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ROLE OF TECHNOLOGY IN FINANCIAL INCLUSION IN INDIA

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ABSTRACT

Technology and financial inclusion are the popular coinage in banking parleys in the country. While technological upgradation and mobile banking are catching up so fast, financial inclusion is tardy. Financial inclusion is a major agenda for the Reserve Bank of India (RBI). Without financial inclusion, banks cannot reach the un-banked. It is also a major step towards increasing savings and achieving balanced growth. The reach the country is having with technological progress mobile banking has the potential to emerge as a game changer in terms of costs, convenience, and speed of reach. Business models of banks, telecom operators and other stakeholders need to converge. However, the banking industry's penetration to un-banked areas is still found sluggish. The role of the Indian banker is challenging. At one end of this spectrum lies the demand to achieve financial inclusion as nearly 50 per cent of the population is yet to be covered under the formal system of banking and at the other end lies the task to fulfil the needs of the existing customers. The first priority for banks is to adopt core banking solution (CBS), including all regional rural banks (RRBs). Next, a multi-channel approach using handheld devices, mobiles, cards, micro-ATMs, branches and kiosks can be used. However, it should be ensured that the transactions put through such front-end devices should be seamlessly integrated with the banks' CBS. In rural areas, where accessibility is a problem, banks are using the microfinance network and business correspondents and facilitators to bring more people under the ambit of banking services. Capitalising on the huge untapped potential in smaller towns and cities and rendering financial services to this segment of people poses a big challenge. Few banks have explored technology solutions to increase the scale of their microfinance portfolios, with the use of smart cards and core banking solutions.

KEYWORDS- *Technology, Financial Inclusion, Core Banking, Business Correspondents*

OBJECTIVES

- To understand the role of technology in financial inclusion
- To understand various technological solutions for promoting financial inclusion in rural market.

RESEARCH METHODOLOGY

The study is based on the secondary data collected from the various sources such as books, journals, newspapers, magazines, Government and RBI published reports etc.

INTRODUCTION

Ever since India's independence in 1947, the biggest priority for the nation has been its economic growth, education for all and financial inclusion for the vast population of the country. While India has made some noteworthy progress in the past six decades and more, but on the aspect of financial inclusion, the progress is not satisfactory. Along with the regulation of the banking sector in the country, the Reserve Bank of India (RBI) has been also spearheading the movement for financial inclusion. Accordingly, the RBI "describes financial inclusion as the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such

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as weaker sections and low-income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players."

In a country where the vast majority of the population is still very poor, financial inclusion is of great significance to them. For the poor, access to finance and ensuring the optimum utilization of the resources they possess is a major challenge. Economic and societal uncertainties mean volatility in their income can have an adverse reaction on the financial stability. This exposes the poor to the dodgy moneylenders, which is turn can lead to debilitating debt trap. Banks, both private and public, were supposed to play a pivotal role in financial inclusion, but beyond a point the impact has been minimal. In a speech last year the RBI, Deputy Governor, S S Mundra says, "according to census 2011, out of 24.67 crore households in the country, only about 14.48 crore or 58.70 % households had access to banking services. Further, of the 16.78 crore rural households, only about 9.14 crore or 54.46 % households were availing banking services.

One of the biggest components of financial inclusion is financial literacy. No matter how many banks you open and how many boots you have on the ground, if a person does not know about the financial options that are open to him, policies/schemes and financial instruments will mean little. The digital economy can be strongly leveraged to spread financial literacy.

Financial literacy has to be based on three principles.

- ✓ Effectively use the power of mediums like a computer, mobile and internet to enable people to have the skills, knowledge or information about financial instruments.
- ✓ We must ensure people have the ability to critically understand the content they have received through digital means.
- ✓ They should apply it to the best of their knowledge and capacity.

BARRIERS TO FINANCIAL SERVICES ACCESS

The financial inclusion can be seen to have two categories of barriers, viz., demand and supply side barriers. The factors that drive these barriers are listed as under:

Demand Side Barriers: The barriers arising out of the demand side factors may be characterized by the following features:

- ✓ Complexity: The excluded sections of the society find financial services complex in nature. They see no reason to go to the banks for conducting small transactions, which in their opinion, are time consuming and perplexing
- ✓ Place of living: Generally commercial banks operate only in commercially profitable areas and it would not be viable for banks to open branches in the remote villages. People who live in under developed areas find it very difficult to reach the nearest bank due to transportation cost and wages lost in travelling to the bank
- ✓ Limited literacy: Financial illiteracy and lack of basic education are prohibiting factors leading to non-access of financial services.
- ✓ Convenience and affinity towards informal sector: The excluded section of the society finds informal sector (such as the money lender or the pawn-broker) more user-friendly and accessible and as such, they develop an affinity which always drives them to approach this sector for their credit needs.

Supply Side Barriers: The supply side of barriers though not many, may be characterised by the following features:

- ✓ Legal identity: Inability to provide a legal identity such as voter id, residence proof, birth certificates, etc. often exclude women and migrants from accessing financial services.
- ✓ Outreach Issue: Very often, even if a person is bankable, the distances are too long for services & supporting the accounts at reasonable costs.

ROLE OF TECHNOLOGY IN DRIVING FINANCIAL INCLUSION

Developments in the field of Information Technology (IT) strongly support the growth and inclusiveness of the banking sector, thereby facilitating inclusive economic growth. IT not only enhances the competitive efficiency of the banking sector by strengthening back-end administrative processes, it also improves the front-end operations and helps in bringing down the transaction costs for the customers. It has the potential of furthering financial inclusion by making small ticket retail transactions cheaper, easier and faster for the banking sector as well as for the small customers. The Reserve Bank has, thus, been actively involved in harnessing technology for the development of the Indian banking sector over the years.

The major technological developments in banks that facilitates financial inclusion are the following-

1. **Adoption of the Core Banking Solutions (CBS)**

   CBS is networking of branches, which enables customers to operate their accounts and avail of banking services from any branch of the Bank on CBS network,

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regardless of where the customer maintains his/her account. The customer is no more the customer of a Branch as he becomes the Bank's customer. Thus, CBS is a step towards enhancing, customer convenience through, Anywhere, Anytime Banking.

2. **Automated Teller Machines (ATMs)**
The banking space has seen considerable growth through the ATMs, (approximately 87000 ATMs at present) but the same has been restricted principally to the urban/metro areas. As per the existing rules/regulations, only banks are being permitted to set up ATMs in urban/metro areas. Tier III to VI unbanked/under banked areas have not witnessed much ATM presence.
3. **Electronic Payments:** The overall thrust is to reduce the use of paper for transactions and move towards electronic mode. Following are various electronic payment services available in the country:
Electronic Clearing Service (ECS)/National ECS (NECS): ECS is an electronic mode of payment / receipt for transactions that are repetitive and periodic in nature. ECS is used by institutions for making bulk payment of amounts towards distribution of dividend, interest, salary, pension, etc., or for bulk collection of amounts towards telephone / electricity / water dues, cess / tax collections, loan instalment repayments, periodic investments in mutual funds, insurance premium etc. Essentially, ECS facilitates bulk transfer of monies from one bank account to many bank accounts or vice versa.
National Electronic Funds Transfer (NEFT): NEFT is a payment system facilitating one-to-one funds transfer. Under this, individuals, firms and corporate can electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country participating in the Scheme. Thus, this is an interbank fund transfer system.
4. **Real Time Gross Settlement (RTGS) System:** This Real Time Gross Settlement is a continuous (real-time) settlement of funds transfer individually on an order by order basis (without netting). 'Real Time' means the processing of instructions at the time they are received rather than at some later time. 'Gross Settlement' means the settlement of funds transfer instruction occurs individually (on an instruction-by-instruction basis). Considering that the funds settlement takes place in the books of the Reserve Bank of India, the payments are final and irrevocable.
5. **Pre-paid Payment Systems:** Pre-paid instruments are payment instruments that facilitate purchase of goods and services against the value stored on these instruments. The pre-paid payment instruments can be issued in the form of smart cards, magnetic stripe cards, internet accounts, internet wallets, mobile accounts, mobile wallets, paper vouchers, etc.
6. **Point of Sale (POS) Terminals / Online Transactions:** There are over five lakh POS terminals in the country, which enable customers to make payments for purchases of goods and services by means of credit/debit cards. To facilitate customer convenience the Bank has also permitted cash withdrawal using debit cards issued by the banks at POS terminals.
7. **Business correspondent (BC)/ Business Facilitators (BF) model - Branchless banking:** With the objective of ensuring greater financial inclusion and increasing outreach of the banking sector, the Reserve Bank, in January 2006 permitted banks to use intermediaries as Business Facilitators (BF) / Business Correspondents (BC) for providing financial and banking services leveraging upon the Information and Communication Technology (ICT). The BCs were allowed to conduct banking business as agents of the banks at places other than the bank premises.
8. **E-KYC:** Electronically, Know Your Customer (e-KYC) was introduced in the year 2013, as RBI permitted it under the Prevention of Money Laundering (Maintenance of Records) Rules, 2005 to reduce the risk of identity fraud, document forgery and paperless KYC verification. Under this explicit consent of the customer and after his or her biometric authentication from UIDAI data base individual basic data comprising name, age, gender and photograph can be shared electronically with authorized Users like Banks, which is a valid process for KYC. The electronic form of data available through Aadhar made opening of bank account easier and all banks adopted it.
9. **Mobile Banking:** Nowadays, more than 60 percent of the population is in possession of a mobile phone. This includes a large section of the rural population. People have started understanding the value, convenience and ease of owning a mobile phone. Mobile

banking has come in handy because of little or no infrastructure cost to the bank and no additional investment from customers. So, this may be a useful channel where most of the population is unbanked. Mobile Phone, a Personal Device, which increases security though Second Factor Authentication, may also be added. On comparing mobile banking with branch banking and internet banking mobile, mobile banking could be most accessible with lowest cost of services.

10. **Immediate Payment System (IMPS)**: An IMP was introduced by NPCI in the year 2010. It offers an instant, 24X7, interbank electronic fund transfer service through mobile phones as well as internet banking & ATMs. The sender uses mobile banking to send money, the receiver mobile number should be registered with his bank, and the money is credited to receivers' account instantly. For registration, the Remitter must register for mobile banking and get Mobile. Money Identifier (MMID) & Mobile Banking PIN (MPIN) is for initiation of a transaction. MMID is a 7 digit number, issued to the customer by the bank while registering. The transaction can be initiated by sending an SMS. Payments Corporation of India (NPCI) is facilitating the Interbank Mobile Payment Service (IMPS).
11. **Micro-ATMs:** Micro-ATMs are handheld devices having biometric authentication enabled for financial transactions. In order to make the ATMs viable at rural / semi-urban centres, low-cost Micro-ATMs have been used by each of the Bank Mitra locations. This has enabled a person holding it to instantly deposit or withdraw funds, regardless of the bank associated with a particular Bank Mitra / Business Correspondent. Micro-ATM operates using Mobile phone connection and has been made available to every Bank Mitra / Business Correspondent. Customers only get their identity authenticated through biometric signature through the customer's UID and withdraw or put money into their bank accounts. The money is delivered through the cash drawer of the Bank Mitra / Business Correspondent.
12. **Biometric ATMs:** The penetration of ATMs into Rural / Semi-urban areas may not serve the envisaged purpose unless it is put to use by illiterates/semi-literates whose presence is predominant in rural areas. The existing ATMs are not being used optimally by rural folk on account of PIN and Password related issues. Introduction of Biometric ATMs enables the illiterate and semi-literate customers to avail ATM facilities on par with literate customers. Under this, Thumb impression of the cardholder will be scanned and transfer the same to central server as one-time measure. ATM dispenses cash and other services only after verifying the thumb impression of the cardholder with that of finger print available with the bank's server. Bio-metric ATMs are going to play an important role in the remote rural areas in the ensuing years.
13. **Rupay Debit Cards:** As part of the financial inclusion initiative, a new card payment scheme was launched by the National Payments Corporation of India (NPCI), to offer a domestic, open-loop; multilateral system enabled all Indian banks and financial institutions in India to participate in electronic payments. "RuPay" is the coinage of two terms Rupee and Payment. Rupay Cards are addressing the needs of all elements like Indian consumers, merchants and banks.
14. **Aadhaar Enabled Payment System (AEPS):** A banking product, which permits online, interoperable financial inclusion transaction at POS (Micro-ATM) or Kiosk Banking, through the Business Correspondent of any bank. It utilizes UID (Aadhaar) authentication, and the four banking transactions available with it are basically Balance Enquiry, Cash Withdrawal, Cash Deposit & Aadhaar to Aadhaar Funds Transfer. Inputs which are needed for transactions by customer are IIN (Identifying the Bank to which the customer is associated) & Aadhaar Number.
15. **Aadhaar Payments Bridge System (APBS):** This system enables the transfer of payments from Government and Government Institutions to Aadhaar-enabled accounts of beneficiaries at banks and post offices. Every Government Department or Institution that sends EBT and DBT/DBTL payments to individuals simply needs to prepare a file containing the Aadhaar number and amount and submit it to their accredited bank. The attributed bank then processes the file through an interoperable Aadhaar Payments bridge and funds are credited into the accounts of beneficiaries. Upon receiving incoming funds, the beneficiary's bank notifies through an SMS or any appropriate communication channel.
16. **T-Banking:** The presence of Television in all households is the order of the day and now it has become one of the most cost-

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effective modes to disseminate information across the country. Banks may explore the possibility of making use of cable network to extend banking services to remote rural areas and this can be used as non-branch service delivery channel.

CHALLENGES IN TECHNOLOGY ADOPTION

Major challenges with reference to technology adoption are lack of last mile connectivity, financial and technology illiteracy, lack of technology adoption, etc. Technology has helped enable Multi-channel branchless banking through E-KYC, transaction through mobile banking, IMPS (immediate payment system), Micro ATM's, National Unified (USSD platform), RuPay debit cards and Aadhar payment bridge system. The challenge now lies in taking greater advantage of new technologies and effective implementation of the same to expand the coverage of the banking and financial system. Thus, technology-based solutions would go a long way to achieving greater financial inclusion.

CONCLUSION

The main reason for slow inclusion by banks is the absence of delivery model and products designed to satisfy the low-income families. The provision of uncomplicated, small, affordable products will help to bring the low-income families into the formal financial sector. Banks have limitations to reach directly to the low-income consumers. The use of technology and using economies of scale will, however bring down the cost of transaction to the banks and it will be a win - win position for both banks and customers. Financial inclusion and the extension of financial services to every citizen of the country is a priority for the Government. The goal of financial inclusion cannot be achieved without the help of technology.

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