M-Commerce–Issues AndChallenges of Wireless TechnologyIn The Digital Era

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Abstract: This study mainly examines the issues and challenges of wireless technology with a basic thrust on m-commerce. M-commerce is defined as the buying and selling of goods and services via mobile/wireless technologies and devices. India is the second largest cellular market in world with a huge subscriber base. There has been a tremendous increase in use of smart phones and mobile utility. However a shift from 3G to 4G networks is perceived to be slow in India. This slow start in 4G adoption is a struggle that many nations face, as it takes time for mobile ecosystems (devices, connectivity, and use cases) to fully develop. The study reveals that though the number of mobile internet users is increasing but the Consumers have shown relatively low willingness to use m-commerce. However the Government can boost the growth of m-commerce by providing faster broadband speeds at affordable prices or by making Wi-Fi free. As part of its attempt to connect every Indian, local Smartphone manufacturer Ringing Bells 'with immense support' from the India government will launch an affordable Smartphone called the Freedom 251. Ringing Bells says that the Smartphone is in line with India Prime Minister NarendraModi's vision to connect every Indian and enrich their lives. There are various mobile apps available such as paytm, m-wallet but the greatest challenge for m-commerce applications is their usability. The businesses are still experimenting with how to use the mobile commerce concept to their best advantage. However with the launch of Freedom 251 and the other government strategies the future looks very bright for mobile commerce.

Keywords:m-commerce,e-commerce, 4G network

INTRODUCTION:

After China, India is the second largest cellular market in the world with a massiveSubscriber base of 1003.49 million, as of 31 October 2015.i.e.79.3 connections per 100 citizens.Majority of the smart phone users are still using 2G and 3G networks.The 4G network users can grow in India if it is supported with affordable plans.

The statistics reveal that mobile commerce is growing big and fast.Buying a product, physical or digital, from a retailer, paying a bill (e.g. utility bill), buying stocks and shares, buying a ticket to travel or attend an event, or receiving wages, on the other hand, are all clearly commercial transaction as funds have been exchanged for a product, service or financial product is received in return. So doing this using a mobile device is clearly m-commerce. Being the second largest mobile market in the world, India needs to take its

place in the forefront of providing innovative services to its citizens. Recente-Marketer study revealed that by the year 2017 more than 25% of all online retail transactions will happen in themobile paradigm. The statistics also provide information that people in the age group of 18-34 year are verylikely to use their mobile devices as a shopping tool. Their process is to visit their favourite retailstores not to shop but to view a product and compare prices, and then to compare prices at variousonline locations using their

phones. They then buy the product using their mobile device. Thefuture looks very bright for mobile commerce, although businesses are still experimenting withhow to use the mobile commerce concept to their best advantage The Freedom 251, touted as India's cheapest Smartphone -and likely the most affordable Smartphone in the world as well - will sport a price tag below Rs. 500 (approximately $7)..

WHAT IS M-COMMERCE?

There is no set definition for what m-commerce actually is. MobiThinking defines m-commerce as**the buying and selling of goods and services via mobile/wireless technologies and devices**. This includes purchases on Websites or apps, in-store or from vending machines; paying for travel, events or bills; or redeeming a coupon… any type of commerce that is conducted using a mobile device. But there are much broader definitions of m-commerce that include all types of mobile transactions, such as mobile banking (m-banking) and money transfers (m-money) – which mobiThinking argues should be categorized separately as mobile financial services (MFS).

OBJECTIVES OF THE STUDY

The main objective of the study is to study the Issues and challenges of wireless technology with a specific thrust on m-commerce.

However, the detailed objectives of the study are as follows:

1) To study the barriers in adopting the wireless technology in the so called Digital Age.

2) To identifythe greatest challenges for various m-commerce applications.

3) To understand the change in buying habits of people-from traditional brick and mortar store to e-commerce ....to m-commerce. Are the adopters of e-commerce more likely to embrace m-commerce in the future?

Research Design

The present study is purely exploratory in nature. The various sources of information used were

▪ Journals and magazines.

▪ Freelance search using various search engines.

RELATED RESEARCH:

The wireless technology is particularly promising for enhancing relationships with customers [Kannan et al. 2001].

M-commerce applications support not only transactions, but also value added services and interaction [Lehner& Watson 2001].

Even with the latest 3G phones in Japan, consumers still find usability barriers in small screen display and small buttons on these devices [Belson 2002].

Research has also found manipulation of visual design factors of the customer interface could induce a target emotion, such as trustworthiness [Kim & Moon 1998].

Eye Catching stats about m-commerce:

• According to economic times, Providing access to faster broadband speeds and easing of payment norms in the country can play an important role in further boosting growth in e-commerce and m-commerce sector in India **- Internet & Mobile Association of India (IAMAI).**

• "m-Commerce growth to exceed $500 billion sales by 2017 driven by Asia, America and Europe (almost half in Asia)" – Digi-Capital (July 2014).

• "The value of mobile commerce transactions conducted via mobile handsets and tablets will exceed $3.2 trillion by 2017, up from $1.5 trillion this year" – Juniper (June 2013).

• "We estimate that by 2016, the m-commerce market is expected to reach US $800 billion worldwide" – Ericsson (July 2014).

• "We expect global mobile [payment] transaction volume and value to average 35 percent annual growth between 2012 and 2017, and we are forecasting a market worth $721 billion with more than 450 million users by 2017" – Gartner(June 2013).

Difference between mobile web commerce and pc web commerce:

•**Limitation of the device**: the smaller screen, the touch-based interface (with smartphones), the lack of keyboard, makes filling out those lengthy forms that plague e-commerce sites – registration, delivery address, credit card details etc – a very painful experience.
• **Cookies**: most PC-commerce sites won't work without cookies. PC sites place cookies on visitor's PCs so they can recognize them when they move to the next page or return to the site. Most mobile phones don't allow cookies.
• **Context**: Where a PC user is (usually) at home or work on a fixed Internet connection, the mobile user could be out-and-about, on transport, often on a mobile network connection (which aren't as reliable as a fixed Internet connections) or on a less secure public Wi-Fi or hotspot. This means m-commerce needs to be as fast and efficient (with as few clicks and forms) and secure as possible.
• **Payment scenarios**: while PCs are usually restricted to remote purchases on the Internet, mobile payments could be Web-based or in person. M-commerce includes paying for goods in-store, paying for transport or event ticketing, or paying for goods from vending machines, perhaps using near-field communications (NFC), mobile barcode-based systems, or SMS-based payment.

• **More (and easier) ways to pay**: PC Websites commonly only offer one form of payment, by credit card, sometimes also with a payment provider such as PayPal. Entering credit card details on a Website using a mobile phone is tedious, which has led to the emergence of different payment methods. These include mobile wallets (m-wallets), where

payments are deducted from a cash balance, topped up from a bank account or taken directly from a credit card account, of which there are numerous providers, many local to each country, such as China's AliPay, which is believed to be the world's largest, ahead of PayPal. Payments can also be taken directly from the user's mobile phone bill.

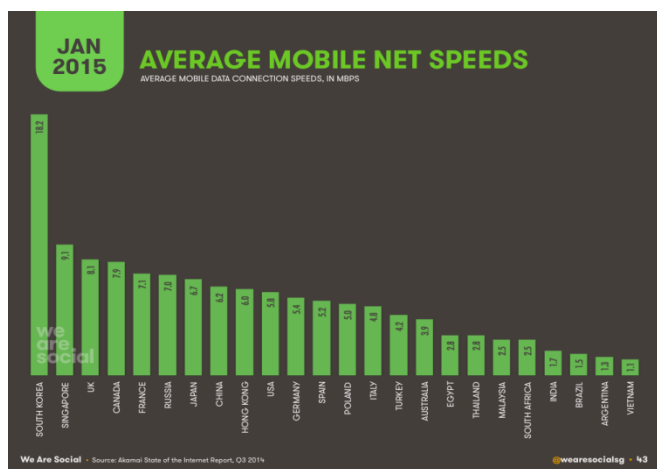**Exhibit No: 1 Activities Performed on Smart phones**
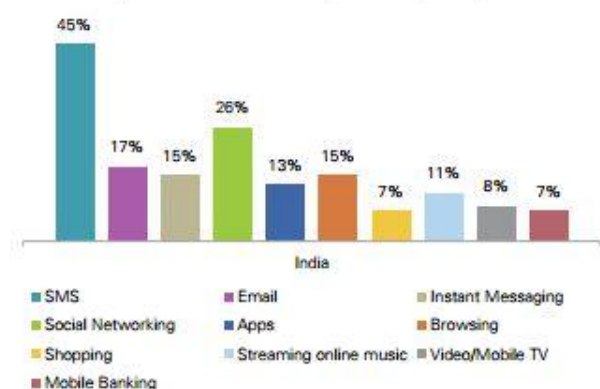
Source: Nielsen mobile consumer report, a global snapshot 2013

In India, for nearly 45% of respondents use smart phone for sms, followed by social networking and browsing. However it has been found that only 7 % of the respondents use it for shopping and Mobile Banking.

Exhibit No: 2 Average Mobile Net Speeds

The data reveals that the average mobile net connection speed is the highest in South Korea with 18.2 MBPS followed by Singapore with speed of 9.1 MBPS.The average mobile net connection speed in India is low i.e 1.7

MBPS.However shifting from 3G to 4G networks is perceived to be slow in India. This slow start in 4G adoption is a struggle that many nations face, as it takes time for mobile ecosystems (devices, connectivity, and use cases) to fully develop.

Exhibit No: 3 Indian E-commerce –Mode of Payment

In India the mode of payment is mainly through cash on delivery which account to 45%, followed by debit card and credit cards. Mobile wallet is the least used mode of payment in India which account to only 8%.

Exhibit No: 4 Barriers to Adoption
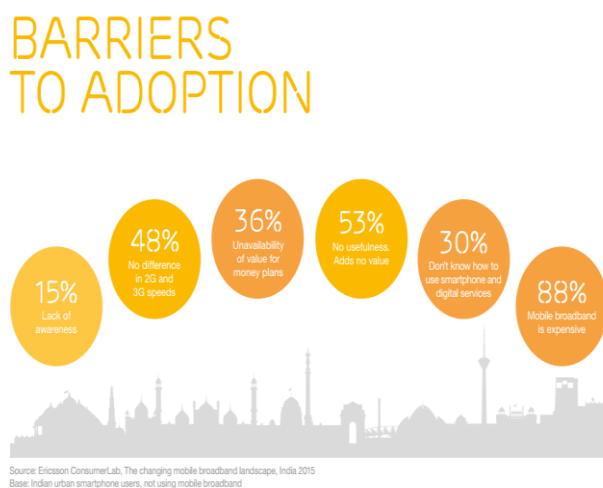
Most of the respondents don't use Mobile Internet as they perceive it to be expensive. Moreover they don't find any difference in 2G and 3G speeds. Nearly 30 % of the respondents quoted that they do not know how to use smart phones and digital services.

Exhibit N0:5Number of Mobile internet users in India:

MOBILE INTERNET USERS IN INDIA 2013-17 (E)
(in million)

110 — 2013
159 — 2014
213 — 2015 (P)
236 — 2016(P)
314 — 2017(P)
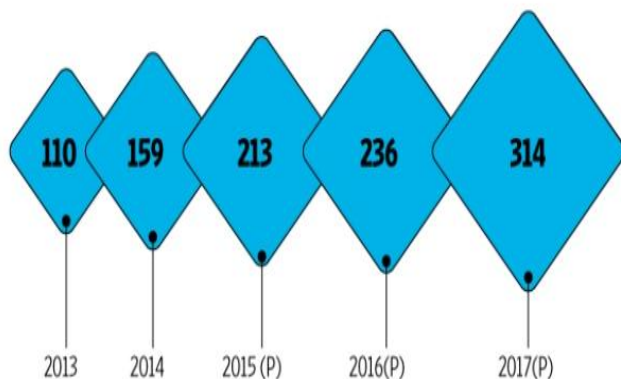
Source: Iamai-IMRB Mobile Internet in India 2014 report; KPMG-Ficci M&E industry report 2015

In India, 110 million users used mobile Internet in the year 2013.The number of users increased to 159 million. Moreover it is predicted that the mobile internet users are likely to increase in future. This indicates a greater potential for m-commerce in the coming years.

CONCLUSIONS:

Though the number of mobile internet users is increasing but the Consumers have shown relatively low willingness to use m-commerce. But adopters of e-commerce are more likely to embrace m-commerce in the future. The greatest challenge for various m-commerce applications is their usability. This exploratory study has enabled us to identify many issues surrounding the current implementation of wireless solutions for mobile consumers. All these solutions were designed primarily to support existing customers or subscribers. The biggest challenge is to make m-commerce usability to reach masses. Moreover it has been revealed that entering the credit and debit card numbers by using keypad of mobile phone is perceived to be tedious. Using the Mobile phone apps to recharge sometimes lead to wrong entry of mobile number and thus customer ends up in recharging other mobile number. Thus it is a biggest challenge for m-commerce to provide help desk and excellent services to satisfy the needs of customers.

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