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TECHNOLOGY-BASED SERVICES IN INDIAN BANKING SECTOR FOR FINANCIAL INCLUSION

KEY WORDS: Financial Inclusion, Banking Service, Business Correspondents, Core Banking

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ABSTRACT

With a large rural population, that is economically challenged, Financial Inclusion is indispensable for the sustainable growth of India. Financial Inclusion is the simplest term means "reaching the unreached", i.e., bringing the people under the financial umbrella who have no access to financial product or service. Financial exclusion is the lack of access by certain consumers to appropriate, low cost, fair and safe financial products and services from mainstream providers. The combination of technology and other technology-based services have been, nowadays, emerging as a viable solution for deepening the process of financial inclusion. In this regard the Government of India and the Reserve Bank of India have taken series of measures and introduced various programmes to take financial services to masses. Use of Information and Communication Technology enables the financial sustainability, cost reduction and better product and productivity. But at the same time, there are innumerable constraints to expand the same to rural areas where the exclusion is more prevalent. There is a need to develop a suitable effective model to serve the underprivileged and tap the vast untapped opportunities in the rural areas. This is the high time to discuss the role of technology-based banking services in promoting the financial inclusion in general and financial intermediaries in particular, problems and prognosis and to suggest measure to improvement.

INTRODUCTION

"A country is poor because it is poor" – Ragnar Nurkse.

This proposition holds true even today, reasons behind this are related with poverty and unemployment. High growth rate of national income alone does not address the challenges of unemployment and poverty. For this growth must be inclusive and equitable. The benefits of growth must percolate down to the lowest strata of the economy. Growth becomes inclusive when the resources are allocated and the benefits are bestowed equitably across different socio-economic groups and different regions. It is a biggest challenge in India, second largest populated country in the world, to take the levels of growth to all sections of the society and all parts of the country. Providing financial help to the people for improving their living condition is very crucial as it will automatically lead towards development. Financial provision has two dimensions – providing finance to the well-off people and providing finance to the low income group people. If the finance is provided to the well-off people, it will not result in the economic development and hence no growth. On the other hand, financial provision to low income group and poor unemployed people will solve the problems of poverty and unemployment, and hence break the vicious circle of poverty. But, such a provision has not been achieved even after 65 years of independence. Therefore, the Government altogether adopted a new strategy to bring these people under the financial ambit and this is well-known by the term 'Financial Inclusion'.

OBJECTIVES

Main purpose of this paper is to provide discussion on the issues related to technology-based financial inclusion.

1. To discuss the scope of financial inclusion and extent of exclusion in India.
2. To examine various technology-based banking services and products introduced in India.
3. To identify the challenges in the introduction of technology-based banking services and products especially in rural India.
4. To propose suggestions for improvement.

METHODOLOGY

The study is descriptive in nature and based on the secondary data that is gathered from the books, various articles from journals, reports various Departments, and other valid online sources.

MEANING AND DEFINITIONS:

Financial Inclusion is the simplest term means "reaching the unreached", i.e., bringing the people under the financial umbrella who have no access to financial product or service. The term "Financial Inclusion" was used by the Reserve Bank of India for the first time in its Annual Policy Statement of 2005-06. Financial Inclusion is the delivery of banking services at an affordable cost to the vast section of disadvantaged and low income group.

Dr. C. Rangarajan Committee on Financial Inclusion defines it as: "Financial Inclusion may be defined as a process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost"

According to United Nations, "A financial sector that provides access for credit for all bankable people and firms and saving and payment services to everyone. Inclusive finance does not require that everyone is eligible to use each of services but they should be able to choose them if desired".

Asian Development Bank defines Financial Inclusion as "the provision of broad range of financial services such as deposits, loans, payment services, money transfer and insurance to poor and low-income households and their micro-enterprises."

Financial Inclusion, hence, is the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low-income groups at an affordable cost in a fair and transparent manner by mainstream institutional players. In other words, Financial Inclusion is defined as an extension of banking and financial services at an affordable cost to unbanked people of the community.

According to UK Financial Inclusion Taskforce, there are three main concerns in Financial Inclusion: access to banking, access to affordable credit and access to face-to-face financial advice. According to K.C. Chakrabarty, Deputy Governor of RBI, "Financial Inclusion should include access to financial products and services like - bank accounts, immediate credit, savings products, remittances and payment services, insurance-health care mortgage, financial advisory services and entrepreneurial credit". Apart from these, pension products, mutual funds, annuity products, micro-insurance services (life and non-life) are also, eventually, included in Financial Inclusion.

The RBI stated in December 2009 that the facilities under

Financial Inclusion are not restricted merely to opening up of bank accounts, but also includes other financial services such as credit facility, remittance facility, insurance, financial advisory services and the so on. Scope of Financial Inclusion is explained in following the Figure: 1

Figure 1: Scope of Financial Inclusion
Source: Rangarajan Committee Report on financial Inclusion, 2008

EXTENT OF EXCLUSION:

Financial exclusion is the lack of access by certain consumers to appropriate, low cost, fair and safe financial products and services from mainstream providers. There can be multiple levels of financial inclusion and exclusion. At one extreme, there exist 'super-included', i.e., those customers who are actively and persistently courted by the financial services industry, and have at their disposal a wide range of financial services and products. At the other extreme, there are the 'financially excluded' that are denied with the access to even the most basic of the products. In between, there are those who use the banking services only for deposits and withdrawals of money. But these persons may have only restricted access to the financial system, and may not enjoy the flexibility of access offered to more affluent customers.

INDIAN SCENARIO:

NSSO survey 59th Round reveals the extent of exclusion in India:

- 41percent of the Indian population is unbanked (80 million households). Out of this, 40 percent is unbanked in urban areas and 60 percent in rural areas. Only 14 percent of adult population has credit accounts with formal financial institutions.
- Out of the 203 million households in India, 147 million households are located in rural India. Out of these rural households, 89.3 million households are farmer households. 66 percent of farmer households are marginal farmer households.
- 51.4 percent farmer households (45.9 million out of 89.3 million) are financially excluded from both formal and informal financial sources.
- 27 percent farmer households have access to formal sources of credit. Among non-cultivator households nearly 80 percent do not access credit from any source.
- North-East, Eastern and Central India account for 64 percent of all financially excluded farmer households in India. Overall indebtedness to formal finance sources is 19.66 % in these three regions.
- Geographically, 256 districts (out of 640 districts) representing 40 percent of total districts in India, spread over 17 states and 1 UT have critical credit exclusion thresholds in respect of access to formal credit.
- The proportion of people having some form of life insurance cover stands at 10 percent and people with any form of non-life insurance cover stands at less than 1 percent. There are only 3.1 policies per thousand people in India (2007)
- Only 36% of ST farmer households and 51% of SC and OBC farmers are indebted to formal sources of finance.

Thus, apart from the fact that exclusion is general in large, it also varies widely across regions, social groups and asset holdings. The poor the group, the greater is the exclusion. Financially excluded class comprises largely of small and marginal-farmers, landless labourers, industrial workers, self-employed in unorganized sector enterprises, urban and slum dwellers, migrants, ethnic minorities, socially excluded groups, senior citizens, women, physically challenged people, small vendors etc. Moreover these excluded are living in rural areas which has intensified rural poverty and underdevelopment.

STATEMENT OF THE PROBLEM

With a large rural population, that is economically challenged, Financial Inclusion is indispensable for the sustainable growth of India. When the majority of the population is excluded from access to financial services, it can significantly and adversely affect the efficient allocation of financial and physical resources, economic growth, income/non-income equalities and the distribution of benefits in the economy.

There are a number of positive externalities of Financial Inclusion. One among them is that it is able to reap the advantages of network externality of financial inclusion as the value of entire national financial system increases. In addition, financial inclusion being the quasi-public good involves the fuller participation of masses which makes monetary policy more effective and thus enhances the prospects of non-inflationary growth.

In this regard the Government of India and the Reserve Bank of India have taken series of measures and introduced various programmes to take financial services to masses. The initiatives taken in this regard include: building institutional framework of credit institutions with the focus on co-operative institutions, nationalization of major domestic commercial banks, introduction of Lead Bank Scheme to expand the outreach of banking facilities in rural and semi-urban areas, creation of targets for lending to agriculture, small scale industries and other weaker sections defining them as priority sector for the purpose of lending by banks, introduction of Service Area Approach and Village Adoption Schemes, sponsoring schemes targeted at poor, linking them to lending schemes of banks in the villages, Micro Finance Programmes, SHG-Bank Linkage Programme, Development of Micro Finance Institutions, financial literacy programmes, Creation of special funds etc.

The combination of technology and other technology-based services have been, nowadays, emerging as a viable solution for deepening the process of financial inclusion. These are beneficial as they supplement the setting up of the bricks and mortar branches at remote areas and placing the trained personnel to man them. Branchless banking services improve the access with lower investment. It is well-known fact that telecommunication development in India is very rapid in recent years having its deep roots in villages too. This has enhanced the banking reach and affordability. For technological innovation to succeed, it should necessarily be customer focused.

In this regard RBI in its annual report (2007-08) insisted the banks to adopt Information Technology based financial inclusion projects. Banks, also have introduced multiple of programmes leveraging information technology for the successful launch of pilot project for extending the banking services to the excluded. Use of Information and Communication Technology enables the financial sustain ability, cost reduction and better product and productivity. But at the same time, there are innumerable constraints to expand the same to rural areas where the exclusion is more prevalent. There is a need to develop a suitable effective model to serve the underprivileged and tap the vast untapped opportunities in the rural areas. This is the high time to discuss the role of technology-based banking services in promoting the financial inclusion in general and financial intermediaries in particular, problems and prognosis and to suggest measure to improvement.

ANALYSIS

Positive correlation between financial inclusion and economic growth cannot be denied. Ensuring accessibility and affordability of the disadvantaged groups to financial services is considered to be a key for reducing economic inequality. But it needs to be recognised that mere opening of bank account would not serve the objective of financial inclusion. It is the usage of financial product for economic self-reliance and growth which ultimately leads to financial inclusion (Rajdeep Sahrawat, 2010). It is the frequent use of bank account by the individual, velocity of transaction and interaction between the customers and the financial institutions which realises the process of financial inclusion.

Chief impediment for the financial inclusion process are the cost of serving small value and unprofitable customer group, provision of credit facilities to the informal sector whose income is irregular etc. Information and Communication Technology has, in these days, emerged a viable solution for achieving financial inclusion in a cost-effective manner. It allows the financial institutions to provide multiple services and improve efficiency.

RBI and the Government of India have initiated many steps to increase the banking services to the excluded rural poor using technological advancement.

1. BC/BF model: Due to the constraints involved in going for a full-fledged brick and mortar branch model, the RBI in 2006 adopted the ICT based agent bank model through Business Facilitator (BFs)/Business Correspondents (BCs) for ensuring doorstep delivery of financial products and services. NGOs, MFIs, Section 25 Company, an individual, Kirana/Medical/Fair Price Shop Owners etc. can be the BCs/BFs who undertake banking activities on the behalf of bank. They are not permitted to collect charges for their services from the customers but are paid by the banks. Unlike BCs, BFs are not permitted to transact on behalf of the bank but can refer clients, pursue the clients' proposal and facilitate the bank to undertake its transactions.

Table 1: Progress of banking under BC Model (All SCBs including RRBs)

Particulars	March 2010	March 2017	March 2018	Growth in % (2016-17)	Growth in % (2017-18)
Banking Outlets in Rural Location – Branchless Mode	34316	50860	518742	2.4	-5.2
Urban Locations covered through BCs	447	102865	142959	0.3	39.0
BSBDA – Through BCs (in Millions)	13	280	289	21.2	3.2
ICT-A/Cs-BC-Total Number of Transactions (in Millions)	27	1159	1489	40.1	28.5

Source: Report on Trend and progress of Banking in India 2017-18 (RBI)

Moreover, nearly 80% of the villages covered under BC model which proves that the model is most suitable channel for the banks to cover uncovered areas. (RBI, Report on Trend and Progress of Banking in India 2017-18, June 30, 2018) BCs/BFs work with technology-based devices. They use Biometric HHD, Smart Cards and Mobile Phones.

(I) Biometric HHD: These devices have wireless connectivity, bio-metric readers for beneficiary authentication and micro-printers. The account-holders authenticate themselves typically through bio-metric validation based on their personal data captured during enrolment. The devices typically connect through wireless GPRS/CDMA/GSM protocols. Near Field Communication technology is also becoming popular.

(ii) Smart Cards: Smart cards are of two types: (i) Smart cards are issued to the customers that are personalised with name, address, photograph and biometrics of the customer. Many accounts are maintained depending upon its capacity. Basically these cards work as electronic pass books of the customers. (ii) NFC-enabled mobile phone stores the biometric and the photograph of the customer which is available at BC outlet along with HHD. A plastic card bearing the ID number is issued to the customer.

(iii) Mobile Phones: Under this model, customer and BC both are required to have mobile phone and customer authentication and transaction is done based on PIN and Mobile Number as security i.e., double factor authentication as stipulated by RBI for mobile banking.

There is a tremendous increase in BC-ICT transactions. It increased from 26.5 million transactions for the quarter ended March 2010 to 550 million in the quarter ended September 2016. (RBI, August 28, 2018)

2. IT-enabled Kiosks, PoS: IT Kiosks are among the most common forms of delivering products for financial inclusion. They are small and self-operated IT-enabled centres that provide the customers with banking features such as cheque or cash deposit, internet banking, non-cash ATM transaction and teller enquiries. Kiosks are located in the areas where financial inclusion initiative is likely to lead significant increase in the transactions volume as well as the number of users. About 100 kiosks (30 interactive kiosks and 70 non-interactive LFDs) are being set-up on a pilot basis in public places like banks, post-offices, collector's offices and primary health centres to promote financial awareness. (RBI, August 28, 2018) A Point-of-Service terminal enables a smart card holder to deposit or withdraw money by swiping which saves transaction information for uploading on the bank's main server.

3. ATMs: Automated Teller Machines are the computerised telecommunication devices providing facilities for financial transactions in a public place without the need for a cashier or human clerk. Several new technology ATM devices have been designed to enhance the banking services in rural and remote areas which enable even the illiterate customers in unbanked areas to avail ATM facilities. (i) Biometric ATM avoids the need for PIN numbers which the illiterate cannot remember easily. Thumb impression of the card holder is scanned and stored for authentication. The customers by scanning their thumb impression can avail the ATM services. (ii) Mobile ATM provides the ATM services on van. The ATM van visits the villages on the pre-determined dates offering the services such as opening of accounts, cash withdrawal etc. (iii) Micro ATM provides low cost ATM alternative with basic features such as cash withdrawal and cash enquiry. These can be located at easily accessible places where rural people visit regularly such as petrol pumps and market.

4. Debit Cards, Credit Cards, Kisan Credit Card etc.**:** A Debit card is a plastic payment card that provides the cardholders electronic access to their bank account. It can also be used at the time of purchase instead of cash. Payments using Debit Cards are immediately transferred from cardholders' designated bank accounts. Instant withdrawal of cash is also allowed under this system. A Credit Card is payment card issued to the users as a system of payment. It allows the

cardholder to make payment based on the holder's promise to pay. The issuer of the card creates revolving account and grants a line of credit to the user from which he can borrow money for payment. Kisan Credit Card is a credit card issued to the farmers to provide affordable credit. The recent initiative in this regard is the introduction of m-KCC by NABARD to provide banking facilities to the cardholders at their door-step in safe, secure, quick and reliable method through mobile phones. This also facilitates cash withdrawals and cash deposits. The total number of KCC issued went up from 24.3 million in March 2010 to 46.4 million in September 2016. General Credit Cards issued went up from 1.4 million in March 2010 to 11.5 million in September 2016. (RBI, August 28, 2018) The extent of ATM, debit and credit cards in providing banking services is summarised in the following table;

Table 2: ATM and Card Statistics for December 2014 and 2018 Source:

ATMs	POS	Credit Cards						Debit Cards				
		No. Of Outstanding cards at end of the Month	No. Of Transactions		Amount of Transactions (in Million Rs.)		No. Of Outstanding cards at end of the Month	No. Of Transactions		Amount of Transactions (in Million Rs.)	
			ATM	POS	ATM	POS		ATM	POS	ATM	POS
176400	1058642	20362829	438032	56091791	2505.79	171865.26	500080855	591056613	73618740	1897693.28	111006.57
205184	3193356	37782876	727175	132318612	3396	448342	906356781	758938556	333766148	2647971	454571

http://rbidocs.rbi.org.in/rdocs/ATM/PDFs/ATM1214CD0315T.pdf

5. Mobile Phone based Financial Services: Mobile phone transactions include the use of network airtime or e-currencies for deposits, transfer of funds or credits, payments of services etc. Without the help of an intermediary, one can conduct payment transactions and avail banking services with the mobile telephonic services. It helps the banks to reach out the unbanked populations in remote areas. The advent of 3G/4G of mobile telecommunication, the ICT has deepened and widened the process of financial inclusion.

6. UID: The recently launched Unique Identity Number would be important element of financial inclusion. The UID serves as in identity proof for all the purposes including the opening of a bank account. It is likely to make it easier to link financial transactions to the payment gateways providing banking access to rural, urban poor and remote population.

7. Internet Banking: Internet Banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as a retail bank, virtual bank, credit union or building society. Internet Banking is also referred as Online banking, e-banking, virtual banking and by other terms. To access a financial institution's online banking facility, a customer with Internet access would need to register with the institution for the service, and set up some password (under various names) for customer verification. The password for online banking is normally not the same as account numbers, because a number of customer accounts can be linked to the one customer number. The customer can link to the customer number any account which the customer controls, which may be savings, loan, credit card and other accounts. Customer numbers will also not be the same as any debit or credit card issued by the financial institution to the customer.

8. Core Banking Solutions: Core banking is banking service provided by a group of networked bank branches where customers may access their bank account and perform basic transactions from any of the member branch offices. The advent of computer and telecommunication technology enables the banks to share information between bank branches quickly and efficiently. Here computer software is developed to perform core operations of banking like recording of transactions, passbook maintenance, interest calculation on loans and deposits, customer records, balance of payments and withdrawal.

9. Post Offices: Indian Post Offices have a very large rural reach. Instant Money Order is one of the measures taken to facilitate financial inclusion. The smart card enabled facilitating mechanism now available in Post Offices to enable money transfer between two resident individuals of India. This time saving mechanism helps to clearing outstation cheques. Those who do not have internet and e-mail can also get benefit from this service. Besides, banks make use of Post Offices to provide banking services in the unbanked areas.

10. Pradhan Manthri Jan Dhan Yojana: It has been announced in August 2014 to deepen the financial inclusion in India. The main objectives of the Yojana are to provide basic banking accounts with overdraft facility and Ru Pay debit card to all households, financial literacy programmes, creation of credit guarantee fund, micro insurance and unorganised sector pension schemes. Under the scheme the technological innovations like Ru Pay card and mobile banking are utilised. Banks will use the RBI's scheme for subsidy on rural ATMs and UIDAI's scheme for subsidy on micro ATMs to augment their resources at the village level.

A number of technology-based innovative models and financial inclusion programmes have been introduced and implemented by the RBI and the Government of India together to extent the scope of activities and services of financial institutions to include rural poor who are excluded from any kind of banking services. It is notable that the creation of new institutions, expansion of their outreach, finding ways and means to effect improvements within formal credit delivery mechanism etc. are useful to address the issues on the supply side only. What is required now is to address the issues on the demand side too. Credit is necessary but not sufficient and hence meeting the credit needs must be go hand in hand with efforts to improve the productivity of rural poor households.

Government in this regard has introduced a number of measures under social welfare schemes, employment generation programmes, poverty alleviation programmes, grants, subsidies etc. It is estimated that only a few paisa out of a Rupee reaches the actual beneficiary on account of the leakages and inefficiencies in the system of delivery. Involving the banks in the process will improve the benefit delivery mechanism. Widespread ICT based financial access will encourage the central, state and local governments to transfer each benefits and subsidies directly to the UID based bank accounts of the poor residents. This in turn will increase the use of these accounts and allow them to become the source of savings.

CHALLENGES

Use of technology in general and ICT in particular is a key to achieve financial inclusion at a faster rate. Technology driven initiatives make the delivery of financial services cost effective. RBI and the Government of India have introduced multiple of technology-based financial inclusion models which helped the financial institutions to overcome the constraints of geography and ensure efficient financial inclusion. Technical advancement makes innovation feasible. In the financial sector, for technology and innovation to be true value to the customers, it must lead to better customer services in three ways: (a) faster and hassle-free, (b) safer and error free and most importantly (c) easier access and cheaper. (Dr K C Chakrabarty, Deputy Governor of the Reserve Bank of India, 2012)

In this regard it is worthwhile to identify the main constraints on the path of financial inclusion. Diagnosing the problem is necessary to resolve it.

1. Device: Faulty devices distributed to BCs and PoS are the main challenge identified. Hand Held Devices do not work properly. There are two parts in the device to identify the customer; one is web cam and the other is fingerprint identifier. Finger print identifier causes the problem which requires cleaning on regular basis. Slow functioning of HHD machines in uploading and authorisation process, non-availability of camera in HHD to take the photograph of the customers, operational difficulties in taking the photographs, sharing of one laptop by three CSPs are some of the impediments with regard to the device.

2. Smart Card: Another important challenge pertaining to the working of smart cards. Once the account is opened through PoS/HHD by BC, it needs smart cards to undertake financial transactions. It takes one month or sometimes more to issue the smart cards to the account holder. Meanwhile if the customers want to transact they can't do which has resulted in dissatisfaction. Besides, there is no uniform technology standard for the design of the smart cards. Smart card issued by one bank cannot be used to undertake transactions of the other bank.

3. Connectivity: PoS and Hand Held Device is a wireless electronic instrument which works on battery. For operating it requires internet connectivity. For this internet connectivity, they are availing the services of mobile service provider. Without network PoS device cannot connect to internet and hence the transaction cannot be materialised. (Smitkumar K. Hingrajiya, 2012)

4. Document: For opening the bank accounts through BC model photo identity and residence proof are the documents required. But it is the common problem observed in villages that different names are recorded in two different documents due to the illiteracy and ignorance of the people. As per KYC norms do not allow to accept such applications.

5. Account Holding at Main Branch: Villagers have small savings. They are opening savings account for their small savings. For this they have to go to bank branches for transactions or any kind of banking facility which results in wage-loss for that day and burden of transportation cost. BCs provide banking service at doorstep but they cannot avail this service as they are the account holders in the branches. (Smitkumar K. Hingrajiya, 2012)

6. Awareness and Acceptability: It is very difficult to implement new plans and schemes because people won't accept easily and quickly. It is observed that the people don't have trust and confidence with the working of BC mechanism and personnel and it is very hard to convince them with this regard. Moreover BCs and BFs are not often properly trained to offer financial counselling services to the beneficiaries and to generate confidence among the people about the working of formal financial institutions.

7. Standardisation: ATMs are known for their instant and faster dispensation of cash. But its working is not hassle-free. Some swallow cards, some require swiping, some drop cash on tray, some do not, some operate on the press of the keys and some have touch screens and so on. All these are the sources of confusion to the man on the street. Some people find it difficult to remember PIN. In addition to it, some ATMs are malfunctioning. Lack of standardisation of the ATMs, hence, is another key issue. (Dr K C Chakrabarty, Deputy Governor of the Reserve Bank of India, 2012)

8. Insecurity: Another issue is of assuring protection to the customers in e-banking. The customer has not been offered protection in an electronic transaction as is in paper-based transaction. The customer is not held liable if a signature is forged, whereas he is held responsible when the fraudulent transaction takes place electronically and the onus rests on the customer to prove that it was so. Increasing frauds in e-banking necessitates maintaining the quality of security at the highest level which has become a greater challenge.

9. Lack of Accountability: A large number of the participants in the process like BCs, banks, CSPs, Technology Service Providers etc. is a challenge to the accountability of the services. At the time of redressal of customer grievances each of these participants shows the attitude of 'finger-pointing'.

POLICY SUGGESTIONS

RBI's Annual Policy 2007-08 urged the banks to scale up effort on ICT-based financial inclusion and develop technologies that are highly secure, amenable to audit, and follow widely accepted standards. Some of the suggestions in this regard are:

For smoothening the work of the BC they should be well-equipped. Devices should be provided in time to the BCs, BFs and PoS. Banks and BCs should avail the help of experts to solve technical problems with the device. Proper training should be provided to the BCs to understand the working of device.
Measures should be taken by the banks to issue the smart cards at the earliest say, 3-4 days. RBI or the Government should issue guidelines or develop standard pertaining to the configuration of the cards. Standardisation of the ATM is also required to promote the uniformity in the operation.

More importantly steps should be taken to link the operations of the braches and BCs. Branches should develop such facility that account holder can access his account both from bank branch as well as from BC.

Improvement in the network connectivity is very much necessary for the working of ICT based devices. Steps must be taken to scale up of internet connectivity.

With regard to the documentation relaxation in KYC norms is preferred. Banks may require self attestation by the customer in case of differences or mistakes in name and address.

Financial literacy campaigns can be arranged to create awareness at customer level along with the training and education programmes to the BCs and bank officers about the working and need of the financial inclusion.

Fixed place of business should be provided to CSP and BC which enables the customers to approach him with certainty to avail banking service. Banks should also think about issuing common uniform, identity cards, banks' name board to BCs, CSPs for easy identification which may also help to generate confidence among the customers.

CONCLUSION

Access to formal sources of finance provides security to the rural poor at the time of emergencies like illness, death and empowers them fight these risks. In addition, it frees the poor from the clutches of money lenders. Besides it provides opportunity to build savings, make investment and avail credit. With a large rural population, that is economically challenged, Financial Inclusion is indispensable for the sustainable growth of India. The combination of ICT and other ICT-promoted services have been, nowadays, emerging as a viable solution for deepening the process of financial inclusion. Use of Information and Communication Technology enables the financial sustainability, cost reduction and better product and productivity. Appropriate and affordable technology accompanies by suitable business model can make financial inclusion viable for formal financial sector and transform the challenges into an opportunity.

REFERENCES

1. Chakrabarty K C (2012), Address in the Inaugural Plenary Session of the Seventh Banking TECH Summit, June 2012.
2. Committee on Financial Inclusion (2008), Report on Financial Inclusion, January 2008
3. Gadamshetty Sai Arun (2013), Understanding Financial Inclusion in india and Role of ICT, International Journal of Innovative Research and Development, Volume 02, Issue 12, December 2013
4. Ganesan L M (2011), Study on the ICT-based Financial Inclusion Through BC – Impediments and Corrective Actions, Report published by College of Agricultural Banking, Pune, December 2011.
5. Hameedu Shahul M (2014), Financial Inclusion – Issues and Measurement Analysis, International Journal of Current Research And Academic Review, Volume 02, Number 02, February 2014
6. Hingrajiya Smitkumar K (2012), A Study on Business correspondent Model Under Financial Inclusion Drive in Surendranagar District of Gujarat, Report Submitted to NABARD, July 2012.
7. Mihasoniria Andrianaivo & Kangni Kpodar (2011), Financial Inclusion and Growth: Evidence from African Countries, V Working Paper No. WP/11/73, 2011.
8. RBI (2018), Annual Report 2017-18, Reserve Bank of India, August 28, 2018
9. RBI (2018), Report on Trends and Progress f banking in India 2017-18, Reserve Bank of India, June 30, 2018
10. TCS (2010), Financial Inclusion – From Obligation to Opportunity, retrieved on 7th December 2014 from
11. http://www.tcs.com/SiteCollectionDocuments/White%20Papers/Government_Whitepaper_Financial_Inclusion_09_2010.pdf
12. UNCTAD (2014), Financial Inclusion – Status Paper – India, Report, 12-14 November, 2014.