Mobile Commerce Potentials and Challenges: India Case Study

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Abstract: This study aims to highlight the present situation and status of commerce in India particularly mobile commerce or M-commerce. At present time, mobile phones including smart phones, I-pad and tablets are common items to people, and they are now highly affordable. Users of mobile phones have significantly increased in number, and the bandwidth consumed is large as well. Meanwhile, e-commerce applications are very common today but there is still hesitance among people towards m-commerce use, owing to the issues associated with security and payment, in addition to the complexity of mobile application. It is projected that the future will witness different form of sales and services. Accordingly, problems have arisen in the m-commerce implementation on the sides of users, provider, as well as business. Meanwhile, the application providers are obliged to consider the type and needs of users. Hence, this paper will detail the issues faced by both users and providers in the context of India.

Index Terms: E-business, m-commerce, mobile adoption, technological innovation.

I. INTRODUCTION

M-Commerce refers to the exchange of goods using the medium of the Internet through mobile phones. Alternately, m-Commerce is describable as the applications and services that are dramatically available via the Internet-enabled mobile devices [1]. Additionally, it encompasses innovative technologies, services and business models. Considering that this technology is mobile, user can take it everywhere with them. Hence, user could search the nearest food trucks, make payment for items at a store, or even communicate with peers [2]. Considering that the Internet is now associated with user's use of resources (money) to make purchases, it has become personal, and so are the devices used in accessing it [3].

At present time, mobile phones are equipped with the capacity to identify the phone numbers of friends and colleagues, and they could even track the location of user. It is therefore not impossible for these devices to replace user's credit cards and even wallets [4].Intuitively, it is also possible to perceive future mobile phones to have the capacity in foreseeing the desires and needs of users and act upon them including making spontaneous taxi arrangements to fetch user following the adjournment of business meetings or furnishing users with recaps of news and messages from colleagues [5]. Still, in order that these changes could efficiently materialize, the primary issues of interoperability, usability, security, and privacy have to be addressed.

M-commerce is in fact a progeny of e-commerce. Accordingly, m-commerce is not a limited form of e-commerce. Instead, m-commerce encompasses a distinctive form of e-commerce that carries its own distinctive benefits. Relevantly, the use of m-commerce falls within two categories namely content delivery and transactions [6]. In regards to content delivery, it encompasses consultation, notification, order confirmation, feedback and tracking, just to name a few. Meanwhile, transactions data entry entail, purchasing, paying, checkouts, and maintenance. Hence, with the aforementioned functions in m-commerce, users could make purchases on items more easily. Relevantly, the increase in the penetration of Smartphone's from 8% in 2014 to over 21% in 2017 has provided assurance of the readiness of the mass population towards m-commerce [7].

In the context of India, m-commerce market was projected to expand at a CAGR of71.06 % till 2016. Today, there are approximately 44 million users of Smartphone and the number is expected to expand 150% yearly. Furthermore, a survey carried out by The Associated Chambers of Commerce and Industry of India found Delhi as the city most adapted to e-commerce, while Mumbai and Ahmed Abad took the second and third place. As indicated by KPMG, 30% of shopping queries is made via mobile phones [8], [9].

II. LITERATURE REVIEW

In India, m-commerce is still in its development stage and its adoption is rather complex. At current time, the uses of mobile phones are no longer limited to making phone calls; mobile phones can now be used in accessing websites, for chatting, and also shopping (just to name a few). In the situation of India, the use of m-commerce has both benefits and drawbacks [10]. Among the advantages include mobility, user friendly, and so forth, while the drawbacks include language barrier, poor graphic resolution, small number of users of mobile phone etc. In India, albeit its newness, the use of Smartphone has dramatically increased. Relevantly, among the drivers of m-commerce growth include immediate connectivity, factor of Personalization and mobility, localization, and so forth [11].

Additionally, the use of m-commerce in India has been linked to purchases of ticketing, e-auction, entertainment, and so forth.M-Commerce has indeed transformed people's life as well as their method of engaging in business [12]. The use of m-commerce enables the attainment of knowledge just through phones, and using m-commerce, one

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can also access andmanage his/her bank accounts, escape parking rush, health issues etc. Somehow, the arising issues linked to m-commerce include the issues of security and insufficient speed which could deter user from making purchases and payments online [13].

Technologies of wireless mobile and the link between e-commerce and m-commerce assist businesses in recognizing what is derivable from m-commerce, the building blocks of e-commerce and m-commerce, as well as the types of applications of m-commerce. Meanwhile, the concept of m-commerce has been defined by many and its acceptance has been evidenced in the society at all levels [14].Notably, the use of m-commerce is expansive; for Education, Traffic, TravelandTicketing, Health care, and so forth. Aside from India, in countries including China and Brazil, m-commerce use appeared to have increased from years2010 to 2011.Alongside the increase in usage, providers of m-commerce have been urged to improve user interface, and employ innovative pricing structures. Meanwhile, among the employed technology protocols in m-commerce include GPRS, WAP, GSM, UMTS, and so forth. However, the technicalities of these protocols will not be detailed in this paper [15].

III. CURRENT SCENARIO OF M-COMMERCE IN INDIA

The popularity of m-commerce usage in India is caused by many factors, and these include the factor of cost. In fact, the price of devices today has considerably decreased. Hence, the public are now able to own the devices at judicious price. This easy availability due to cost has facilitated the acclimatization of the public to the mobile phones. It appears people from all walks of life in India are users of Smart phones, and in fact, for every 100 mobile users, 74.16 users are in India. Globally, concerning mobile phone usage, India has been ranked second. In this country, the Internet on mobile phones is effortlessly obtainable and at rates that are reasonable.

In India, the providers of mobile service are offering internet connection for mobile phones at highly minimal price and half of the population could afford it. In fact, 2013have seen the significant drop of prices of mobile phone internet rates. For instance, the rates of 3G were dramatically reduced by 70%, while Reliance had slashed its rates up to 90%, whereas the rates offered by Vodafone went down by 80%. In addition, there are approximately 431 million mobile devices with internet abilities in India implying easy accessibility to m-commerce among all levels of consumers.

Accordingly, in the market of India, among the available mobile applications are as follows:

- Ticket Sales: This application assists users in booking their travel and entertainment tickets in the comfort of their own homes. Among the sites include IRCTC, and Book my show, just to name a few. For airline ticket booking, among the popular sites is Sky scanner, whereas for hotels and accommodations search, Ixigo is among the popular sites.
- Restaurant Apps: Among the popular apps is Urban Q. It helps customer in finding the neighboring restaurant. Another popular application is Domino's Pizza app.

This application assists customers in making orders on the phone.

- Mobile Marketing Apps: Among the popular apps is Mobile Deals and it allows users of mobile phone to obtain a lot of discounts, as well as purchase deals on-the-go. In fact, it is common for restaurants, bars or shops to offer a lot of deals, and the app may even employ features of GPS in finding deals that are nearest to the mobile user. Another popular app is Mobile Coupons. This app encompasses a tool of marketing tool. In the use of this app, user needs to specify the store.
- Retail Store Apps: Flipkart, Firstcy, and Amzon.in are among the retail store apps that assist user in their online purchases.
- Social and Gaming Apps: Through the integration with payment systems, apps of mobile gaming have begun to integrate the in-game content purchase, and the app store is accessible using nearly all operating systems(e.g., Android or iOs or Symbian, etc.).
- Banking Apps: The services of mobile banking are popular nowadays more than ever. In fact, all leading banks in India provide countless types of banking services for instance bill payments, credit card payments, and real-time personalized messages to consumers, and so forth. Among the banks that provide such services in India include Bank of Baroda, Axis, and SBI.

One major advantageous feature of mobile phones is their portability and availability at all times. Today, mobile phones are much smaller but equipped with a lot more capacities. Hence, mobile phones provide users with much more convenience as opposed to laptops. Meanwhile, sites of m-commerce are accessible at all times. In regards to the products sold online, they are fairly cheaper as opposed to those sold in physical stores. Furthermore, online customers often are offered with a lot of discounts, free shipping, and coupons in their product purchase.

IV. ISSUES IN USING M-COMMERCE

In the context of India, the concept of m-commerce is still new, and in offering convenientand hassle-free shopping experiences to the customers, companies of e-commerce are still testing the mobile sites and mobile apps. In this regard, a lot of companies are yet to decide ifthey would employ mobile-optimized websites or mobile apps. Nonetheless, owing to the lack of awareness, the use of m-commerce has not been as extensive in this country. In fact in India, while it is true that users of Smartphone's' are many, a lot are clueless regarding what can be done with them.Apart from that, a lot of users feel unsafe when making payments over mobile phones.

Another issue is low internet connectivity (2G, 3G). In India, the 3G rates have dramatically dropped. Somehow, there are phones that do not support 3G. Meanwhile, the speed of 2G is too low for making purchases and payments. Not only that, albeit the reduction of 3G rates, they are still

unaffordable to a large chunk of users. 4G is also available but its availability is restricted to cities and certain areas in India such as Bangalore and Pune. Somehow, for 4G connection, it is unaffordable to a lot of users as the required device and connection rate is very costly.

Aside from the low speed of internet, security issues have also been reported by users. Accordingly, without the appropriate security software, users would be exposed to threats from identity theft, hacking as well as phishing.During apps usage, the personal details and bank credentials fuser are used by the app store, and during payment, user is brought to the third party. During this time, if anything goes wrong, user would need to repeat the payment process or the order would be pending or cancelled. In this regard, user will employ m-commerce only if they are confident that the transactions made using their devices are secure.

As reported in ROPO (Research Online and Purchase Offline), the inclination of people is also a significant issue. In India, a lot of users would only go online to view and compare products rather than making the actual purchase. As for making the purchase, many seem to prefer going to the actual shop. Among the reasons for this is their reluctance in having to be bound by the online returning policies.

Problems related to language have also been reported. Notably, the accessible apps are primarily presented in English as it is the common language for apps. Unfortunately, in the context of India, a lot of users are not proficient in English, and even so, many are more comfortable using apps presented in their native language. Somehow, till date, apps presented in regional languages are few, and the available ones include apps in Tamil Seitegal, and inTamil and Panchanga in Kannad, and so forth. Sites for banking and purchasing are still primarily presented in English language.

Another point worth noting is that technology lovers are not necessarily technology users. Hence, it is common to see people carrying around with them state-of-the-art mobile devices, and yet, they don't use them for making purchases. Among the possible reasons for this is the inability of the screen resolution and the catalogue in presenting the desired product viewing. Mobile applications can also be complicated as opposed to e-commerce websites. In order to assure ease of use, it is crucial that m-commerce apps are fashioned in a manner that caters to the need of users. The apps also need to be up-to-date with the current shopping trends.

V. CONCLUSION

M-Commerce is currently expanding its market in India but not without having to deal with challenges and issues. The use of m-commerce is spreading owing to the ease of availability of Smartphone in this country. Smartphone's allow people to perform countless of tasks including making audio and video calls, viewing products and making purchases online, and so forth, with ease and freedom, in just a few simple clicks. Countless of services are also available through m-commerce including ticket booking, bank accounts and mail accounts management and so forth. However, the issues of security are plaguing the use of m-

commerce in this country, considering that wireless connections can be exposed to threats.

Furthermore, the use of the applications requires user to share their personal details with the service provider, and this means that user's bank credentials, debit and credit cards are also viewable by others during the apps usage, which might put the user at risk of data thefts. Also, disturbance in connection can cause user to repeat the purchasingprocess which can be a hassle. Success and failure of m-commerceare caused by many factors. It is therefore necessary for both government and provider in India to identify the factors and make the appropriate efforts as countermeasures, in order that the success of m-commerce in this country can be achieved. In turn, m-commerce will become an integral part of life for the people in India.

VI. ACKNOWLEDGMENT

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