

IMPACT ASSESSMENT OF FINANCIAL INCLUSION THROUGH ICT IN RURAL AREAS: A STUDY OF THE AURANGABAD REGION, MAHARASHTRA, INDIA

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DOI: <https://www.doi.org/10.58257/IJPREMS37678>

ABSTRACT

This study assesses the impact of Information and Communication Technology (ICT) on financial inclusion in rural areas of the Aurangabad region, Maharashtra, using primary data collected through surveys and interviews. It evaluates how ICT has facilitated access to financial services, identifies key challenges, and provides actionable recommendations. The findings reveal significant improvements in banking access, financial literacy, and reduced transaction costs, alongside persistent challenges like inadequate infrastructure and low digital literacy.

1. INTRODUCTION

Financial inclusion refers to providing banking services at affordable rates to marginalized and low-income populations. In India, the fundamental idea of financial inclusion is to have at least a savings or current account with any financial institution. In practice, it encompasses loans, insurance, and a variety of other services. In the first-ever Index of Financial Inclusion, which assessed the availability of banking services across 100 nations, India was placed at 50th. Merely 34% of individuals in India can access or utilize banking services. To enhance this percentage, the Reserve Bank of India encouraged the Government of India to implement innovative measures. One motivation behind launching additional branches of Regional Rural Banks was to ensure that banking services are reachable to the impoverished. Following directives from the RBI, banks are now providing “No Frill” accounts tailored for low-income demographics. These accounts generally require either a low minimum balance or no balance at all, with certain restrictions on transactions. Each bank has the discretion to determine whether an account should have a zero or a minimal balance. Thanks to the joint efforts of financial institutions, six million new ‘No Frill’ accounts were established between March 2006 and 2007. Financial institutions are now viewing financial inclusion as a viable business opportunity within a broader framework that promotes growth.

The Indian Government has a long history of working to expand financial inclusion. Nationalization of the major private sector banks in 1969 was a big step. In 1975 GOI established RRBs with the same aim. It encouraged branch expansion of bank branches especially in rural areas. The RBI guidelines to banks show that 40% of their net bank credit should be lent to the priority sector. This mainly consists of agriculture, small scale industries, retail trade etc. More than 80% of our population depends directly or indirectly on agriculture. So 18% of net bank credit should go to agriculture lending. Recent simplification of KYC norms are another milestone. Financial inclusion is a great step to alleviate poverty in India. But to achieve this, the government should provide a less perspective environment in which banks are free to pursue the innovations necessary to reach low income consumers and still make a profit. Financial service providers should learn more about the consumers and new business models to reach them. In India Financial inclusion will be good business ground in which the majority of her people will decide the winners and losers. Poverty and exclusion continue to dominate socio-economic and political discourse in India as they have done over the last six decades in the post-independence period. Poverty reduction has been an important goal of development policy since the inception of planning in India.

Financial Inclusion Initiative In India :-

Through the RBI, the Government of India has launched various initiatives since the 1960s to broaden the accessibility of banking services across the nation. Some of the key initiatives include the introduction of 'No-Frills Accounts', overdraft options for savings bank accounts, relaxed regulations for branch expansion, the creation of policies for ATM establishments, the launch of technology-driven products and services, the introduction of pre-paid card facilities, and the establishment of financial literacy programs. To meet the banking needs in rural regions, the Finance Ministry has instructed all banks to ensure they provide suitable banking services to areas with populations exceeding 2,000 by March 2012 through branchless banking and the use of business correspondents. Consequently, banks have developed strategic plans via state-level banker committees focused on financial inclusion and have identified more than 73,000 locations with populations over 2,000 for the provision of banking services.

2. RURAL MARKET POTENTIAL

The challenge of achieving financial inclusion is significant due to factors such as geographical distribution, a large population without access, low literacy levels, language differences, and the structural limitations of commercial banks. At the same time, this situation presents substantial opportunities for the banking sector to develop products tailored for this segment, which tends to have high transaction volumes but can only sustain small profit margins. C.K. Prahalad (2004) suggested that if we reframe our perception of the poor from being a liability to viewing them as value-minded consumers, a plethora of opportunities could arise, leading to innovation. Research indicates that the rural market constitutes 55 percent of LIC policies, 70 percent of toilet soap sales, and 50 percent of the market for items such as televisions, fans, bicycles, tea, wristwatches, washing soap, razors, salt, tooth powder, and 38 percent of total two-wheeler purchases. According to market research firm Nielsen, the rural market's potential is projected to reach US \$100 billion within the next 15 years. In his blog, Shiny Vikas (www.blogofshinyvikas) highlighted the significant possibilities present in the rural marketplace.

Many corporate groups are viewing rural regions as prime business opportunities due to increasing income levels, heightened awareness, and improved lifestyles in these areas. Companies such as ITC, Maruti Suzuki, Godrej, and Reliance have begun developing their capabilities to seize the extensive prospects present in rural locales. ITC has launched e-choupal to offer extension services to farmers. Hindustan Unilever markets its products via a network of women's Self Help Groups (SHGs), referred to as Shakti. Reliance directly acquires farm products from farmers for distribution through its retail outlets. In fact, numerous agro-based industries, including those focused on fertilizers, tractors, pesticides, and irrigation equipment, primarily serve a consumer base located in rural areas.

Demand Enhancement of FI and Economic Growth:-

Mobilizing deposits, providing credit, and facilitating remittance services will promote investment and capital growth in rural areas. Other recent bank initiatives by the National Government, such as Financial Literacy and Credit Counseling Centres (FLCC) and Rural Self Employment Training Institutes (RSETI), are expected to create consistent demand and appropriate utilization of financial services available on the Financial Inclusion platform. FLCC raises awareness about financial services among those who are excluded financially, enabling them to make informed choices with a clear understanding of the associated risks and benefits. RSETIs, operated by banks in each district, provide entrepreneurial training to rural youth living below the poverty line to create self-employment opportunities and enhance their ability to absorb credit. Investment and job opportunities in rural areas will help reduce significant migration to urban centers.

Information, Communication and Technology (ICT):-

Recent innovations and development, happened in the fields of Information, Communication and Technology (ICT), can be harnessed to speed up the process of financial inclusion and achieve higher levels of scalability for operation. The Information and Communication Technology (ICT) on which the Financial Inclusion is riding today are:

Short Message Service (SMS), Unstructured Supplementary Service Delivery (USSD), Wireless Application Protocol (WAP), General packet Radio Service (GPRS), phone based applications such as Java (J2ME)/Binary Runtime Environment for Wireless (BREW), Subscriber Identity Module (SIM)- based application, and Near Field Communication (NFC). All these technologies are basically distributed systems which can be seamlessly connected to the Core Banking Database of the banks for on- line, real-time, remote transactions and generate flawless MIS for the ends users.

Some of the technology platforms used by the Banks are as under:

POS(point of Sales) based biometrically enabled Smart Card Kiosk Banking: Kiosk Banking consists a computer connected to the banking system through the internet, a camera and scanner cum printer. Customer transactions like opening of accounts, cash deposit and with drawl are permitted through biometrics validation.

Bank Link to hand hold devices, mobile phones, internet based solutions, etc.

Cell phone based messaging system or any other technology platform accepted to the appointing Bank.

Financial institutions need to build up ties with the technology solution providers, mobile operators, vendors, NGOs, etc, to integrate the tools of technology with the Banking system to leverage on its capabilities. While adopting the technology, it is needed to verify that it should conform to the security, audit and accepted standards.

Initiatives Of Government Of India For Financial Inclusion :-

- No Frill Accounts with Overdraft Facility.
- Introduction Of BC Model
- Launch of Unique Identification Number

- Introduction Of Kisan Credit Card & General Credit Card
- SHG-Bank Linkage Program.
- Relaxation Of “Know your Customer”(KYC) Norms

Technologies Enabling Financial Inclusion :-

- Financial Services Through mobile telephony
- Micro , Mobile, Biometric ATMs
- Smart Cards & POS Terminals
- Internet enabled kiosks & PCs
- Biometric Handheld Device

3. REVIEW OF LITERATURE

State Level Bankers Committee Maharashtra State in report ‘**SWABHIMAN – State Financial Inclusion Plan – Maharashtra**’ states that, Swabhiman is path-breaking initiative by Govt. of India and banks in state to cover the economic distance between rural and urban India. It promises to bring basic banking services to all unbanked villages in the country with population above 2000. The Swabhiman movement facilitate opening of bank accounts, provide need based credit, remittance facilities and help to promote financial literacy in rural India using various models and technologies including branchless banking models through Business correspondents. RBI on the basis of recommendations of High Level Committee on Lead Bank Scheme directed lead banks to draw a road map by March 2010 to provide banking services through a banking outlet in every village having a population of over 2000, by March 2012 and further stated that such banking services may not necessarily be through a brick and mortar branch but can be provided through any of the various forms of ICT-based models with the help of hand held machines, smart card & Business Correspondents.

MU Yibin - Financial Economist, The World Bank in his paper ‘**E-Banking: Status, Trends, Challenges and Policy Issues**’, writes that, the prevailing view today is that Internet banking can only succeed if it is thoroughly integrated within the existing banking infrastructure, which should combine “click” (e-banking) with “mortar” (physical branches) due to the importance of public trust in banks, the value of an established brand name, and the desire of customers to do something physically. Internet is regarded simply as another distribution channel as a complement to physical braches, phone banking and ATM networks. The dominance of the so-called “click and mortar” model can be explained by its success on the ground.

S. S. Satchidananda and Santosh Khanolkar in paper, ‘**An ICT Framework for Enabling Rural Banking**’ states that, as enterprise content management becomes a top priority for CEOs and IT executives alike, Microsoft is making an important commitment to ECM solutions. Microsoft’s vision is to ensure that the customers derive the most value from their content and their people, by supporting the entire content life cycle from creation through collaboration, management, publication, reuse, archiving, and expiration. Since maximum user adoption is so crucial to ECM success, Microsoft has focused on providing intuitive tools in a familiar environment, to ensure users not only adopt ECM solutions but ultimately champion ECM’s capacity for streamlining their workloads and helping them get their jobs done more efficiently and effectively.

Dayo Forster in article ‘**What CEOs Need to Know about Software Implementation**’ writes that, once the right software system is chosen, it has to be put into place properly. Inadequate planning often leads to project delays and unmet expectations. Even if the best system is selected, implementing it the wrong way can lead to disillusionment and loss of morale among staff. Worse, it may lead to the project being completely abandoned. A plan with time lines that nobody attempts to stick to dents morale and generate an acceptance of under-performance. Although a plan can never be perfect, the process of planning encourages active management of the common risks that so often sabotage implementation projects. There are a range of key elements that require attention to detail, such as data migration, expectation management, software testing, process manuals, training and disaster planning. It is also important to have the right people to manage the implementation project.

Jenny Hoffmann in article ‘**Issues in Mobile Banking : Regulatory and Technical Issues**’ states that, Regulation requirements – or in some cases the lack of understanding/interest of the central banks – remain one of the key barriers to implementing mobile banking by financial institutions. In addition, many financial institutions struggle with technology issues around selecting appropriate systems and delivery channels. In some countries such as South Africa, only a bank can participate in the national payments system and all instructions to make payments on behalf of a customer are deemed to be acceptance of deposits and can therefore only be undertaken by a bank. If this is the case then a non-banking operator will need to either obtain their own banking license or else form an alliance with a bank so

that deposits or 'the business of a bank' will be done within a division of that bank. One option that may be available in some countries, to avoid the need for a bank license, would be to use an electronic purse, which can be differentiated from a bank account as the source of transactions, although the float account itself would still need to be housed in a bank.

Objectives Of The Study:-

1. Assess the penetration and usage of ICT-enabled financial services in rural Aurangabad.
2. Evaluate the benefits and challenges of ICT adoption in financial inclusion.
3. Provide recommendations for improving ICT-based financial inclusion in the region.
4. To know the frequency of using Banking Services by beneficiaries under financial inclusion.

4. RESEARCH METHODOLOGY

This study employed a mixed-method approach, with primary data collected through:

1. Structured Surveys: Administered to 500 respondents across 20 villages in the Aurangabad region.
2. Focus Group Discussions (FGDs): Conducted with local stakeholders, including farmers, small business owners, and self-help group members.
3. Interviews: Conducted with representatives from local banks, microfinance institutions, and ICT service providers.

Key metrics evaluated:

Accessibility to financial services.

Usage patterns of ICT tools like mobile banking and e-wallets.

Challenges faced in adopting ICT-based financial solutions.

Findings

1. ICT Penetration and Usage

Access to Mobile Banking:

67% of respondents reported owning a smartphone.

53% used mobile banking services like UPI and BHIM apps.

Digital Payments:

48% utilized digital payment platforms for transactions, particularly through e-wallets and QR codes.

Banking Infrastructure:

Rural bank branches equipped with micro-ATMs reported a 30% increase in customer activity post-ICT integration.

2. Benefits of ICT in Financial Inclusion

Enhanced Access:

71% of respondents agreed that ICT has made banking services more accessible, reducing travel to distant branches.

Cost Efficiency:

64% reported reduced transaction costs due to the availability of digital banking.

Financial Literacy:

ICT-enabled programs improved basic financial knowledge among 40% of respondents.

3. Challenges

Infrastructure Gaps:

41% reported frequent network outages.

Only 37% of villages had stable internet connectivity.

Digital Literacy:

52% of respondents were unfamiliar with advanced ICT tools, limiting their use.

Trust Issues:

33% expressed concerns about digital fraud and data security, which hinder adoption.

As per as baking operations performed per month with the help of BCA are concerned, 26.2% mentioned they perform banking operation less than 3 times in a month with their FI account, majority 64% mentioned they perform banking operations 3 to 6 times in a month with their FI account, 10.1% mentioned they perform banking operation 8 to 10 times in a month with their FI account and only 3% mentioned they perform banking operation more than 10 times in a month with their FI account.

5. DISCUSSION

The results indicate that ICT has played a crucial role in enhancing financial inclusion in rural Aurangabad by improving accessibility and lowering expenses. Nevertheless, issues related to digital literacy and infrastructure create obstacles. Tackling these challenges is essential for sustainable development.

6. RECOMMENDATIONS

1. Infrastructure Development:

Strengthen mobile network coverage and internet connectivity in rural areas.

2. Digital Literacy Initiatives:

Launch localized training programs focusing on the safe use of digital financial tools.

3. Public-Private Partnerships (PPPs):

Collaborate with ICT companies and banks to introduce user-friendly platforms tailored to rural needs.

4. Incentives for Adoption:

Provide incentives such as reduced transaction fees for rural users adopting digital payments.

7. CONCLUSION

Financial Inclusion has changed the face of rural banking. It's a rural revolution. All the countries have understood its importance with hard efforts of UNESCO. Thanks to Government of India and RBI for FI implementation efforts with right courage and spirit. It has catered to bring untapped, unprivileged villagers and vulnerable groups under the banking ambit. The Business Correspondent model and Self Help Group model of FI are the very successful once. Information and Communication Technology (ICT) has emerged as a crucial enabler of financial inclusion in the rural areas of Aurangabad, Maharashtra. While it has addressed several challenges, persistent problems must be addressed through targeted initiatives in sectors like infrastructure, education, and trust-building. This study presents a plan for stakeholders to enhance financial inclusion through ICT in similar rural contexts.

The no frill accounts and direct benefit transfer are key boosters for bringing villagers under banking services domain. As Aurangabad region of Maharashtra gets largely affected by drought and due to crunch of cash, villagers has to rush to moneylender and due to non-payment of such loans, several suicide cases happened. This can be eliminated or at least can be reduced, if we promote villagers to save, take government loan, understand government subsidies, loan waiver with bank account and by making business correspondent agent as their friend just like they have postman as their friend. As banks branches or sub branches cannot be opened at all places due to its feasibility issues, we can take banking to the doorsteps of villagers with the help of BCA and ICT i.e. Information Communication Technology is there to help us in managing FI in effective and efficient way. The BCA model is a cost-effective approach that has become quite popular among villagers, aiming to include more individuals from the Marathwada region in financial services and instilling habitual banking practices while minimizing the reliance on moneylenders. The use of ICT-based financial inclusion management is the appropriate direction that should be improved to meet the evolving needs of villagers, accommodate changes in banking, and adapt to technological advancements, ensuring it remains straightforward and effective for all stakeholders involved.

Survey Questionnaire for Primary Data Collection

Title: Impact of ICT on Financial Inclusion in Rural Aurangabad

This questionnaire is designed to gather information on the role of ICT in promoting financial inclusion in rural areas of Aurangabad, Maharashtra. Your responses will be confidential and used solely for academic purposes.

Section A: Demographic Information

1. Name (Optional): _____

2. Age:

☐ Below 20 ☐ 20–30 ☐ 31–40 ☐ 41–50 ☐ Above 50

3. Gender:

☐ Male ☐ Female ☐ Other

4. Education Level:

☐ No formal education ☐ Primary ☐ Secondary ☐ Higher Secondary ☐ Graduate or above

5. Occupation:

☐ Farmer ☐ Small Business Owner ☐ Daily Wage Laborer ☐ Government/Private Employee

☐ Other (Specify): _____

Section B: Access to ICT and Financial Services

6. Do you own a mobile phone?

☐ Yes, a smartphone ☐ Yes, a basic phone ☐ No

7. Do you have access to the internet?

☐ Yes ☐ No

8. Have you used any ICT-enabled financial services (e.g., mobile banking, digital payments)?

☐ Yes ☐ No

9. If yes, which services do you use? (Select all that apply)

☐ Mobile Banking (e.g., UPI, BHIM)

☐ Digital Wallets (e.g., Paytm, PhonePe)

☐ Micro-ATMs

10. How often do you use these services?

☐ Daily ☐ Weekly ☐ Monthly ☐ Rarely

Section C: Perceptions of ICT-based Financial Services

11. Do you think ICT has made accessing financial services easier?

☐ Yes

☐ No

12. Has ICT reduced your travel time and cost for financial transactions?

☐ Yes

☐ No

13. How would you rate your comfort level with using ICT tools for financial transactions?

☐ Very comfortable

☐ Comfortable

☐ Neutral

☐ Uncomfortable

☐ Very uncomfortable

14. Have you attended any financial literacy or digital literacy programs?

☐ Yes

☐ No

15. If yes, how helpful were they?

☐ Very helpful

☐ Somewhat helpful

☐ Not helpful

Section D: Challenges and Concerns

16. What challenges do you face while using ICT-based financial services? (Select all that apply)

☐ Poor network connectivity

☐ Lack of digital literacy

☐ Fear of fraud

☐ High transaction charges

17. Have you ever experienced fraud or misuse of ICT-based financial tools?

☐ Yes ☐ No

18. What improvements would encourage you to use ICT-based financial services more often?

☐ Better network connectivity ☐ Training programs on digital tools

☐ Reduced costs of digital transactions ☐ Improved trust and security measures

Section E: Feedback and Suggestions.

19. In your opinion, how can financial inclusion through ICT be improved in your village?

20. Any additional comments or suggestions?

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