

# INNOVATIVE DELIVERY CHANNEL – A MEDIATING VARIABLE BETWEEN INFORMATION & COMMUNICATION TECHNOLOGY (ICT) AND FINANCIAL INCLUSION

R.Bharath<sup>1</sup> | Dr.S.Vasanth<sup>2</sup> | M.Bhuvana<sup>3</sup>

<sup>1</sup>(School of Management Studies, MPhil Scholar, Vels University, Pallavaram)

<sup>2</sup>(School of Management Studies, Professor, Vels University, Pallavaram)

<sup>3</sup>(School of Management Studies, PhD Research Scholar, Vels University, Pallavaram)

---

**Abstract**—In India, government has taken several initiatives to elevate financial inclusion. The successful achievement of financial inclusion can be done through Information & Communication technologies such as ATM, banking agents, Mobile Phones, etc. Financial Institutions like banks has done various renovations in their technologies to facilitate their financial services to reach the people especially from the most vulnerable groups in the society. This paper will discuss about how the banking services are facilitated to rural people by Information and communication technology (ICT) through various innovative delivery channels and it acts as a mediating variable between Information & communication Technology and financial inclusion.

**Keywords**—Business Correspondent (BC), Non Governmental Organisations (NGOs), Self Help Group's (SHG's), Micro Finance Institutions, Banks, Rural People.

---

## 1. INTRODUCTION:

Nowadays Technology has become wider and important for any commercial activities. Recently we are living in the world where technologies are more advanced with various economic opportunities which makes a contribution to create values for any type of organization. In the fast growing global development, to provide and improve the financial services provided to the customer's with best quality and reliability the banks and financial institutions has widely invested upon the ICT's. Information and Communication technology acts as a pathway, that can connect people living in remote villages through various devices such as mobile phones, computers, radio and television, networking systems hardware & software. These ICT's provide user friendly and flexible services to the customer for the banking sector through which the customers are satisfied by being at home. The content of this paper is to study the literature of previous researchers who have studied about the Information and Communication Technology which has various innovative delivery channels provided has the medium to the connect the customer and the banking services. Customer service and security are essential for banking service which can be better provided using the ICT's whereby increasing the economic growth and development of the nation. Castells (2001) has stated that today by pressing a single button, transaction of billion dollars can be done within a fraction of seconds through Information and Communication Technologies (ICTs). Hence ICT's provide a new infrastructure which had developed the economy to provide reliability and satisfaction to the customer. But the impact of the ICT's in the rural areas is very much low due to the various factors which affect the usage of banking system through ICT's, where the mediating delivery channels are provided in order to increase the effect and usage of the banking services in the rural areas.

## 2. OBJECTIVES:

1. To study various delivery channels adopted by banks to reach rural people.
2. To study the various banking services facilitated to rural people through Information and communication technology.
3. To prove that innovative delivery channels act as a mediating variable between Information & communication Technology and financial inclusion.

3. CONCEPTUAL FRAMEWORK:

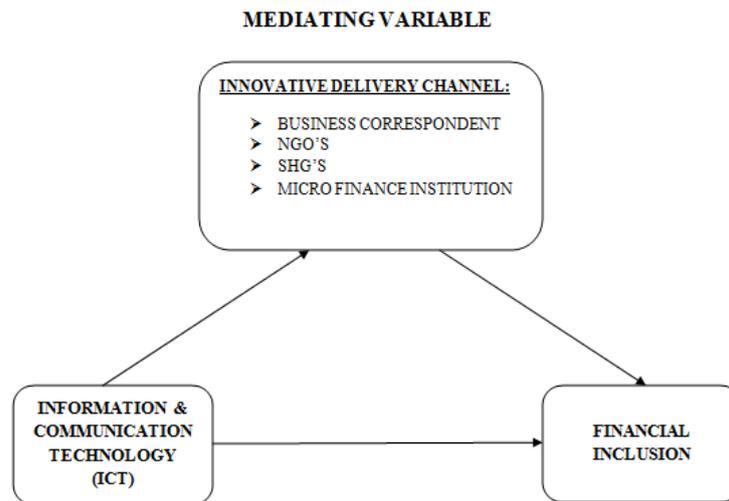


Figure 1. Conceptual Framework

Banks need to provide the various required services to the customers at rural areas which are provided using various delivery channels by the ICT's. Hence those services are provided by the ICT using the innovative delivery channels which connect the ICT's to the financial inclusion.

4. INNOVATIVE DELIVERY CHANNELS ADOPTED BY BANK TO REACH RURAL AREAS:

4.1 Business Correspondent (BC):

In order to achieve the objective of financial inclusion, the Reserve Bank of India (RBI) in the year 2006 implemented the model known as Business Correspondent Model (BC). As per the Financial Inclusion Report of Reserve Bank of India (RBI), Banks are advised to appoint the Business Correspondents (BCs) who acts as a mediator between the banks and the rural people. The BCs are appointed to carry out the money transactions of rural people for making payments, credits and savings by using Biometrics and Point of Sale (POS) devices. Banks implements various channels for delivering financial services for the rural people at a reasonable cost such as Biometric ATMs, Mobile ATMs, Micro ATMs and mobile banking services to get timely credit facilities for the poor people. The Business Correspondent Model is an innovative channel through which the BC Agents approach the rural people and educate them about the banking products and services that are facilitated in a simple process by using Information and Communication Technologies. This in turn increases the trust level of rural people for using banking technologies to banking services with the help of Business Correspondents. On behalf of the bank, BC acts as an authorized agent for guiding the rural poor to obtain financial services through information and communication technologies Frost and Sullivan (2009). The Business Correspondent bridges the space between the banks and the rural people. Hence the responsibility of the BC's is to create awareness about savings and to educate them by advising them to manage the money and debts. The Business Correspondent should also suppose to identify the needs of the rural people and recommend suitable banking products based on their income level.

4.2 Self-Help Groups (SHG's):

Sangwan (2007) studied financial inclusion and self-help groups (SHGs), and the authors has examined that for the past 15 years, India has witnessed unprecedented growth in financial services unfolded by liberalization and the globalization of financial services due to the adoption of information technology (IT) and the unlocking of the regulatory framework. Puhazhendi and badatya (2002) has analyzed that there is a positive impact on members of SHGs towards the saving behavior. The Self Help Groups (SHGs) supports the small scale industries, Low income group people at remote villages and educate the rural people about the financial services offered by the banking sectors through ICTs at a less transaction cost.

4.3 Micro-Finance Institutions:

Ghosh (2007) has stated that existence of micro finance institutions is very less when compared with the Post Office Savings Bank to meet the demand needs of the rural people. Beck, Demircuc -Kunt, and Maksimovic (2004), has stated that micro finance institutions has linked with the formal financial system. This has bought a rapid change over the micro finance institutions such as serving the low income group people and satisfying their timely credit to meet their emergency needs. Biswas (2010) has illustrated that the microfinance institutions should conduct education programs about obtaining financial services through ICT like ATMs, Rupay Card, and Mobile ATMs towards the rural people. This in turn supports the rural people to get their credit facilities on a timely basis and also it boost up the financial inclusion. Nadarajan and

Ponmurugan (2006) has stated that Microfinance Institutions deals with certain functions such as delivering small credit and deposits in rural areas, educate people to increase their saving habits, making rural people to do investments for improving the quality of living among the rural people. Karlan, D. & Valdivia has examined that Bank of Tanzania facilitates more financial services through mobile phones which includes small savings, micro insurance and small credit services.

#### 4.4 Non-Governmental Organization (NGO's):

NGOs play a vital role in the shaping and implementation of participatory democracy and their credibility lies in the responsible and constructive role they play in society. In recent times focus is not only on growth but inclusive growth through NGOs. In keeping with their profile, target based operations and efficacy, NGOs can be major proponents to increase the utilization of the banking services by the people at rural areas. To educate and provide counseling for the people regarding the usage of the banking services provided by the ICT's which can improve the economic growth of the individual and the nation.

### 5. VARIOUS BANKING SERVICES FACILITATED TO RURAL PEOPLE IN ICT:

#### 5.1 Information & Communication Technology (ICT)

Farrell and Saloner (1985) has examined that the strong relationship between information and communication technology and banks exists only when the ICT reduces the operation cost of the banks and elevate the transactions between the customers within the same networks. Thus ICTs provided their services through the ATMs, Internet banking, mobile banking and smart card based services and so on. The infrastructure of ICT plays an important role for increasing the outreach of financial services in rural and unbanked areas through ATMs, internet and mobile banking technologies (Kawaljeet Karur and Jaswinder Singh, 2015). Castells, 1996; Graham and Marvin, 1996, stressed out that Information and Communication Technology has restructured the lifestyle of the people. Martin and McKeown (1993) has stated that the adoption level of ICT is seen to be very less in rural areas, since the rural people are under extreme pressures such as ageing factors, low income, poor network coverage and financial literacy. Thorat (2007) has narrated that most of the banking services are implemented by using Information and Communication Technologies to maintain Customer Relationship Management, to analyze the transaction pattern of the customers, credit profiling and to manage the risk factors.

#### 5.2 Automated Teller Machine (ATM):

It is a computerized technology that permits the bank customers to perform bank operations such as cash withdrawals, balance enquiry and getting mini statement of the account through the registered Personal Identification Number (PIN) without the help of the bank officials.

##### 5.2.1 Biometric ATM:

Biometric ATM is said to be a technology which is specially designed for the rural and illiterate customers. It is very easy, safe and secured to do access account. Since PIN number is excluded in Biometric ATMs, the rural customer registers their finger print or scans the eye retina for authorizing the account. No one else can access the account without the account holder therefore, helps the rural people to get rid of fraudulences and duplications

##### 5.2.2 Mobile ATM's:

Mobile ATMs are similar to the Biometric ATMs. The ATM machines are carried in a van and travelled at the door step of rural people to facilitate financial services like cash withdrawals and balance enquires, etc.

##### 5.2.3 Micro ATM's:

Micro ATM in the Indian context is not an ATM at all. Automated teller machines as we know them are cash dispensers. Micro ATMs are actually modified point of sales terminals (card swipe machine) through which a bank can remotely connect to the bank's core banking system using his debit card. It is a card swipe machine with a fingerprint scanner attached to it.

#### 5.3 Smart Card-Based Products:

Smart card is a plastic card which holds the information about the customer's details such as photo and fingerprint. They can be a very reliable form of personal identification and a tamper-proof, secure information repository.

#### 5.4 Mobile Banking:

Medhi et al. (2009) studied that the mobile banking adaptation and usage by low-literate and low income users. The level of Mobile phone penetration are quite increasing among the low income group communities therefore people who holds mobile phone devices without mobile bank account has to be targeted for facilitating financial services like money transactions, making payments, credits and savings at a very less transaction cost.

### 6. INNOVATIVE DELIVERY CHANNELS – MEDIATING VARIABLE BETWEEN ICT & FINANCIAL INCLUSION:

As Charkraborty's (2009) study focused on technology, financial inclusion, and the role of banks showed that technology can operate on any platform. However, the technology solution to the business needs should be user-friendly without much third-party or IT vendor intervention or support requirement for operating the same. Banks need to redesign their business strategies to incorporate specific plans to promote financial inclusion of low-income groups, treating it as both a business opportunity as well social responsibility. In India, some rural farmers and MFIs are using mobile phones to do book-keeping, to receive and send payments, and to pay utility bills (Rogers, 2007). Gadamsetty Sai Arun(2013) Stated that

inclusive growth is absolutely necessary to pull millions of Indians out of poverty. Financial inclusion is the crucial driver for such growth by covering large sections of society in providing them with financial services. Policies to encourage increased access for the previously unbanked must, however, take into consideration the objectives of financial stability, especially in light of the current economic and financial crisis.

#### 7. IMPLICATION OF THE MODEL OR FRAME WORK :

Through the frame work, it shows that the ICT plays the major role in implication of Financial Inclusion. Whereas the ICT has created revolution in the banks to reach out rural areas. They have made the people to have knowledge about the operations taking part in the bank. Hence people must be well effective in the participation of banking activities with the help of ICT. The ICT is one among the reason in Financial Inclusion to provide the banking services. There are also some innovative delivery channels which are helpful in Financial Inclusion, such as business correspondent, Non – Government Organizations (NGO's), Self – Help Groups (SHG's), Micro Finance Institutions, etc., through which people may have knowledge of using the technology and go through bank activities by themselves instead of waiting for the help of unknown and trust worthless people. They can also utilize the technology of ICTs like ATMs and Internet Banking to acquire maximum customer service and satisfaction.

#### 8. CONCLUSION:

Thus the innovative delivery channels provide services to the customer in the banking system using the ICTs but the rural people are still in the situation to acquire the ICTs in low number due to various factors like lack of education, lack of technology and so on which leads to the lesser usage of the ICTs for the financial inclusion using the innovative delivery channels for better customer reliability and satisfaction in the banking services. The mediating delivery channels can thus provide service even to the people in rural areas where there is lack of communication between customer and bank system. With the increase in the development of the ICTs technology used for financial inclusion, these services can also be provided to the customers in the rural areas without any problem.

#### REFERENCES:

- [1] Biswas, N., 2010. Biometric ATM: Boon to Indian Rural Bank Customers. *Southern Economist*. ISSN 0034 –4046, 48(14).
- [2] Business Correspondents and Facilitators Pathway to Financial Inclusion, (P. Vijaya Bhaskar)Chief General Manager, ACCESS Development Services 28, Hauz Khas Village, New Delhi 110016, RBI / 2008-2009 /142DBOD.No.BL.BC. 36 /22.01.009/2008-2009August.
- [3] Castells, M. (2001), *The Internet Galaxy: Reflections on the Internet, Business and Society*, Oxford; New York: Oxford University Press.
- [4] Dr. Shweta Anand & Ms. Deepika Saxena, "Technology Based Initiatives by Indian Commercial Banks towards Financial Inclusion"
- [5] Economides, N. and Salop, S. (1992), Competition and integration among complements, and network market structure. *The Journal of Industrial Economics*, XL (1): 105-123.
- [6] Economides, N. and Salop, S. (1992), Competition and integration among complements, and network market structure. *The Journal of Industrial Economics*, XL (1): 105-123.
- [7] Farrell J. and Saloner G. (1985), Standardization, compatibility and innovation. *RAND Journal of Economics*, 16 (1): 70-83.
- [8] Farrell J. and Saloner G. (1985), Standardization, compatibility and innovation. *RAND Journal of Economics*, 16 (1): 70-83.
- [9] Farrell J. and Saloner G. (1985), Standardization, compatibility and innovation. *RAND Journal of Economics*, 16 (1): 70-83.
- [10] Ghosh, A., 2007. Financial Inclusion through Micro Finance in India and Emerging Role of POSB: An Analysis. [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1655737](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1655737).
- [11] Increasing the Outreach And Sustainability of Microfinance through ICT Innovation, Stuart Mathison, Program Manager, The Foundation for Development Cooperation (FDC)
- [12] International Journal of Scientific and Research Publications, Volume 3, Issue 6, June 2013 1 ISSN 2250-315, [www.ijsrp.org](http://www.ijsrp.org), The Role of SHGS in Financial Inclusion.A Case Study, Uma .H.R\*, Rupa.K.N\*\*\* Department of Studies Economics And Co Operation, University O F Mysore, Mysore -06
- [13] Jiaqin Y, Whitefield M, Bhanot R, (2005). "E-Banking in Rural Area - Recent Trend and Development: A Case Study", *Communications of the IIMA*, Volume 5 Issue 4
- [14] Karlan, D. & Valdivia, M. (2011). Teaching entrepreneurship: Impact of business training on microfinance clients and institutions. *The Review of Economics and Statistics*, 93(2), 510-527.
- [15] Mackintosh, W. (2005). Can you lead from behind? Critical reflections on the rhetoric of e-learning, open distance learning, and ICT for development in sub-Saharan Africa (SSA). In A. A. Carr-Chellman (Ed.), *Global Perspectives on E-learning: Rhetoric and reality* (pp. 222-240). London: Sage Publications.
- [16] Stamoulis D. S. (2000) "How Banks Fit in an Internet Commerce Business Activities Model." *Journal of Internet Banking & Commerce*. Vol. 5, No. 1.
- [17] Thorat, U., 2007. Financial Inclusion and Information Technology, <http://www.bis.org/review/r080917d.pdf>.
- [18] Vasantha, S., Varadharaj, V., & Varadharajan, R. (2013). Self help group bank linkage model as catalyst for financial inclusion in an unbanked rural area. *Indian Journal of Commerce & Management Studies*, 4(1).
- [19] [www.nabard.org/databank/IARD%20Web/csidfiles/Financial%20Inclusion%20and%20SHGs.pdf](http://www.nabard.org/databank/IARD%20Web/csidfiles/Financial%20Inclusion%20and%20SHGs.pdf).