a company or organization that provides an interface between the merchant's point-of-sale system and the payment system. The service may involve the purchaser's bank paying directly to the seller's bank, or through a credit card company, all facilitated by the payment gateway provider. Tickets can be booked via the mobile; people have the flexibility of purchasing them on the go. Retailers can send coupons and loyalty cards that can be presented at the sales counter. The mobile platform can be used to deliver news alerts, stock market reports, sports schedule and results or traffic information. Paper catalogues can be
replaced by sending periodic alerts to the customers. Companies can reach consumers and select their target audience for a particular product or brand. These opportunities and what mobile commerce will look like in the future depend on the creation of an open and neutral infrastructure trusted by both businesses and consumers to enable a fast and easy adoption of the technology.

**Threat:** The threats involved in m-commerce are;
1. Mobile Commerce Security and Privacy Risks
2. Wireless Infrastructure Security Risks
3. Mobile Middleware Security Risks
4. Wireless User Infrastructure Security Risks
5. Mobile Application Security Risks

An obvious risk with remote networking is loss or theft of mobile devices. Although mobile telephone service can be cancelled and the problem of its loss reduced to the compromising of phone book entries, for large businesses a lost mobile computing device could also seriously compromise sensitive corporate information. In the wrong hands, it may cause untold financial losses, and could quickly cost the business its competitive edge.

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<th>Opportunities</th>
<th>Strengths</th>
<th>Weakness</th>
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<td></td>
<td>• Innovative Business Models</td>
<td>• In Long-term, lack of interoperability and higher operating costs</td>
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<td>• Consumer adoption</td>
<td>• WLAN transmission can be captured by untrusted parties</td>
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<td>• High Speed Internet Connectivity and Always on Connection through GPRS, 3G, UMTS, Bluetooth</td>
<td>• No built-in encryption capabilities in WLAN</td>
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<td></td>
<td>• Third world citizens communicate easily without geographical limitations</td>
<td>• Limited Memory</td>
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<td>• Portability</td>
<td>• Limited computational power</td>
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<td></td>
<td>• Payment gateways</td>
<td>• Antivirus solutions are difficult to implement</td>
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<td>• Ticketing, M vouchers, multimedia information, Shopping, Marketing and advertising</td>
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<tr>
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<td></td>
<td>• Mobile Commerce Security &amp; Privacy Risks</td>
<td>• Risk related to theft of mobile device</td>
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<td>• Wireless Infrastructure Security Risks</td>
<td>• Third world citizens uncomfortable with English</td>
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<td>• Mobile Middleware Security Risks</td>
<td>• No Privacy of data</td>
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<td>• Wireless User Infrastructure Security Risks</td>
<td>• Small screen size of mobile terminals</td>
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<td>• Mobile Application Security Risks</td>
<td>• Relies on proprietary solutions</td>
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<td>• Mobile Viruses can spread attacks quickly through the network</td>
<td>• No standards for M-commerce</td>
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In the above table (I), M-commerce SWOT / TWOS matrix, we examined that,
- S-O strategies pursue opportunities that are good to the future
- W-O strategies overcome weakness to pursue opportunities
- S-T strategies identify ways that the M-commerce can use its strengths to vulnerability threats.
• W-T strategies establish a defensive plan to prevent the M-commerce’s weakness from making it highly susceptible to threats.

CONCLUSION

People live fuller, mobile lifestyles now a days. They value convenience and have a lot of things that they want to do. They are comfortable with e-Commerce and willing to transact over the mobile to simplify their lives and optimize their time. M-commerce is such a technology which offers a new business opportunity to enterprises and consumers within reach, even as barriers to its development fall away. Applications and wireless devices promise to evolve together, each driving the introduction of innovative and powerful features in the other. The opportunity is much beyond mobile bill payments and can include all forms of transactions including merchant payments, utility bill payments, peer-to-peer money transfer and any other transaction scenario that the consumer faces today. The m-commerce need to develop synchronized value added content, synthesized business models that go together with emerging technologies, which can create key mobile features and serve as drivers of the growing market demand.

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