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ROLE OF ICT MODEL IN FINANCIAL INCLUSION AN EMPIRICAL ANALYSIS OF TWO TALUKS IN BANGALORE RURAL DISTRICT

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Abstract
Finance is one of the effective tools in spreading economic opportunities. Wider access to adequate and timely finance helps both the needy and the vulnerable sections in raising their welfare status. Banks are playing vital role accelerating financial inclusion through innovative Information and communication Technology (ICT). As banking services are in the nature of public good, it is essential that availability of banking and payment services to the entire population without discrimination and rather swiftly. The ICT can be used to promote such services like: mobile banking, e-money, and pre-paid cards, which are offered by the commercial banks for promoting financial inclusion schemes. The studies on this issue are only at macro level but not at the micro level supported with empirical studies. Earlier studies had confined to business strategies and technology aspects only. But, the present study makes an attempt to enumerate the need based approach of the rural households with respect to financial inclusion programmes of both Govt. schemes and private initiatives. The study covered the geographical area of two taluks of Bangalore Rural District viz., Nelamangala and Hoskote. The major objective of the study is to examine the status of financial inclusion through the usage of ICT facilities of the target group. The study highlighted the need for intensive application of ICT in all financial inclusion programmes for attaining inclusive growth in the study area.

Keywords: Financial Inclusion, Information and Communication Technology, Finance, Financial Literacy, Inclusive Growth.

Introduction

Financial inclusion or inclusive financing is the delivery of financial services at affordable costs to sections of disadvantaged and low income segments of society. It helps them to bridge the gap between expenses and income and overcome the vicious cycle of poverty. It also helps them in building assets and enhancement of income, saving money for big volume purchases and meets emergency expenses without falling into the poverty trap. In macro-economic sense, financial inclusion is important because it empowers the poor people to build assets and earn more income so that overall national savings and investment increases leading to growth in GDP and employment.

Post – independence India had adopted an approach towards equitable development and poverty reduction through directed lending of subsidized credit and regulated interest rate. The Government wanted to regulate the flow of credit and channelize them towards the poor and disadvantaged so that they could escape the exorbitant interest rates charged by the local money lenders and invest in assets to enhance the income. The co-operatives which were originally meant to channelize credit to the rural areas were in financially very poor condition and hence unable to meet the credit requirements of the poor. The green revolution in mid- sixties further accentuated the credit requirement of the farmers for purchasing agro-inputs. To meet the huge quantum of credit and to streamline the smooth disbursement of credit to the rural areas, the Government nationalized the private sector banks in 1969.To bring further focus to rural lending it established the Regional Rural Banks in 1975 and NABARD in 1982.

ICT Based Financial Inclusion

Developments in the field of Information and Communication Technology (ICT) have made inroads in almost all the sectors. The impact of technology adoption particularly in the banking sector has changed the face of the industry. Banking sector is the backbone of any economy and a healthy economy denotes a strong and resilient banking sector. ICT strongly supported the growth and inclusiveness of the banking sector, thus facilitating an inclusive economic growth. ICT not only improved the efficiency of the banking by strengthening the back end

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administrative processes and also front end operations thus bringing down the transaction costs for customers which has been the major focus of the ICT for financial inclusion. Today banks have centralized operations, more and more banks and branches are moving to core banking solutions, network based computing and are using ICT for customer relationship management... The average cost per transaction through an ATM is Rs. 18 whereas the same for a bank branch is Rs. 45. ICT has not just helped to reduce the transaction costs but it is acting as a tool to facilitate financial inclusion overcoming the barriers such as limitations of physical infrastructure and high cost of maintaining setup. Various initiatives taken by the banks use ICT as an important tool for fulfilling them. The Business Correspondent (BC) model which is the most successful model adopted by the Banks for financial inclusion would not have been possible without ICT.

According to Indian institute of banking and finance, "financial inclusion is delivery of banking services at an affordable cost ('no frills' accounts,) to the vast sections of disadvantaged and low income group". Financial inclusion as the process of ensuring access to financial services timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost. As banking services are in the nature of public good, it is essential that availability of banking and payment services to the entire population without discrimination is the prime objective of the public policy."

According to Dr. K.C. Chakrabarty, financial Inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups Dr. Arindam Laha, and Dr. Pravat Kumar said that, measuring financial inclusion is a complex process. It is desirable to capture the regional variations in the extent of financial inclusion in India exploring both the dimensions of demand and supply for financial inclusion. Mobile banking, e-money, and pre-paid cards are examples of financial innovations that are growing rapidly and often cited for holding great potential for the expansion of financial inclusion globally.

L.M.Ganesan (2011) described that, in financial inclusion programme, the reputation of banks is the greatest risk. Hence, a proper system of issuing identity cards to BC / its controlling functionaries and to CSPs should be put in place. The FI server should immediately be connected to the bank"s CBS server for on-line transactions and effective MIS. The key technologies in non-BC model are mobile banking, bank on wheels, integrated ITES.

According to Dheena dhayalan (2010), financial inclusion has the potential to improve the standards of life of the poor and the disadvantaged. Research reveals that development of financial system contributes to economic growth (Rajan R. G., and L. Zingales, 2003). Punnathara C.J, (2006) described that, „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. Gupta, (2011) said, "ICT solutions are required to capture customer details and facilitate unique identification, ensure reliable and uninterrupted connectivity to remote areas. Some notable financial inclusion schemes such as: Direct Benefit Transfer (DBT), RuPay card, USSD-based mobile banking benefited directly without any delay.

Statement of the Problem

The literature review revealed that, there exists a gap in the ICT related as aspect of financial inclusion. The studies related to ICT application in the area of financial inclusion are very few and far between particularly among the rural households in selected Taluks of Bangalore rural district. The past studies concentrated more at macro level but not at the micro level with empirical evidence. Those studies focused only on business strategies and technological aspects at large. Against this background, the present study assumes importance and enumerating the need of the financial inclusion at rural households using ICT facilities available at the facilitating centers.

Need for the study

The main thrust of the study is to examine the status of financial inclusion with respect to usage of ICT facilities in two selected taluks of Bangalore rural District, and with a view to create data base for identification of financial inclusion beneficiaries.

Financial inclusion measures in India have led to physical expansion in the country. Unfortunately, the expansion has not brought about the necessary changes in the backward and rural areas. Because of this, the rural population is facing severe financial as well as social problems. To address these problems there is a need to identify how far the financial services are reaching the beneficiary borrowers, in rural and backward areas.

Objectives

The study covers the following three specific objectives.

1. To understand the working of financial inclusion programme.
2. To analyse the role of ICT model in financial inclusion in the sample area .
3. To suggest the ways and means of expanding ICT facilities for strengthening financial inclusion

Research Methodology

Research design is descriptive in nature & research method used is single cross sectional survey. Descriptive research seeks to establish factors associated with certain occurrences, outcomes, conditions or types of behavior. It describes the relation between independent and dependent variables normally through surveys. Single Cross-Sectional involves the collection of information from any given sample of population element only once

Selection of Respondents and Data Collection

Primary data for the study was collected through Pretested Structured Questionnaire and the questions were administered through personal interview mode. Pilot testing of data collection instrument was conducted and the reliability of the instrument was tested through Cronbach Alpha Eligibility test. The field survey for the study was conducted in two major taluks of Bangalore Rural District such as Hoskote and Nelamangala on the basis of financial inclusion ranking allocated by CRISIL. One Taluk was Hoskote with low Financial Inclusion Index of 32.7 and another was Nelamangala with little higher Financial Inclusion Index of 45.4 In all 160 respondents were interviewed in four villages selected from each of these two taluks. (40X4=160 total respondents)

Sampling Method: Convenience sampling method was adopted for the study. The taluks were selected based on the number of financial inclusion beneficiaries under various Govt. schemes.

Data Analysis: Data is analysed using the statistical techniques like ANOVA and Chi-Square test.

Hypothesis

H0: There is no relationship between reasons for opening account with total usage of accounts

H1: There is positive relationship between reasons for opening account and total usage of accounts.

Supply side survey was also conducted by meeting the managerial cadre of Regional Rural Banks, Public Sector Banks, Credit Co-operative Societies and Private sector Banks operating in the survey area. Around eighteen experts were contacted and response recorded through close ended questionnaire.

Results of Data Analysis

The sample size has been arrived at considering 95% level of confidence and 5% margin of error.

To check the reliability of the questionnaire researcher has applied cronbach‘s alpha:

Reliability test

Case processing summary

Cases	N	Percentage
Valid	38	100
Excluded	0	-----
Total	38	100

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Reliability Statistics	
Cronbach's alpha :	0.891
No. of items :	19

Data analysis for the study was conducted through testing of Hypothesis using statistical tools like T-Test, ANOVA, Correlation and tabular analysis and findings were documented. T-Test is an inferential statistical test that determines whether there is statistically significant difference between the means of two unrelated groups. The null hypothesis for the independent t-test is that the population means from the two unrelated groups are equal. T-Test was also applied to analyse the difference in Taluk wise usage of account.

Correlation: Descriptive Statistics

Description	Mean	Standard Deviation	N
Total Score reasons for opening an account	18.13	5.643	160
Total usage account	21.87	4.338	160

Correlation

Total Score Reasons For Opening An Account	Pearson Correlation	Total Score	Total Usage Account 0.683
	Sig(2 tailed)	1	0.000
	N		160
	Pearson correlation	0.683	1
	Sig (2 tailed)	0.000	
	N	160	160
**Correlation is significant at the 0.005 (2 tailed)			

It is inferred that both reasons for opening the account and usage of account using Five point Likert scale technique. The total scale has been considered for the study. The study is intended to explore the inter-relationship between both the variables. To check the hypothesis, ―There is no correlation between reasons of opening account and usage of account. To test this hypothesis, Pearson‗s correlation coefficient has been carried out. It was observed that there is positive correlation between reasons of opening the account and usage of the account (Pearson‗s correlation coefficient=0.683) which is statistically significant (p-value= 0.000)

It is inferred that, ―There is no correlation between reasons of opening account and usage of account is rejected and the alternate hypothesis, ―There is positive correlation between reasons of opening account and usage of account is accepted.

The account holders are more likely to use the account more if they have a strong reason to open the account. This implies that accounts which are opened by banks to achieve the account opening targets, may remain unused because the account holders do not find any reason to use them .This also means that promoting financial literacy is must because it helps the account holders to understand the benefit of the account and they can visualize a purpose in having an account.

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Beneficiaries' Opinion about ICT application in financial inclusion

Taluks: Nelamangala/ Hoskote (combined)	N=160	Percentage
Strongly agree	44	27.5
Agree	62	38.5
Neutral	20	12.5
Disagree	26	16.2
Strongly disagree	08	5.0

The above table indicates that majority of the beneficiaries in both taluks had expressed satisfaction of the financial inclusion programme. They were convinced about the ICT application in financial inclusion schemes launched by the banks. They also opined that they never knew that the ICT application is so easy to comprehend, handle and helped to transact in future. While 20 respondents said they were not convinced about the ICT application, hence they chose to remain non-committal. The rest 34 respondents did not agree with the ICT arrangements and opined that they are yet to come to terms with the bank authorities regarding ICT applications. They also felt that the ICT application could have been little more user friendly. On the contrary, because of non– comprehension of certain financial inclusion schemes they feared that they might be left out of the whole inclusion process.

Major Findings

1. There is a significant relationship between beneficiary population with different age groups in the study area with respect to Branchless Banking, Mobile Banking, Biometric ATM, Agent/Correspondent Banking, and Kisan Credit Cards.
2. People use various financial products/services such as bank a/c, debit cards, kisan credit cards, as they can avail government subsidies, to manage & protect against the risk of being exploited by the money lenders, theft of money, to save their money in a safe place, as they trust the financial service providers.
3. 50% of respondents do not use financial services because the financial services information is not available.
4. 52% of respondents do not use ICT services because it is very expensive and not user friendly.
5. 64.7% of respondents are neutral towards lack of money being the reason not to use the financial services.
6. 60.7% of respondents do not use financial services because they lack proper documentation required to use the ICT services.
7. Income levels have a strong influence on financial inclusion. Even in rural areas people with better income levels are likely to use their account more compared to those with poor income.
8. Taluks which are mainly semi urban in nature are more likely to fare better in terms of financial inclusion. This may be because of higher literacy level, better per capita income, higher bank coverage per unit population and better access to information compared to purely rural districts.
9. Poor people have a strong propensity to save; majority of the respondents cited savings as the main reason for opening an account .There is no requirement for explaining to the poor, the need to save money. However the savings product should have the right kind of Pay Ins and Pay outs which are convenient for the poor to manage the hard earned money.
10. In all 12 percent of the respondents are not having bank account. 31.70 percent said that they have saved in the account while in Hoskote and in case of Nelamangala, a whopping 86.59 percent said that they have saved in the account . This may be due to differences in urbanization level, varying per capita income and literacy levels.
11. It is observed that in Nelamangala, which is an urban district, people resort to savings rather than borrowing while for a rural taluk like Hoskote informal borrowings takes precedence over savings.
12. 59 percent of the respondents from Nelamangala borrowed from Informal sources during the last 12 months while in Hoskote 86 percent of respondents borrowed from formal sources.

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Suggestions

1. People should be made aware about the benefits of having an account so that they have a strong reason to open an account. Accounts which are opened by banks to achieve the target remain unused. Account opening should not be a target imposed on bank staff. Rather creating awareness through financial literacy programmes can increase the usage of accounts that are opened.
2. Experiencing the benefits of using the savings account can influence people to avail other banking product like credit, remittances and insurance. People who don't have an account perceive that they don't need an account because they don't have money. This can be addressed only when they are made aware about the benefits of having an account so that they are interested in availing them.
3. Financial inclusion in India has always been associated with credit delivery. The study found that credit delivery doesn't have significant influence on usage of savings account. Banks should promote these two products separately instead of linking the two on the presumption that availing a loan would increase the usage of account. Rather availing a loan may reduce the propensity to save because repayment absorbs the surplus income. Also, avenue for easy loan availability reduces the fear of future shocks so the inclination to save reduces.
4. The study also found that occupation doesn't influence the usage of account significantly. Rather income of the people has significant impact on usage. This implies that while approaching people to open an account (with intention to use it) banks should not set target based on occupation of the people but on the income. People with high income are more likely to use the account frequently. Also, villages which are economically developed should be targeted first because they will use the account frequently.
5. There is also Taluk -wise difference in the usage of financial services based on income level, literacy, awareness etc. Financial Inclusion programmes should vary based on district-wise parameters. There should not be a same programme replicated in all districts.
6. To increase awareness and interest in products offered under various schemes of FIs, increase in advertisement in local language, on radio and television, and in print media, with local icons and artists as brand ambassadors of the campaign, could help in building public confidence. In this context, role of mobile phones and reach of mobile banking is immensely promising.
7. Common consumer knowledge in rural areas about dialing to a toll-free number should be leveraged provide introduction to financial literacy as well as instructing people on steps to use mobile banking. The banks should educate their staff and BCs about latest developments in mobile banking, and mandate them to promote these facilities during financial literacy campaigns in rural areas.

Conclusion

Thus, financial inclusion will lead to financial development which will help accelerate economic growth. The significance of financial inclusion as a prerequisite for inclusive development. A country in look upon to financial inclusion delivery, has adopted the ICT model which is in the transition phase and time will speak for its success or otherwise. Since financial access in India is reported to be poor, there is need for healthy financial inclusion policy and strategies. It is believed that with the growth of information technology and allied services, if financial literacy in the region is properly addressed, financial inclusion nevertheless would help achieve rapid progress.

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