

Role of m-Commerce in the development of Rural Economy of India

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Abstract

According to Mary Meeker's 2014 Internet Trends report, smart phone usage has consistently grown over the past few years, so much so that 30% of mobile users are smart phone users. With phones getting smart and markets getting online, there has been an inevitable need for something that can bring the whole market to our fingerprints. M-Commerce has emerged as a key player for both product and service industries. This research establishes that mobile was playing an increasingly important part in the way that consumers researched, browsed and shopped. Hence, it creates a big opportunity for m-Commerce.

M-Commerce is an extension of e-Commerce that allows users to interact with other users/ businesses in a wireless mode, anywhere and anytime. This paper explores the role of m-Commerce in the development of the rural economy of India. Economic activities in rural areas of developing countries are usually not strong enough to impact significantly in poverty mitigation and improve rural life. Information and communication technologies can be used to develop these potentials by opening these markets beyond the local/urban borders. Our objective is to explore the potentials of information and communication technologies for rural economy development by bringing mobile added value to potential users. According to "State of M-Commerce 2016" survey conducted by Regalix Company, "Indian retail customers are taking strongly to mobile commerce, with nearly 83% of people owning a smart phone shopping online on their mobile phones. In particular, customers in the age group of 25-34 are taking to their mobile phones to shop online, with 90% of customers in this group doing so."

In this paper, we explore that rural economy can be developed by the use of different product and services available through m-Commerce easily.

Key words: m-Commerce, e-commerce, rural economy, poverty, Information and communication technology.

INTRODUCTION:

The 21st century is the time for digital commerce to thrive. With an ever changing market and demands for a more flawless experience, companies are finding new innovative ways to sell their products.

In India, digital is going huge, due to the great rise in users. According to statistic, India may be less on GDP but due to the influx of low priced Chinese smartphones, the mobile market has drawn to an open ground. Therefore, the rise of mobile users has been on a new high. Every house may not have a machine but every household has at least two smartphones on use.

E-Commerce is a constantly growing part of the larger retail and commerce landscape, but what about m-Commerce? Given the growing number of smartphone and tablet users, this is understandable and the growing popularity of mobile internet and mobile shopping, not to mention the multi-screen world we live in today. So, with online market, m-Commerce has emerged as a key player for both product and service industries.

E-commerce has been firmly established for years and continues to see healthy growth. Mobile devices are changing the way we shop in a number of ways. The recent introduction of Apple Pay and Android Pay may help to accelerate the mobile commerce industry.

THE CONCEPT OF M-COMMERCE:

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 e-commerce capabilities directly into the consumer's hand, anywhere, via wireless technology.

Mobile-commerce-related services were first delivered 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.

Mobile commerce (m-commerce) is an e-commerce activity conducted over a wireless network using handheld electronic devices such as smartphones and tablets etc. It includes activities such as buying and selling goods, services and information, online transactions etc. To be very clear, m-commerce is not a separate entity from e-commerce; instead, it's a more specific sub-group of e-commerce transactions that involves the use of smartphones and tablets, instead of desktop computers and laptops.

The main idea behind m-Commerce is to facilitate different applications and services available on the internet to handy devices to overcome the constraints of a desktop computer. It aims to serve all information and material needs of the people in a convenient and easy way.

NEED FOR THE STUDY

Mobile Commerce has become the latest topic for today. Business organizations have been restlessly evaluating the revenue potential of the m-commerce market and developing business models to exploit the huge profit potential of this new market. So, the main purpose of this paper is to explore the role of m-commerce in the

development of rural economy of India.

OBJECTIVE OF THE STUDY:

1. To understand the basic concept of m-Commerce.
2. To study the mobile internet users in India.
3. To study the products and services of m-commerce.
4. To study the impact of m-commerce on rural economy of India.

RESEARCH METHODOLOGY:

Secondary sources of data would be used for the study. Secondary sources of data would involve the use of Books, Journals, Publications from Ministry of Corporate Affairs, Govt. of India and recognized institutions available on websites and Magazines etc.

LITERATURE REVIEW:

K.S. Sanjay (2007)

The article entitled "*The diffusion of mobile commerce in India*". This Paper states that mobile hand held technology is less cost included and also provides a better flexibility and effectiveness to its users. M-commerce is also a subset of e-commerce, but the difference lies that m-commerce uses wireless technology. So it gives flexible and convenient experience.

Sujata P. Deshmukh & G. T. Thampi (2014)

The article entitled "*Transformative Effect of e-Commerce and m-Commerce on National Productivity in India*". The m-commerce is the branch of e-commerce technology, in short we can say that, e-commerce transaction carried out using a mobile hand held devices. Today internet is the part of our daily life for communication, business transaction and market transaction, but India is a country of many different languages, only 4% of people know very well about the English language. If m-commerce uses local language, this will not only ensure quickly adoption by the customers but also will be an instant success.

Dr. Sachin Gupta and Mr. Anand Vyas (2014)

The article entitled "*Benefits and Drawbacks of M-Commerce in India: A review*". The purpose of this research paper is to identify factors affecting the adoption of m-commerce and how m-commerce is developing in India. The study found that, still there is lot of work, which is to be done for m-commerce. Internet connectivity and mobile networking is still not accessible to entire population.

Manpreet Kaur (2015)

The article entitled "*M-commerce: SWOT Analysis*". This paper is intended to bring out the facts about the feasibility of m-commerce today, its growth and the strength and opportunities, the weaknesses and threats lying ahead. The study found that,

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. The study also found that, there has been tremendous growth in wireless technology in the last decade.

Tarandeep Kaur (2015)

The article entitled “*Transformation from E-commerce to M-commerce in India*”. This paper evaluates the position of e-commerce and m-commerce in India which will be further helpful for increasing productivity in India. At the same time it will also useful to design and implement different models of mobile commerce in India as model for the commerce in India. The study found that, customized and innovative services, right regulation and right models will drive the future e-commerce and m-commerce in India.

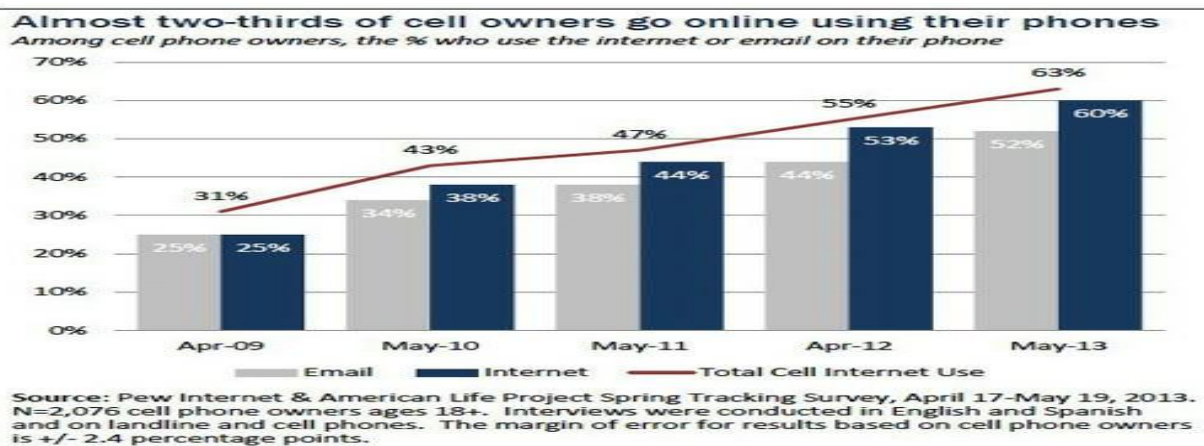
Kush Dhingra, Abhishek Bhardwaj and Aashish Aggarawl (2015)

The article entitled “*M-commerce*”. This paper identifies the progress and future direction of m-commerce. M-commerce is the next generation of e-commerce which enables the user to access internet without need of a place plug in. The study found that, today mobile is not use for sending message or calling but it also used for other ways like web browsing etc. The study also found that, the technology used in m-commerce based on Wireless Application Protocol (WAP), M-commerce helps in improving relationship with customer.

MOBILE AND INTERNET USERS IN INDIA:

As per census 2011, 63.2% houses in India have and use telephone. That is approximately 15,59,09,766 (156 million) houses. This includes all houses having either Mobile phones or fixed land-line phones or both. The census covered 24,66,92,667 (246.7 million) houses in India to gather this data.

The Pew Research Internet Project found that, by May 2013, almost two-third of all mobile users used their phone to access the Internet. These users aren’t mobile-only, but the fact that they do spend a statistically significant amount of time accessing the Internet using their mobile phones means that there’s definitely a chance that they’ll be doing some shopping on their device(s).



(Image Source: Pew Research Internet Project)

According to a report from the Internet and Mobile Association of India and market research firm IMRB International, “the number of Internet users in India is 432 million in December 2016. Urban India with an estimated population of 444 million already has 269 million (60%) using the Internet. Rural India, with an estimated population of 906 million as per 2011 census, has only 163 million (17%) Internet users. Thus, there are potential approximately 750 million users still in rural India who are yet to become Internet users; if only they can be reached out properly.” But according to the latest data from TRAI (31 May, 2017), the telephone subscribers in Rural India was 507.92 million. The report points out that 77% of urban users and 92% of rural users consider mobile as the primary device for accessing the Internet, largely driven by availability and affordability of smartphones.

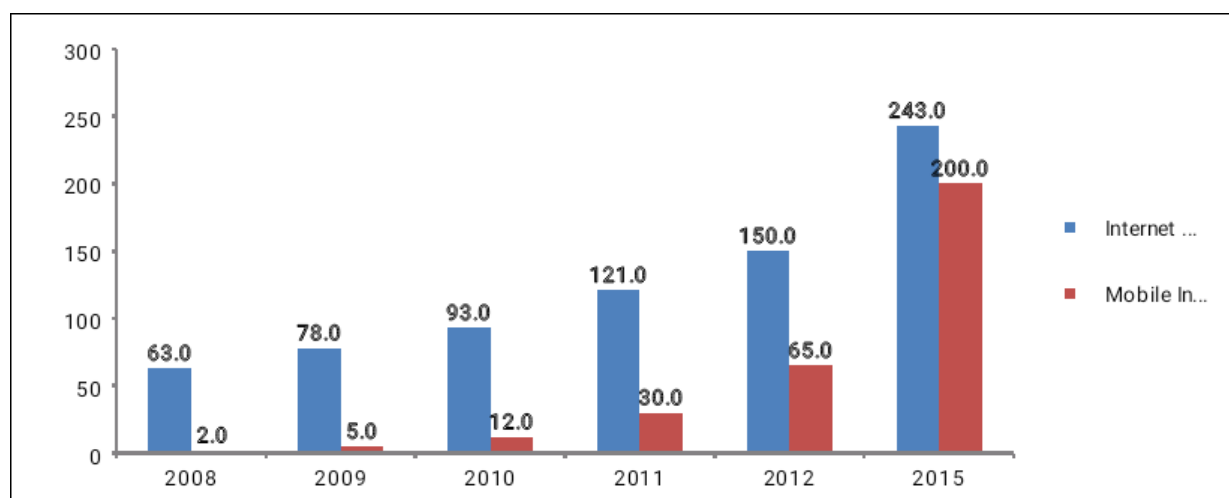
As per Telecom Regulatory Authority of India (13th July, 2017), Population of India was 1,31,10,50,530 and mobile phone users were 1,18,08,24,744.

Highlights of Telecom Subscription Data as on 31st May, 2017

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1,180.82	24.16	1,204.98
Urban Telephone Subscribers (Million)	676.65	20.41	697.06
Rural Telephone Subscribers (Million)	504.18	3.74	507.92
Overall Tele-density*(%)	91.74	1.88	93.61
Broadband Subscribers (Million)	273.38	18.23	291.61

Source: Telecom Regulatory Authority of India (13th July, 2017)

India had more than 100 million internet users in the year 2010 and this value reached 121 million users by the end of 2011, which make it the third-largest country in internet population. It is found that the number of internet users in India is triple i.e. 243 million in 2015, growing at a CAGR* of 25.5 %. Following figure shows the internet users in India:



RURAL AREA OF INDIA:

Nearly 70% of the country's population lives in rural areas. According to Census of India's 2011, "Of the 121 crore Indians, 83.3 crore live in rural areas while 37.7 crore stay in urban areas."

ECONOMIC ACTIVITIES IN RURAL AREAS:

Directly or indirectly farming is the major economic activities of rural India, 75% of the people who are working are dependent on farming for livelihood. Dairy is the other common economic activity. Agriculture and allied sectors like forestry, logging and fishing accounted for 18.6% of the GDP in 2005, employed 60% of the total workforce.

India is the largest producer in the world of milk, cashew nuts, coconuts, tea, ginger, turmeric and black pepper. It also has the world's largest cattle population (193 million). It is the second largest producer of wheat, rice, sugar, groundnut and inland fish. It is the third largest producer of tobacco. India accounts for 10% of the world fruit production with first rank in the production of banana and sapota (chiku).

All the above activities are to be done in the rural India.

The required level of investment for the development of marketing, storage and cold storage infrastructure is estimated to be huge. The government has implemented various schemes to raise investment in marketing infrastructure. Amongst these schemes are Construction of Rural Go-downs, Market Research and Information Network, and Development / Strengthening of Agricultural Marketing Infrastructure, Grading and Standardization.

SCENARIO OF M-COMMERCE IN INDIA:

Use of M-commerce become popular in India in these days and the main reason behind this popularity is availability of mobile phones at reasonable rate and therefore people become use to of using mobile phone. One more reason which influences the popularity is internet facility in mobile at feasible rate. In today's economic scenario, business and public sector i.e. telecommunication, financial institutions are utilizing large number of cell phones and even facility of providing information through SMS grooming these days facility of mobile banking is introduced which provide facility to common people for making payment of bill easily and also helpful in ticket limit Rs. 50000 is made by RBI for mobile payment. Even mobile phones/smart phones can be used the payment and then utilize that money later.

POTENTIALS OF ICTs FOR RURAL ECONOMY DEVELOPMENT BY BRINGING MOBILE ADDED VALUE:

Much of the development of agriculture and rural sector also depends on certain kind of infrastructures. Rural ICT infrastructure is often underdeveloped, due to the high costs of last mile connectivity in rural areas, intermittent and unreliable power, and

priority for ICT investment, due to other more pressing needs in the rural sector. Besides the limitations of existing telecom infrastructure in developing countries, the principal constraints in adopting and using ICT applications, especially for small businesses, include lack of capacity to assess returns and costs of using ICT and shortage of and an inability to retain ICT-skilled labor.

Given the unmatched growth of affordability and coverage of mobile services and its growing importance as a means of two way communications, the scope of this paper is limited to the role of mobile commerce in sustainable rural development in developing countries. The focus on mobile services is additional justified by the following facts:

(a) *Affordability*: The many pricing models offer affordability and alternative, even for very low-income customers; for example: cheap handsets, micro prepayments, top-up cards. Innovative ways of mobile phone access, which allow sharing of phones through SIM cards and payments for air time through micro-prepayment, promote even more rapid adoption by the poor.

(b) *Flexibility*: It is not pricing models that are flexible; usages are also. Mobiles can be used for text and voice and are two-way communications i.e., more flexible than radio/TV.

(c) *Low Barriers to Entry*: In response to factors above, mobile has become the most easily accessible and ubiquitous communications device in rural areas. Easy availability of low priced new handsets with basic features and emergence of secondary markets for used devices, whose prices are even lower, make them within reach for even the poorest of the poor.

Products and services which are provided through m-commerce are as follows:

1. **Mobile money transfer**: We can transfer money through our mobile phone. There are many services or modes by which we can pay instantly or transfer money from one account to another. The main services are mobile wallets, card based payments, carrier billing, SMS/USSD based transactional payments, QR code payments etc.
2. **Mobile Ticketing**: It is the process whereby customers can order, pay for, obtain and/or validate tickets using mobile phones or tablets. The best example would be IRCTC, where ticket comes as SMS to users.
3. **Content purchase and delivery**: It mainly consists of the sale of ring-tones, wallpapers, and games for mobile phones.
4. **Location-based services**: The location of the mobile phone user is an important piece of information used during m-commerce transactions.
5. **Information services**: Many information services (like news, stock quotes, sports scores, traffic reporting etc.) will be delivered to mobile phone users.
6. **Mobile banking**: Banks use m-commerce to allow their customers to access account information and make transactions.
7. **Mobile browsing**: A mobile browser is a web-browser designed for use on a mobile device. Mobile browsers are optimized so as to display Web

content most effectively for small screens on portable devices. Many mobile marketing apps with geo-location capability are now delivering user-specific marketing messages to the right person at the right time.

- 8 **Mobile purchase:** Catalog merchants can accept orders from customers electronically, via the customer's mobile device. In some cases, the merchant may even deliver the catalog electronically, rather than mailing a paper catalog to the customer.
- 9 **In-application mobile phone payments:** Payments can be made directly inside of an application running on a popular smartphone operating system.
- 10 **Mobile marketing and advertising:** Mobile marketing is a multi-channel, digital marketing strategy aimed at reaching a target audience on their smartphones, tablets, and/or other mobile devices, via websites, email, SMS and MMS, social media, and apps. Mobile advertising means understanding your mobile audience, designing content with mobile platforms in mind, and making strategic use of SMS/MMS marketing and mobile apps.

IMPACT OF M-COMMERCE IN RURAL DEVELOPMENT:

Bridging the digital divide and promoting trade and commerce in rural areas to accelerate development & growth are the main m-commerce growth drivers in India. The Indian rural population is much devoid of information and mobile technology can bridge this gap. Thousands of geographically scattered village have never attracted telephone companies as they failed to make a good business case for them. But a right mix of wireless technology, newer business models and directed policy initiatives can overcome these hurdles. The concept of localized services has always been restrictively thought of in terms of provisioning information related to travel, hotel, shopping, weather and other facilities. However for rural India the meaning of localized services could include information and consultation related to agriculture, such as advice on suitable crop for the area, timing of various agricultural activities, quality, information on cost of seed and prices of agricultural produces, future trading option in agricultural commodities, obtaining comparative rates in various mandis (local place of auction), disaster warning for coastal areas etc. Paucity of information which led to exploitation of the rural farmers at the hands of the middlemen could be easily overcome by wireless technology based new business model like that of 'e-choupal'. Other relevant usages of m-commerce would include giving short-term credits to rural farmers and small entrepreneurs. Micro credit is a large market in India. It is estimated that the trade sector needs around Rs 2.1 lakh crores of credit out of which around Rs. 61,000 crores is met by banking sector and rest by non banking informal sector. Charmed by the figures many banks are interested in entering the sector but are often constrained by their limited reach. However collaboration between mobile operators and banks, postal department, or financial institutions interested in extending their operations to micro credits in far-flung areas can work wonders. For example in the boat markets of Bangkok one can make payments through charged cards provided by mobile operators. Other example could be Bangladesh's 'Gramin Phone' working on a similar principal.

Taking conservative estimates even if only Rs 50,000 crore of non formal credit market is tapped by mobile operators in the next five years at an interest rate of 20 percent (though the retail credit in the `open' market is at around 60 per cent today) the sum that is expected to be earned is Rs. 10,000 crore which is around six months revenue of all operators combined. Central and state governments can use the networks to provide public information to masses, leading to better governance. Once the small farmers get perceived benefits from m-commerce services the propensity to go mobile will increase. This would trigger an increase in subscriber base, which will pull down the fixed costs of services. This would further snowball into rise in subscriber base making rural markets a good business case for mobile operators. Thus, the mobile technologies can prove to be a win-win situation for all stakeholders, particularly the rural population, mobile-operators, and the government.

CONCLUSION:

This research paper shows that m-commerce is rapidly growing in Indian business market in spite of its positive and negative impact. The reason for this is the easy availability of smartphones, with the help of this, people have got the freedom to do almost every aspect of business from browsing the new products, adding it to cart and making the payment in just few clicks. M-commerce as game changer in the future online market. Application and wireless technology promise to develop together. The opportunity is much beyond mobile bills payment and include all types of transaction including payment gateway technologies and all types of other business transaction. The enhance 3G, 4G penetration have opened up new possibilities on m-commerce. Many network and mobile device related problems like slow communication speed and connectivity where addressed by mobile operators. At last but not the least, we conclude that m-commerce technology is not new in Indian business market, because of this there are so many challenges, problems, hurdles and obstacles in the front of industry, which can be manages for better growth in Indian Industry.

In conclusion, there is substantial support to advise that the economic and social benefit of mobile-commerce-related services will be highest in rural areas, which currently have less telephone services. Both poverty and lack of information are common bed partners. Thus, the dissemination of information together with serving rural areas has double anti-poverty imperative. Studies have attributed many benefits to the mobile phone: from lowering negative aspects (e.g., corruption, crime, high prices) to raising positive aspects (e.g., levels of education, efficiency, health). Such benefits already witnessed in the developed world can also spread to the developing world, provided the right level of access and pricing are put into place.

Against this fast-moving mobile background, it is clear that just having mobile access to e-mail is extremely insufficient for growing productivity and producing better-informed employees. The integration of mobile devices such as laptops, tablet

computers, PDAs and smartphones, along with their various applications and software, make it easier than ever for workers to collaborate and businesses to communicate with staff, customers, and vendors.

Mobile technology allows people to use company data and resources without being tied to a single location. Whether company's staff is travelling to meetings, out on sales calls, working from a client's site or from home anywhere on the globe, mobile devices can help them keep in touch, be productive, and make use of company resources.

Mobile IT devices can also change the way our company does business - new technologies lead to new ways of working, and new products and services that can be offered to the customers. They can make the team more efficient, more creative, and more valuable to clients. Every day businesses are learning more about the ways mobile technology can be used to increase their productivity and lead to increased profitability.

Mobile technology allows companies to have an unprecedented level of connectivity between employees, vendors, and/or customers. Real-time communication with the office can be important in delivering business benefits, such as efficient use of staff time, improved customer service, and a greater range of products and services delivered.

It is clear that the deployment of mobile phones with mobile-commerce-related services does have a multi-dimensional positive impact on economy development and sustainable poverty reduction.

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