

EFFECTIVENESS OF SMART CARDS FOR FINANCIAL INCLUSION IN RURAL INDIA

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Abstract

India is a country with significant rural population, variations in income levels and economic activities where large sections of people still do not have access to formal banking services like credit, savings etc. Today government of India has a number of rural poverty alleviation schemes to promote viable employment opportunities for rural poor such as NREG, social security, pension scheme etc. Government wants to transfer the funds allocated to these schemes directly to the beneficiaries. Large segments of population are still unbanked and hence no bank a/c. The establishment of brick & mortar banks are proving to be cumbersome, costly and un-wielding. The Apex bank, the RBI mandated that every citizen of this country should be brought under the banking network. So the only viable option is to use technology to reach the unbanked Indian. Banks in India have realized this limitation and are trying to leverage the new smart card technology to provide banking services to large unbanked population. Banks are providing these services through different means like technology providers, business correspondents. In this scenario the present study is undertaken to assess effectiveness and the viability of smart card technology in providing banking and other financial services to unbanked people in rural India.

Keywords : Smart card, technology, banking, network, rural.

Introduction

India is a country with significant rural population, variations in income levels and economic activities

where large sections of people still do not have access to formal banking services like credit, savings etc. According to 2003 survey 145 million households are excluded from banking almost 50% of the population does not have a bank account, only 34% of the population has any credit exposure specially in remote areas, only 3000 villages have commercial bank branches, only 10% have life insurance cover, just 9.6% have non-life insurance cover.

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Objectives of the study are to:

- Study the financial services status in India

- Study the features of smart card technology
- Analyze the role of technology in providing effective financial inclusion.

Methodology

The present study is a descriptive study; an attempt to explore the opportunities technology in the form of Smart Card provides in bringing financial services to financially excluded Indian population. The study uses only secondary data gathered from magazines, websites, journals etc.

Scope & Limitations

The scope of this study is confined to assessing the viability of smart card technology only for financial inclusion and from an Indian perspective.

The major limitation of the study is very little data is available regarding the use of smart card technology in Indian environment also very little information about statistics of usage of smart card technology.

Financial inclusion scenario in India – A Review

Financial Inclusion as defined by many economists is – extending banking services at an affordable cost to those who have not so far been provided with. That is Ensuring access to banking services to all sections of the society who were earlier not included in a cost effective way by mainstream financial institutional players. As large section of the population are excluded from banking and other basic financial operations the need for financial inclusion is like never before, the beneficiaries of different government schemes such as social security pension, NREG, SHG linkages, microcredit, micro savings, insurance schemes, Kisan credit cards, general credit cards forced to have an account at the nearest place.

According to IndiaMicrofinance.com Broad based financial inclusion is a must, as there is hardly any instance where transition from an agrarian system to a post industrial modern society has happened in

any economy without the setting up of a robust financial system.

Despite the aggressive growth in most financial segments since 2001 coupled with the successfully absorbing of the global recession of 2008, under penetration of banking facility and of most financial products/services is widespread in both rural and urban areas of India.

The statistics on financial exclusion in India provides a very depressing picture. Out of over 600,00 rural habitations in the country, only about 30,000 or just 5% have a commercial bank branch. Just about 40 percent of the population across the country have bank accounts and this ratio is much lower in the north eastern part of the country. The proportion of people having any kind of life insurance cover is as low as 10 per cent, and the proportion of having non-life insurance is an abysmally low 0.6 per cent. people having debit cards comprise only 13 percent and those having credit cards a marginal 2 per cent.

Financial Inclusion is a necessity for inclusive growth and if Indian economy has to grow at the rate of 7 to 8 %. Large sections of the society are left at the mercy of NBFCs and local lenders who exploit the vulnerability of their poverty. Traditional banks and insurance companies are finding it difficult to scale up to the magnitude of the task ahead of them. There is also large scale pilferage of these schemes.

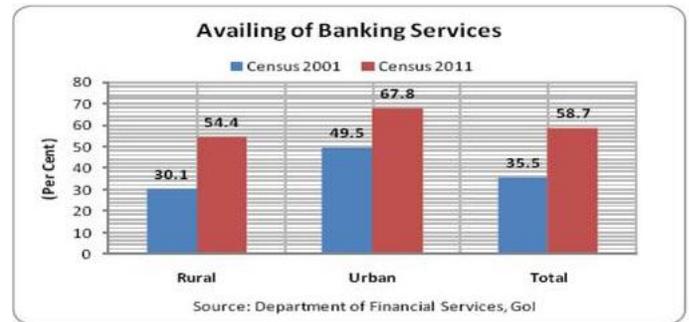
Neha Dangi & Pawan Kumar in their article *Current Situation of Financial Inclusion in India and Its Future Visions state* - With a vision to attain inclusive growth, the Government, RBI and the implementing agencies are required to place mind and hearts together to develop methods and measures to take forward financial inclusion.. In India, only 55% of the population have deposit accounts and 9% have credit accounts with banks. The numbers showing access to other financial services are even more unsatisfactory. Less than 20% of Indian population has life insurance coverage and only 10% have an access to any other

kind of insurance coverage. The number of credit cards has remained stagnant at around 20 million for last 5 years. Thus India has large number of households and rural population excluded from banking. Financial Inclusion can be seen as a prospect of improving and upgrading existing working style of banks and financial institutions. There is also an opportunity for banks to improve delivery mechanism and existing structure of operations. The mass banking with no-frills accounts can become a win-win situation for both the banks and the customers. Proper and efficient technology, thus, holds the key for financial inclusion to take place on an accelerated scale. So, there should be implementation of ICT (ATMs, Smart Cards, and Mobile banking).

Devaki Muthukrishnan states “The introduction of IT-enabled financial inclusion will facilitate easy payments to beneficiaries under various schemes of the state and central governments such as social security pension schemes and the National Rural Employment Guarantee Scheme (NREGS) which can be directly deposited to their bank accounts

According to *WORKING PAPER NO: 474 of IIMB Financial Inclusion in India: Select Issues* - Technology has started playing a very important role in financial inclusion. Indian banks are using all the avenues available to increase their reach and penetration. One of the recent technologies that have made the banking system much easier is the Automated Teller Machines (ATMs).

According to Department of Financial Services -As per census 2011, only 58.7% of households are availing banking services in the country. However, as compared with previous census 2001, availing of banking services increased significantly largely on account of increase in banking services in rural areas



Extracts from the Hon'ble Prime Minister's Address at Delhi Economics Conclave, 6 November 2015 - The big push towards financial inclusion in India has emanated from the Pradhan Mantri JanDhan Yojana (PMJDY) in August 2014 and the Jan Dhan Aadhaar Mobile (JAM) trinity articulated in the Government's Economic Survey 2014-15 as well as the special thrust on financial inclusion by the Financial Stability and Development Council (FSDC) that includes a Technical Group for dedicated attention to this issue. Thus, the inclusion drive has gone beyond the confines of various financial regulators and assumed the character of a broader national development policy goal [www.rbi.org]

Brookings - financial inclusion strategies of the government should ideally leverage the already existing and extensive postal network in the country. Post offices offer few financial services currently but these must be augmented. Particularly because the original mandate of postal department has weakened with improved digital and telecom footprint across India.

They further state that Technology must be leveraged to bring down the operating costs of these financial instruments which are more expensive in comparison to larger ticket instruments of the mainstream financial sector.

Technology perspective in financial inclusion

Technology plays an important role in bringing financial services to the citizen. Rapid strides made in information and communication technologies are being leveraged in delivery of financial services across length & breadth of country. Today the notion of a bank with brick and motor infrastructure

is diminishing. The extensive use of ATMs have resulted in bring basic services like withdrawal or deposits to the nearest point for an account holder, thus breaking the myth of a traditional bank. 24×7 banking operations are a reality. Growing Mobile and Internet penetration in the country is propelling financial services industry to strategise their operations to reach large segments of population. The technology can bridge the gap between financially excluded and financial services providers.

Sanjeev Kumar Gupta writes Technology can play an important role in reducing operating cost of providing banking services, particularly in the rural and unbanked areas. There are technologies that could drive the growth in financial inclusion.

Government of India through Digital India programme want to optimise the use of technology in financial inclusion by using mobile-banking, micro-ATM program, citizen service centres and post offices.

There are several benefits of using technology and these benefits could even bring in more to financial services providers, Internet service providers, mobile companies as well as customers.

Operating costs of providing these services can be considerably reduced banks can not only provide round the clock service (Anytime Anywhere) but can also provide other services as well diversify from traditional banking services to payment gateways etc.

In near future technology will enable us to go for cash-less transactions which may be safer as we do not have to carry paper cash or even credit/debit smart cards all these will be digitally available. This could even reduce black money. Some countries like Sweden have already moved to cashless environment.

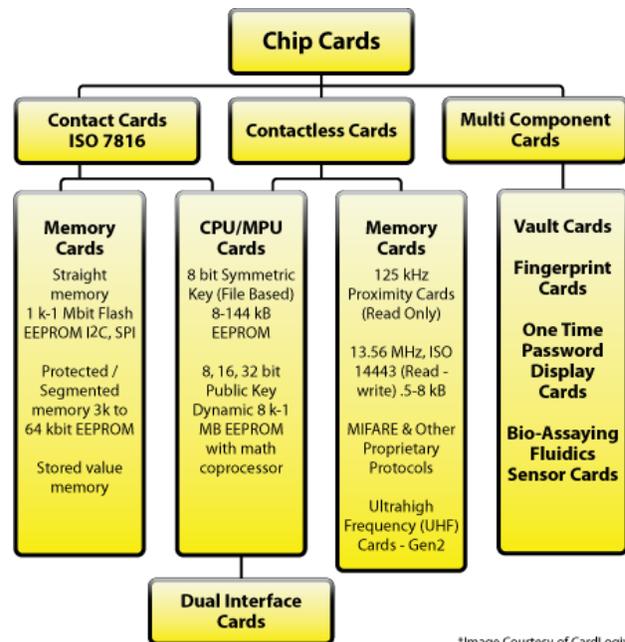
According to KPMG mobile phones are likely to lead digital growth in India, considering the expected level of penetration. Innovations that use mobile penetration and payments banks to their advantage are likely to further financial inclusion. The extensive reach of mobile phones in the country (920 million subscribers⁰⁹) offers an innovative low-cost channel to extend the reach of banking and payment services.

Smart card technology which uses biometric authentication is being used by many banks to bring unbanked population into banking fold. These cards especially used for government beneficiaries in rural areas where there is no physical bank presence. Many schemes of the government like pension schemes, NREGA etc where money is deposited use of smart cards helps to reduce pilferages in such transfers as they can identified through these cards.

Features of Smart cards

A Smart card is a plastic card with a built-in microprocessor, used typically to perform financial transactions. First introduced in Europe nearly three decades ago, smart cards debuted as a stored value tool for payphones to reduce theft. As smart cards and other chip-based cards advanced people found new ways to use them, including charge cards for credit purchases and for record keeping in place of paper.

Smart cards are of different types based on 1) How the card data is read and written 2). The type of chip implanted within the card and its capabilities. There is a wide range of options to choose from when designing your system.



*Image Courtesy of CardLogix

According to smartcard alliance smart cards have a number of advantages over other magnetic stripe cards. Few of them are following

Smart cards embedded with microprocessors can encrypt and securely store information

Smart cards can allow access to stored information only to authorized users.

Smart cards support strong authentication for accessing personal information In addition, smart cards support personal identification numbers and biometrics (e.g., a fingerprint) to further protect access.

Smart cards support digital signatures, which can be used to determine that the card was issued by a valid organization and that the data on the card has not been fraudulently altered since issuance.

Smart cards use secure chip technology and are designed and manufactured with features that help to deter counterfeiting and thwart tampering.

Some Possible Disadvantages

Easily Lost -Like a credit card, smart cards are small, lightweight and can be easily lost if the person is irresponsible. Unlike credit cards, smart cards can have multiple uses and so the loss may be much more inconvenient. If you lose a card that doubles as a debit card, bus pass and key to the office, you could be severely inconvenienced for a number of days.

Security -A second disadvantage of the using smart cards is their level of security. They are more secure than swipe cards. However, they are not as secure as some in the general public would believe. This creates a false sense of security and someone might not be as diligent as protecting their card and the details it holds.

Slow Adoption -If used as a payment card, not every store or restaurant will have the hardware necessary to use these cards. One of the reasons for this is since the technology is more secure, it is also

more expensive to produce and use. Therefore, some stores may charge a basic minimum fee for using smart cards for payment, rather than cash.

Possible Risk of Identify Theft -When used correctly for identification purposes, they make the jobs of law enforcement and healthcare professionals easier. However, for criminals seeking a new identity, they are like gold, based on the amount of information it can contain on an individual.[Ref 14]

Smart cards and Financial Inclusion

Smart cards can play a vital role for financial services industry like banks, insurance companies, microfinance companies and government as well. Smart cards can enhance the reach for the companies as well as offer secure transactions for hitherto financially excluded segments. This can also provide efficient and faster mode of payments to beneficiaries of government schemes like social security schemes, MNREGA, scholarships for students etc.

Government of India in order to provide social security to unorganized workers in the country will be issuing a smart card called UWIN (Unorganised Workers Identity Number) Card so that they can avail services like health, insurance, pension and banking. In fact this card will enable different ministries to provide services to such workers on a single card.

Many Public and private sector banks are providing smart cards for their account holders who do not have access to their nearest branch, especially in rural and inaccessible areas. Several public sector banks have taken initiatives to reach the unbanked people to offer their banking services through use of smart card the following tables illustrates examples of some banks and services that are offered using their card.

Bank Name	Services Offered Through Card
Bank of India	Can remit money without any charges providing a range of financial products at an affordable cost.
Indian Bank	It acts as a customer identity token using the finger print of the client as bio-password to provide basic banking & financial services. It is also an e-passbook, used for storing data of all transactions.
State Bank	Cash withdrawal at ATMs, for purchase transactions at merchant establishments and for e-Commerce transactions i.e., for online payment.
Andhra Bank	Social Security Pensions, Wages under NREG, SHG linkage
State Bank of Tiruvanthapuram	Biometric Smart Card for distributing wages to NREGP beneficiaries

Conclusion

The study concludes by bringing out the features of Smart card technology and its benefits and how financial services sector is leveraging smart card technology to provide basic banking and insurance services to the financially excluded people in India. The study provided some insights into the role of smart card and their relative benefits in promoting financial inclusion by banks and other financial

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