SWOT SURVEY ON M-COMMERCE IN INDIA

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Abstract
There had been tremendous growth of technology in India especially wireless technology. And as a result of this growth changed public to do business in M-commerce. This advancement of wireless technology leads to attain good and fast transaction into market. M-commerce become very successful in Indian market because it has been adopted by large number of people day by day. Due to huge number of mobile applications, users are intensely increased on smartphones and consuming bandwidth of internet service providers. Many people started using electronic commerce but they are hesitating to use of mobile commerce because of problems like security problems, payment issues and complexities of applications. This paper clarifies about the feasibility of mobile commerce in India, its growth, Strength, weakness, opportunities and threats lying ahead.

Keywords— Commerce (Mobile Commerce), Wireless Technology, Smartphone, SWOT survey

Introduction

I. INTRODUCTION

M commerce stands for Mobile Commerce. In 1997 at the launch of the Global Mobile Commerce Forum, Kevin Duffey originally coined m-commerce, to mean "the delivery of electronic commerce /transaction capabilities directly into customer's hand, anytime & anywhere via wireless network technology. M-commerce is a wireless extension of wired extension of e-commerce which is accessible by anytime from anywhere. According to source M-commerce is the buying and selling of goods and services through wireless handheld devices such as smartphones and tablets. The factors which are making m-commerce popular day by day is M-ticketing, Mobile money transfer, Mobile Banking, Location based services etc but it totally depends availability of mobile networks. M-commerce provides multiple advantages like personalization, distribution, flexibility, instant connectivity and immediacy. Like these, there are many ways by which we are benefitted from advancement of m-commerce.
II.DEFINING ‘M-COMMERCE’

M-Commerce refers to a great range of online business transactions for applications, goods and services.

1) "The use of handheld devices to communicate, interact via a high-speed internet connection".

2) Mobile commerce is the use of information and imparting technologies for the use of mobile integration of wide value chains in business processes and relationships.

3) "M-Commerce is the use of handheld devices to communicate, transact and entertain with text and data via a connection between public to private networks."

The core technology behind m-commerce is based on Wireless Application Protocol (WAP) architecture which includes use of other technologies such as SMS (Short Message Service), IS95 (Interim Standard 95), CDMA (Code Division Multiple Access), Bluetooth Applications, 2G, 2.5G, 3G, 4G, Wi-Fi, etc.

A. Objective

Main Objectives of Research Paper are as follows:

1. To find how India is impacted by m-commerce.
2. To find what kind of problems and issues m-commerce industry in India are facing. 3. To find the growth ratio(rate) of mobile commerce in India.
4. To find what makes a life easy with M-commerce that is SWOT Survey.

III.LITERATURE REVIEW


Nowadays people are choosing m-commerce rather than e-commerce to obtain fast and good transaction in the market so m-commerce is gaining more importance. But still many people stumble to use m-commerce due to security issues, payment problems and complication of mobile applications. Mobile commerce sales are forecasted to form up 44.7% of amount total US e-commerce sales in 2019, which elevate from 39.6% in 2018. There lie 2 different examples about the relationship of m-commerce to e-commerce. The first example analyses m-commerce as a sub component of e-commerce; the second example analyses that it is an independent business territory and consequent as different mechanism to e-commerce.


In today's world, M-commerce paved the way of connecting everyone using a smartphone. Smartphone consumers is estimated to touch 2.1 billion and in India the number of smartphone consumers is amounted to touch 340.2 million in 2016. with the use of advanced technology, it is useful in most of the sectors whether it is private, business or government. Number of smartphone users is estimated to grow from 1.5 billion to 2.5 billion from 2014 to 2018. According to latest survey smartphone users has increased by 37.25% in 2013-2014 year and was expected to be 317 million in 2019. There was a rapid growth of m-commerce
due to the factors like security, innovation, affordability, accessibility.

Nowadays handheld devices are coming at very cheaper and reasonable price. Commerce accords with transfer of goods & services of efficient value between consumer and producer. With the advancement of technologies, it had taken many forms. M-commerce is the transaction with the mobile using wireless technology. M-commerce is used in various sectors like Service or Retail sector, Finance, Business, etc. In India m-commerce is becoming popular because mobile phones are available at reasonable rate and other is internet facility in mobile is also available at suitable rate. Nowadays commercial scenario, public and business zone that is financial and telecommunication organizations are using immense number of mobile phones and facility of giving information through Short Message Service (SMS) are in trend these days and mobile banking which makes an individual's life easier by providing payment of bill or invoice using mobile. RBI had given a ticket limit that anyone can pay the invoice or bill amount using mobile phone if amount is up to 50,000 Rs. Some benefits of m-commerce are User-friendly, easy to carry devices, works in low connectivity, secure transactions etc. Conducted a strategic planning technique for evaluating four important factors that is Strength, Weakness, Opportunities and Threats which are involved in a business organization or in a project that is SWOT survey.

Mobile devices are being utilized as to order goods and services, to do various transactions in the sectors such as Financial, Telecom, Real Estate, Banking, for trade dealings, MMS, SMS, etc. M-commerce is the subset of electronic commerce. Business Transactions can be done anytime anywhere. Normally M-Commerce is used for booking tickets for railway, air, and movie tickets, to pay bills of restaurants, mobile, debit and credit cards, to buy gifts, shopping, pay insurance, etc. Hence mobile commerce is succeeding mode of business. Technologies that increase users are Location-based marketing, Web Applications, Bluetooth services, MMS [Multimedia Message Service] and SMS [Short Message Service].

According to them there will be immense growth of smartphone from 2014 to 2017 that is from 8% to more than 20%. Handheld devices are the instrument through which consumers or users can do buying and selling of products or goods and services. E-commerce, Internet Connectivity and Wireless framework are the subsets of the M-commerce. Essential Technologies for m-commerce potency contain of: Hand-held devices such as smartphones, tablets, wearables etc, private assistant(digital); operating system: Android, IOS, Symbian, palm OS, pocket PC, various platforms; demonstration standards: Hypertext Mark-up Language(HTML), Wireless Mark-up Language(WML), Handheld Device Mark-up Language(HDML), I-mode; Internet Browser: Nokia Browser, Default Mobile Browser, Phone.com and other browsers & Network providers: Global System for Mobile Communications (GSM), Code Division Multiple Access (CDMA), General Packet Radio Services (GPRS), Time-division multiple access (TDMA), Cellular digital packet data (CDPD), paging networks. In India, m-commerce was in starting stage of development.
According to the survey, mobile devices used in the country would turn into handheld devices or smartphone up to 80%. E-commerce kings like Snapdeal and Flipkart accounted that their orders coming from mobile is increasing gradually. Snapdeal told that their 50% of orders come from mobile devices and Flipkart had a record 20% and will reach 50% in nearby future.

[Niharika and Satinder (2015)]
India has the second largest mobile market in the world after China. According to the survey by IAMAI and IMRB, the number of internet users in India reach 302 million by December 2014. 2014 has been golden year in the sector of m-commerce. According to survey by Nielsen in 2014, smartphone penetration in India as 18% and Philippines as 15% and in Indonesia was 23%. PayPal accounted that mobile phones transactions was more than 250% in 2014 by comparing it with last year that is 2013. Cell phones equipped combination of data, inclusion with stock data, transport information, NEWS, Sports information, Financial transcript, etc. Wireless Fidelity (Wi-Fi) was mostly used by the smartphone or mobile users in shopping malls or cafes and later resulted into lethargic pick up of 3G connections in India by amounting 3.4% of penetration level in January 2014. M-commerce had a de-merit of Wireless Network, Security problems, Incompatible in devices, slow access speed and costly phone prices.

[Dr. Pravin H. Bhatawal and Anshu Agarwal [2015]]
Mobile Network (Service) Providers such as Vodafone, Airtel and Reliance had to slash their 3G rates from 70 to 90 percent in India. According the statement by TRAI over 431 million devices which are capable to use internet in country. So large number of users can efficiently enjoy convenience. Banking sector services in m-commerce was raised massively, most of the banks like Bank of Baroda, HDFC Bank, Axis Bank, State Bank of India etc. granted banking services such as m-passbook, quick transfer, credit card bill payment, access to financial services. Even though the charges of 2G services was found to be economical by major population, but their speed was very slow and people won't be able to do purchases and payments. Whereas Indians cannot be able to afford slashed charges of 3G, where expensive 4G services was available but in limited cities.
Mobile is used as a medium to call or message, it is used for buying and selling of goods and services. Here for business dealings in mobile devices Wireless application protocol (WAP) technology is used. Enhanced relationships with users is resultant conclusion of M-commerce. It was time to uplift m-commerce in India hence Government of India has increased internet connectivity to next level.

E-commerce has become latest paradigm in world. M-commerce is the part of electronic commerce and most advanced communication technology in newly advanced generation. There was a massive storm in wireless technology in today's world and with these it gave a boost to m-commerce. Due to boost in M-commerce there was a tremendous growth in the business sector. The developing technology behind m-commerce is Short Message Service [SMS], Global System for Mobile Communications [GSM], Wideband Code Division Multiple Access (W-CDMA), Interim Standard 95 (IS95), 2g, 3g, 4g, Wi-Fi, etc. M-commerce gives various services like banking, entertainment, information services, shopping, marketing, ticketing, telematics services and has various drawbacks such as lack of internet connectivity, language barrier, awareness etc.

M-commerce describes that The Mobile phone looks to give us great potential as individual to do whatever we want and be like whosoever you want be. Young generation consider cell phone as expansion themselves. M-Commerce has become a latest interesting topic nowadays. Business Institutions have been furiously figuring out the revenue possibility of m-commerce market and progressing business designs to handle the great profit possibilities of the new market.

In India, mobile was introduced in 1995 and in a decade quickly it started turning into necessity for every single person and was entered in Indian market. Mobile users to be increase from 7.94 lakhs in December 1997 to 52.41 crores in December 2009 (TRAI and COAI). India was made the fastest developing mobile market with this record of 13 years. Technologies that are used in m-commerce are: GSM and HCSD protocol based on GSM. GPRS service depend on GSM. Boosted Data count for global expansion, Micro browsing, Bluetooth and WAP (Wide Application Protocol).First m-commerce was introduced in Helsinki of Finland by Company named Coca-Cola in 1997 by introducing payment method through mobile phone in vending machine and first banking service was also started in Finland by the bank named Merita bank.
Most of Indian Population don't have telephone (landline) or bank account, but amazingly they have handset with enough amount to transact. People who can read English language is only 2% in India. So, m-commerce could be another level success if they have local languages support. According to forecast by TechNavio's analysts, In the span of 2012-2016 m-commerce would boost at CAGR 71.06%. According to KPMG's study, Users in China and India are now heading towards personal banking and retail transaction with smartphones.

For all businesses whether it is big or small Indian market is massive point of attraction. The main reason behind this is diversity and population. Many organizations or companies have gained immense profit by trying their fortune in Indian Market due to these reasons. From them most have achieved success and many got fail, everyone having their own design or planning. Those who adapted changes according to the economy and population of country remained in market.

The paper he published was "Australia -Mobile Data -Mobile Commerce and M-Payment", in this he describes the overview of Australia in terms of m-commerce and classifies the affecting factor that will necessary for future market transaction. In this Paul curb that, market place of m-commerce in Asian countries is greater than the Australia.

Hand held technology is cheaper and also offers a better effectiveness and flexibility to its consumers. Mobile commerce is also a sub component of e-commerce, but the divergence lies in m-commerce use wireless framework technology. So, it provides malleable and favorable experience.

**IV.RISE OF M-COMMERCE IN INDIA**

India has the second largest mobile market in the world after china. According to the survey, the number of internet users in India reach 375 million by December 2019. 2014 has been golden year in the sector of m commerce. According New zoo’s Global Mobile Market Report in 2017, smartphone penetration in India is 23% of population and of mobile phones is close to 100%. It's foreseen, in India near about 1 billion mobile phone subscribers along 240 million Smartphone users are there. In the recent case study India to have 530M smartphone users in 2018. As per BCG report in July 2016, only 22% of cashless transactions
recorded in India that's lags far behind if we compare globally. However, Boston Consulting Group predicted to increase the cashless transactions up to 59% by 2025, as government promoting a digital mode of payment to make India cashless. Near about 45% mobile subscribers link from rural areas. According to the Reserve Bank of India’s (RBI) annual report for 2017-18, mobile banking services witnessed a growth of 92 per cent and 13 per cent in volume and value terms, respectively. The number of registered customers rose by 54 per cent to 251 million at end-March 2018 from 163 and Quantitatively measured, digital payment transaction turnover vis-à-vis GDP(at market prices-current price) increased from 7.14 in 2016 to 7.85 in 2017 and further to 8.42 in 2018., The turnover in payment transactions (after including CCIL figures and paper) vis-à-vis GDP (at market prices-current price) increased from 14.41 in FY 2015-16 to and 14.73 in FY 2016-17 and further to 15 in 2017-18. According to survey done by India Today, 2 out of 3 urban Indian women use mobile applications for financial transactions. It's anticipated that the internet users will set to double in coming five years – at present the internet users recorded to be 300 million which projected to 600 million in 2020. That shows half of the internet users from 600 million will expect to make payment through digital or mobile payment method.

Let's take a visual look at how some of the top M-commerce applications of India grew in the year 2014, which also points towards the overall growth of mobile commerce in India.

![Fig 1. Famous M-commerce Apps in India (in Millions)](image-url)
V. GROWTH FACTORS

a) *Speed:* M-commerce through the handheld devices is increasing rapidly due to very fast and easier transactions every day. It fulfils instant expectations of customers and allows organization or businesses to create urgent and drive sales through the use of short-term discounts.

b) *Security:* All the transactions done using handheld devices or made by M-commerce technology are fully safe and secure. M-Payment allows a complete interactive experience that would encourage businesses and their customers.

c) *Innovation:* M-Commerce provides innovative applications and new creative mobile payment solutions. In a growing development market, it is an important to innovate new apps that keep pace with development elsewhere.

d) *Affordability:* Android is one of the ruling mobile technology in India, nowadays people even with low income is able to buy a smartphone and afford it and they can surf internet using the device. According to recent survey there will be 375 million internet users till December 2019.

e) *Accessibility:* Many cities do not have existence of big brands retail outlets. Hence the M-commerce or online marketplace became the gateway for a greater number of youngsters those who want to buy their favorite brands clothing accessories.
VI. M-COMMERCE ISSUES

To increase the sustainable growth of mobile commerce in India we need to take appropriate steps for making some consistent policies and make factors more likely for mobile commerce growth.

Following types of challenges are faced by M-Commerce are:

1) Security Issues
2) Network Issues
3) Slow Internet Speed
4) Constantly adapting new technologies (High Cost)
5) Limitations of mobile devices
6) Wireless Infrastructure
7) Legal and Regulatory Challenges

There are some problems or issues faced by m commerce which directly or indirectly affects the growth of m commerce. Many challenges faced by M-commerce are:

a) Lack of Awareness:
   As of now many people in India does not know what type of resources, they have with them and they don't know how to use it. Most of them also don't know how to do an online transaction and they feel insecure while doing transaction through the phone.

b) Low Internet Connectivity
   In India internet speed has become a concern from years. Even though services of 4G & 3G is not same by each provider. It means there is issue of unevenly distributions os connectivity as there. Still now some of the areas don't have network connectivity in India.

c) Lack of Simple, standardized payment mechanism
   As there is ATM, credit card or debit card no other mode of payment is popular in India. This type of payment mode is easy for payments so it creates an issue for growing M-commerce in doing online transaction even though "Mobile Wallets" concept is there.

d) Imbalance between service providers & network providers
   Nowadays there is huge imbalance between different service providers that is between small and large service providers. Small service providers face problem of providing their services to customers at right time with consistent speed and facility. As network operators’ interest is to attract greater number of buyers rather than increase in charge to earn more.

e) Lack of high-speed connection
   To access an information, high speed internet connection is required. In India, there is gradually increase in speed nowadays but still network is n concern in most of the areas.

f) Security
   There is fear of hacking and attack by hacker to the device is mostly seen in the user. Even sometimes while doing a transaction user lost their money and get nothing and sometimes their money has been deducted from their account but gives an error like server unreachable.
so, security system is a challenge.

\*\*g) Privacy\*

Fear of hacking the private credentials of user as sometimes user needs to disclose their private credentials while doing financial transactions and if information gets hacked then it causes great problem to user. so, it is challenge while doing a transaction.

VII. SWOT SURVEY

SWOT survey is a strategic planning technique that is conducted by any company or organization to identify its strengths, weaknesses, opportunities and threats associate to any project planning or business competition. It is very useful technique to identify both internal and external factors in which few are favorable and few are unfavorable in managing the objectives. For analyzing the weakness and threats in mobile commerce this SWOT survey is carried out.

A. Strength

\*\*a) Contemporary Business Models\*

- Developing competitions creates novelty in all sectors and newly modernized way attracts consumer's approach of accomplish business. Mobile commerce is such technology which allows a new business modernization to organizations and customers.

\*\*b) User Endorsement\*

- New generation people want satisfaction and they are ready to fit in new things for it. Mobile commerce gives a newly advanced technology day by day to make life survive with smoother and comfort.

\*\*c) Tremendous pace of internet connectivity\*

- With the newly 4G services it takes seconds to load sites or apps on a mobile devices or handheld devices. With the help of high internet speed connectivity, it saves a lot of time and provide more efficient service to an individual in comparison with Desktops and Laptops.

\*\*d) Communicate easily without geographic constraints\*

- Mobile commerce had made a communication to anyone with the help of fingertips very easily. Users can access anything from anywhere without any geographic constraints.

B. Weakness

\*\*a) In long phase, Absence of Interoperability and Immense Managing Costs\*

- Absence of Interoperability among devices creates security issues and Immense managing costs put burden on retail chains to transform.

\*\*b) Bounded Memory\*

- There is limited memory in device but m-commerce takes immense memory space and creates an issue with low memory space.

\*\*c) Limited Computing Capability\*

- Computing capability refers to pace of information’s are figured out and is declared in kilo and mega flops etc. Computing capability would carry this but mobile phones have it in disadvantage.

\*\*d) Antivirus solution is crucial to carry out\*

- Smart phones should be updated frequently for most efficient protection and it is challenging to implement.

C. Opportunities
a) Mobile commerce privacy and security liability - Mobile commerce transactions carry out the personal information of users like their address and their financial details. Hence, m-commerce transactions hike Privacy and Security problems for users, as well as worry about mobile spam.

b) Wireless Framework Risks - The wireless network infrastructure is valuable component of assuring that potential risks to global ICT security posture of CGIAR centres are handled productively.

c) Virus is transmitted instantly among system - As you know that m-commerce runs on wireless infrastructure and networks so it is difficult to assure the safety and security on devices against e-attacks in form of malware and viruses.

d) Various factors of Infection - There are various factors by which devices can get infected like use of passwords and PIN which are easily assumed or guessed, spoofing attack on user's card or service provider, chance of SMS getting lost. The necessity of protecting mobile commerce transactions.

D. Threats

a) Risks associated with fraud of device - Lost or theft of devices are most common trending threat to data on mobile devices. With more trend of m-commerce nowadays mobile companies have a special team of security their work is to keep email and application data secure on the devices.

b) No Confidentiality - As there is a massive increase in m-commerce day by day there is an increase in privacy threats, every individual using smartphone is worried about their data, text messages and voice calls from unauthorized access.

c) Short screen devices - Mobile devices have small screen size if we compare it with laptops or desktops so sometime it creates an effect on mobile commerce.

d) No typical standards - There should be a one department of standards for m-commerce in today's lifestyle which deals mainly with standards.

Table I. M-Commerce SWOT
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CONCLUSION

Mobile phone had become the valuable thing to survive now a days and it became an important component of individual's life. They offer all the things which an individual wants to do. Mobile devices will helpful to themselves by doing transactions with it and people can transform their lives smoother and can optimize their valuable time. day by day m-commerce is earning a fame in whole world so there is immense growth in users. M-Commerce is the technique or method of making business transactions using hand held gadgets. Many Applications and service available nowadays which are helpful to us in day to day life. Applications and Wireless Infrastructure are providing assurance to emerge together, both are running with introduction of modernization and powerful features. Due to cheaper mobile phones and feasible rates of internet connectivity m-commerce reached to a different level. Enhanced 3G and 4G connectivity unlocked new opportunities for m-commerce. Many mobile and network related issues were addressed by network service providers. At last conclusion is that there are many challenges, issues, problems or obstacles in this industry which should be managed for superior growth in Indian Market.

REFERENCES

For papers published in translation journals, please give the English citation first, followed by the original foreign-language citation [6].


