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INDIA POSTS PUTTING ITS BEST LEG FORWARD: A CASE ON ICT4D

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Abstract

Literature has provided a robust evidence on the link between financial inclusion and development. The onus lies on governments on ensuring the diffusion of financial services to the remote corners of the nation. The rapid diffusion, penetration and global reach of Information Communication Technologies (ICT) have assisted and continues to assist this aim of governments to a large extent. Financial management is, for the poor, a fundamental and well-understood part of everyday life. To enable them with better access to needs in life leading to social inclusion, they have to supported by external financial services. In light of this scenario, this paper attempts to understand a project from the Actor Network Theory (ANT) perspective focussing on improving the disbursement of financial services in an emerging economy. Statistics indicate India has the lowest penetration of banks/ATMs per 100,000 population compared to any of the BRICS nation. The Indian Postal department utilising its large Postal Network in the world with 90% penetration in the rural areas leverage this large network for disbursement of financial services to all citizens focussing primarily on rural villages. Bringing banking services closer to citizens through these post offices ensure efficient, accessible and readily available banking network across the nation. Thereby guaranteeing financial inclusion to the rural populations. The paper highlights the dynamics and the network involved in the process of ensuring financial inclusion, followed by addressing the critical success factors and pain points in the development of this project. The study provides an example of an emerging economy utilising the available resources attempt to attain development through efficient banking system.

Keywords:

ICT for Development, Actor Network Theory, Digital Transformation, India Posts, Payment Bank

1. Introduction

Financial Inclusion is defined “as provision of affordable financial services, viz, access to payments and remittance facilities, savings, loans and insurance services by the formal financial system to those who tend to be excluded” (Thorat, 2006, p.239). The absence of inclusive financial systems lead poor people to invest their own limited savings on education, health and other basic needs of life. Likewise small enterprises also have to rely on their available earnings to track opportunities that lead to promising growth (Demirguc-Kun and Levine, 2009). This could possibly lead to inequality and slower economic growth affecting the development of the nation. Financial institutions, with a scope of spreading its activities across each and every member of the economy can be quite varied and differ across nations (Chakravarty and Pal, 2013). There exists legislative norms and government bodies across

most countries that emphasize banks to cater to all sects of the population irrespective of their economic status. For example: Community Reinvestment Act (1997) of United States, the Law on Exclusion (1998) of France, 'Financial Inclusion Task Force' (2005) of United Kingdom and many other initiatives of the banking sector itself in countries like Germany, South Africa and India (Sarma and Pais,2011).

In India, regulations pertaining to financial inclusion revolves around sectors such as agriculture and small business activities. Moreover, it is directed mainly to groups such as small marginal farmers, women, unorganised sector workers such as artisans, self-employed and pensioners (Dev, 2006). Reserve Bank of India(RBI) being the central banking institution in India have aimed at providing concrete efforts to bridge the gap between banked and the unbanked from 1960s. While Government of India (GOI) nationalized the banking operations by 1980, RBI took initiatives such as "priority sector lending requirements for banks, Lead Bank Scheme, establishment of Regional Rural Banks, Service Area Approach (1989), Self-Help Group-Bank Linkage Programme (1989-90), setting up of Local Area Banks etc." (Bhole, 2004) which primarily focused on making banking benefits available to all masses. The other private players are commercial banks, m-Wallets, private payment banks, Micro-finance institutions and money lenders. In the recent years the GOI have chosen unique and alternate routes to attain financial inclusion through agendas such as Pradhan Mantri Jan-Dhan Yojana, RuPay card, and Direct Benefit Transfer scheme.

Although these means have accelerated the reach of financial services and resulted in impressive gains, certain structural challenges in terms of unavailability of technology and access to the remote corners resist the progress of financial inclusion (Ajwani-Ramchandani, 2017). India has the lowest penetration of banks/ATMs per 100,000 population of any BRICS nation (18 per 100,000), compared to China's 55, South Africa's 66, Brazil's 129, and Russia's 184 per 100,000. A cost effective model of delivery of financial services with available resources is something the Ministry of Finance, GOI was looking forward to. The Ministry of Communications, GOI in association with the Ministry of Finance, GOI recommended the usage of the postal network available in the nation for the disbursement of financial services across the nation. India has the largest Postal Network in the world with over 1, 54,882 Post Offices (as on 31.03.2014) of which 1, 39,182 (89.86%) are in the rural areas. On an average, a Post Office serves an area of 21.22 Sq. Km and a population of 8221 people. Utilizing this readily available network makes banking services accessible to every citizen across the nation. However, to ensure the efficiency of these services led to the proliferated usage of technology. The challenges of unaffordable costs can be reduced by leveraging the application of technology through e-KYC, IMPS (Interbank Mobile Payment System), AEPS (Aadhar enabled Payment System), and mobile banking.

Technology plays a crucial role in driving financial inclusion in India. Of all the available technologies, Information and Communication Technologies (ICT) have influenced development to a large extent. ICT is defined as "all kinds of electronic systems used for broadcasting telecommunications and mediated communications" (Parvez, 2011). For example, personal computers (hardware and software), mobile phones, internet, electronic payment systems etc. Literature identifies ICT as a catalyst to economic development (Zelenika and Pearce, 2013). ICT based empowering solutions for development can be broadly classified in three folds. Firstly, the exceptional speed and coverage of ICT results in enhancing the availability of goods and services in favourable and sustainable means. Secondly, ICT help in enabling alternate models to attain sustainable economic development

in emerging economies unlike focusing on economic growth only through resource consumption. Lastly, proliferation of ICT in a nation can lead in contribution to economic growth in terms of benefits in business, employment generation, emergence of new service industries and also innovations in current businesses (GeSI report, 2016).

The results of adoption, acceptance, diffusion and use of ICT differs across different regions of the world similar to catering financial inclusion activities. A mere imitation of what has worked in the industrialized world may not be apt in a developing or emerging country context (Walsham and Sahay, 1999; Kumar, 2004). A number of constraints for using ICT in developing countries can be listed as - the culture differences, inadequate economic infrastructure, lack of workforce skills, dearth in government or institutional support etc (Eres, 1981). India, although adopted ICT much later than most other economies, it has achieved success in the economic front with its thriving software export industry (Heeks 1996). But on the other hand, nearly 70% of India's population belong to rural community to whom financial services are not penetrated. Development through ICT is to be catered in a manner acceptable to the community which otherwise might and have lead previous ICT development projects to failure (Thirumavalavan and Garforth, 2009).

The digital transformation of India Posts began in the year 2012 under the IT Modernization Project. The project was undertaken primarily to improve the efficiency of the banking services provided by the Department of Posts. The 'IT Modernization Project' was introduced in eight silos which are: (i) Network Integration System – process of connecting all the 1, 54,882 post offices branches to the internet thereby banking services could be accessed from any remotest corner of India. (ii) Data Center Allocation- the post office till then where working on pen and pencil mode had access to servers with the primary data centre was located at Mumbai and the secondary at Mysore. (iii) Finnacle- a computerised financial service application, developed an online banking network and automatic teller machines across 25000 branch offices across India and is yet to diffuse to the sub-branches and village branch offices. (iv) Mechamis- customised solutions for postal life insurance. (v) Rural System Integration- have connected 50% of rural post office branches, the major disadvantage that lies is the absence of adequate infrastructure (vi) Master Operated Handled devices- digital hardware equipment provided to bank correspondents for disbursing financial services across all the citizens (vii) Core System Integration- transition of all other activities of the post offices such as saving certificates, money orders etc. to the web network (viii) Change Management- provides all the necessary training and workshop to the human resources for the visions of the top management to see results.

Sahay and Walsham (1995) suggested that multi-level analysis helped in the study of ICT for development projects, "The process of ICT use in developing countries is a complex phenomenon and it typically involves actors at various levels. It is important to study the interaction of these different actors on the process of ICT implementation and use" (p. 118). Further analysing ICT helps in structuring the interrelationships between social, economic, environmental and political features of the society (Castells, 1996)

This paper aims to understand beyond the hyperbole that surrounds the digital divide and examine the financial inclusion offered after the digital transformation of India Posts from the development lens. The primary research question that is addressed in the study is: How can digital transformation at India Posts be a solution for financial inclusion of all its people in

India? Using an interpretive case method we analyse the mechanisms involved in projects that incorporate technology for rural development in terms of financial inclusion.

2. Literature Review

Financial Inclusion has been a research area of interest for many researchers mainly across the developing or emerging country context. Narrowing the literature focus to India, as it is the context of research study. Researchers have tried to assess the situation of financial inclusion in the country over the years. Mehar (2014) argues that the financial services provided in India are comparatively lowest in comparison US, UK, Germany and other BRICS countries of the world, through a timeline study she concludes that the situation is improving but there is huge scope for better services to be introduced. Pandi and Selvakumar (2012) assessed financial inclusion taking into account the credit and deposits of Scheduled Commercial Bank and found that the penetration of services were low in certain parts of the country. On the same lines, Kaur et.al, (2017) evaluated financial inclusion of India from the context of ATMs and Commercial bank branches and concluded that though there has been progress, there has not been 100% attainment of financial inclusion in the nation. Inclusix (2014) measured the level of financial inclusion in a nation through an index with parameters such as branch, deposit and credit penetration and found out that only 50% of the population was financially included. Sahu(2013) estimated the financial inclusion index for various states in India and found that 72.7 % of India's 89.3 million farmer households were excluded from formal sources of finance. Burgess and Pande (2005) provide empirical evidence that banking the rural unbanked through rural banks in India led to poverty alleviation. Literature identifies the present challenges for attaining financial inclusion are financial illiteracy (Dixit and Gosh,2013), geographic penetration of banks and credit availability (Chakravarty and Pal,2013), physical infrastructure for connectivity and information (Sarma and Pais, 2011).

The contribution to literature can be explained in two folds. Firstly, the studies have not assessed the issue of financial inclusion from a project perspective, it has always been on a generalised framework with respective to all the states in India. Secondly, literature has viewed financial inclusion from the demand side but this paper looks at possibility from the supplier side of disbursement of banking services.

3. Theoretical Background

The Actor Network Theory (ANT) is used as a theoretical lens in this study. ANT is a theory originated from the fields of sociology and psychology, the theory concentrates on every entity, be it human or non-human and the relationship between these entities in the network. (Latour, 2007). For example, a transportation information system may have mobile, drivers, customers, inspectors, software, application developers, travel records, regulations etc. as actors to the system. These actors will interact with each other at different points during the function of the system, for example, the ICT (mobile and PC) helps customers chose the mode of travel and this in turn relates to the work routine and quality of the service provided by the transportation company. To draw a similar analogy with the Indian Postal Department, the ANT seemed appropriate.

ANT provides an understanding on the creation of networks and the other associated interests addressed with the created networks (Callon and Latour, 1981; Callon, 1986; Latour, 1999; Law, 1991; Law, 1994; Law and Hassard, 1999). It sketches the path in which the current actors enrol other actors and use certain non-human actors to strengthen the new bonds, thereby creating actor networks consisting of both human and non-human actors (Callon, 1986; Callon and Latour, 1981; Latour, 1996).

ANT has been used in information systems literature and helps in understanding complex social interactions with technology (Walsham, 1997). The theory subscribes to four major stages in creation of actor-network- “problematization, interessement, enrolment, and mobilization” (Callon, 1986). Callon (1985) defines creation of actor-network as “the methods by which an actor enrolls others” (p. xvii). The four major stages are brief as follows, in the problematization stage the actor who initiates the network recognizes other actors with aligned and reliable interests of the initiating actor. During this preliminary stage of the actor-network, a few actors place themselves as vital sources in the solution of the initially defined problem. These actors clarify the problem, develop solutions and also assign roles and characteristics for other actors in the network. Callon (1986) identify the initiating actors as an “obligatory passage point” for obtaining the solution. The interessement stage requires the initiating actor to persuade other actors that their interests are also addressed and well consistent with the solution provided by the initiator. Incentives are also provided to such actors to not create any resistance during the actor-network creation. According to Callon (1986), successful interessement “confirms (more or less completely) the validity of the problematization and the alliances it implies” (pp. 209-210). It basically freezes the actor-network formed. In the enrolment stage, definite roles are assigned to each of the actors in the network. Initiators involve and convince other actors with different approaches to accept the ideas generated in the developing actor-network and also to play an active role in the network. As per Callon (1986), enrolment is “the group of multilateral negotiations, trials of strength and tricks that accompany the interessements and enable them to succeed” (p. 211). Lastly, in the stage of mobilization, initiators’ use measures to ensure the connected members of the growing actor-network act according to pre-set rules and do not over power the initiators’ interests. Initiators then rely on the enrolled actors to secure constant support and ideas to the solution proposed. Finally, with all its allies agree to abide by an agreement the actor network achieves stability. This stability results that the ideas so generated are institutionalized and cannot be subject to any controversy.

In addition to the above described stages of creation of actor-network, the process of inscription is critical to building of these networks (Latour, 1999). Latour (1987) emphasises the role of technology in the generation of ideas and that these technologies diffuse in relevant contexts which results in socio-technical stability. The inscription stage occurs in generation and placement of this technology in the actor network. Technology need not have to be implanted rather its importance needs to be conceived, once conceived it is calculated as an actor in the network (Latour, 1996, 1999). The inscription stage need not be considered as an exclusive stage of creation of actor-network, it begins with the introduction of technology into the network by the initiators (Akrich, 1992; Latour, 1992).

4. Research Design

4.1. Methodology

The study focusses on understanding the role of technology in India Posts to address issues of financial inclusion across the nation. An interpretive case research helps in understanding the context through the perspective of humans involved (Klein and Myers, 1999). This method can provide deeper insights on the benefits of digital transformation of India Posts on disbursement of financial services across the nation. The primary data was collected from top officials or decision makers (assistant post master general) and the employees of the organisation involved in the 'IT Modernization Project' or simply the digital transformation of India Posts. The secondary data sources were India Posts websites, newspaper articles, videos and training materials.

4.2. Overview of the case

The digital transformation of the Post Offices called for a new banking system called the India Posts Payment Bank (IPPB), which aim to provide efficient banking services to every Indian probably at their doorstep (Aapka bank, aapke dwaar). It is incorporated as a public bank with 100% GOI equity offers savings account up to a balance of Rs 1 Lakh, along with digitally enabled payments and remittance services of all kinds between individuals.

The idea of digital financial services reaching the internal and rural parts of India utilise the vast social network of a postman or a 'grameen daak sevak'. The postman is considered as a banking correspondent. A postman is almost considered as a family member in each and every household of the rural parts of India. This experience of a postman is leveraged to provide banking services, insurance services, mutual fund with other third party services such as pensions, direct benefit transfers (MNREGA, NSAP etc) to the individuals eliminating the middle men relying upon the power of technology. The usage of technology can be expedited by understanding the digital profile of India. India became the second largest market of smartphones in the world. The users of smartphones, mobiles and the internet has increased to 45%, 17% and 51% respectively in just a span of three years. At the same time, the Aadhaar (Unique Identification Number) enrolment has increased from 63 Crore to 114 Crore in three years which is total increase of 45%. Not everyone has a bank account but many have mobile phones and thereby digital financial services can be utilised for economic development.

The postal department have sanctioned for 650 payment banks across the nation which will be tagged to the 1, 54,882 Post Offices. The onus of a proper functioning of this banking system lies in the hands of the postmen. Each day the postmen bound by a deep sense of duty connects Indians across the length and breadth of the country. This circle of trust will soon expand with significant rural presence, IPPB undoubtedly realise the goal of becoming the dominant nationwide banking service provider. The glimpse of possibility is firstly, removing barriers to inclusion- rural citizens hesitate for any communication with the bank due to inaccessibility in terms of proximity or the extra effort needed for any transaction with the bank. IPPB ensures inclusion of all citizens as the postmen or daak sevakars deliver banking services directly to the households. This would benefit the disabled, elderly citizens and women who may not be in a situation to visit the bank or an ATM kiosk for financial transactions. The services are made efficient by equipping the sevakars with mobile ATMS who serve as doorstep teller for financial transactions to and from the IPPB account and biometric devices to ensure secure transactions through the Adhaar number. The customers can avail 1. doorstep account opening through Adhaar enabled KYC for quick onboarding, 2. withdrawal of money from IPPB account by requesting through an SMS and the

acknowledgement is also done over the mobile phone, 3. Payment of bills and fees without having to visit the branch. Secondly, IPPB partners in the growth of the rural economy in terms of postman handling daily fund deposits instantly 1. facilitating loan and insurance products through external partners 2. The needs are supported using an effective technology 3. Increasing the accessibility of government benefits 4. The customer is provided by ATM cards as well as Adhaar enabled payment services for financial transactions.

4.3. Analysis and Findings

IPPB initiative caters banking services primarily to the rural population of India. Although there has been an increase in bank accounts of the rural population over the years, for many of those who have opened accounts, have trouble accessing their banks. The remoteness of the banking system and the secrecy of transactions maintained by the bank resists rural population to involve in a formal financial system. The IPPB case from an ANT perspective helps in understanding the different processes involved in creating an actor-network with predefined goals. It also aids in understanding whether the entire system will continue to survive in the social setting or will lead to failure of project as the actor-network fails.

In applying ANT to the study of IPPB case, follows that there is complete onus on the postman which is a situation of keeping all the eggs in a single basket. If a postman is not able to deliver what is expected, the project approaches failure. Explaining the four stages of the ANT with the IPPB case, (i) problematization: the primary actor is the Indian Postal department, who is looking out for a makeover of its traditional duties (mail-related services such as acceptance of letters and parcels; provision of post office boxes; and sale of postage stamps, packaging, and stationery). Post offices play a role to integrate threads of India's financial inclusion dynamics with their homespun technology. Post offices function as banking units to provide financial support mainly for the rural farmers and poor entrepreneur innovations. Insurance companies, Mutual fund organisations, Government funds, e-commerce businesses are other actors who can leverage this network for their benefit. (ii) Interesement: Insurance companies can promote policies and accept payment using the postal network through the postman. Mutual fund organisations can educate rural population on proper investment modes for their hard earned cash there by maintain the liquidity of cash and hence ensure economic growth of the nation. The funds from the government can also be delivered at the door step favouring old aged, specially challenged and women who otherwise might have to rely on other parties. E-commerce business units can target rural segment and utilise the cash on delivery mode through postmen and enhance their businesses. (iii) Enrolment: Post Office being a 163 year old enterprise, seems to have earned credibility and trust of the rural population of the nation. This trust have closely knit the customers to this network. Moreover with the number of savings plans including recurring deposit account, Sukanya Samriddhi Account (SSA), National Savings Certificates (NSC), Kisan Vikas Patra (KVP), the public provident fund, savings-bank accounts, monthly-income plans, senior-citizens' savings plans and time-deposit accounts benefit the rural people accordingly. In the information era, where people use phones and computers for communication and information seeking, people no longer rely on writing mails or letters. It is high time to get new cover for the old package, Post offices began looking for other service opportunities which can utilize their wide network. Literature indicates the inability of banking industry to serve financial solutions to the rural people of the nation. Post office leveraged this opportunity and began providing banking solutions thereby ensure financial inclusion of the rural population of India. "As on 31st March 2015, Post Office savings bank had a customer base of 330.3

million (rural and urban). It's vast network has been used to disburse payments under National Rural Employment Guarantee Act (MGNREGA)” (Punj,2017). Apart from these major actors, the third party service providers such as e-commerce agencies, insurance companies etc. get enrolled to accrue benefits of this wide network. (iv) Mobilization: Each of the actors are bound by service agreements and all the stake holders assure to act to achieve the common goal of providing financial stability for all the rural population. In the inscription stage, technology has woven the services of the post office, third party service providers and the end customers into a single network, technology has helped the post man serve the end customers at their door step. A mobile point of service hand held device swipes the postal credit card or utilise the adhaar card number for financial communications. Moreover the high rate of mobile penetration among the rural population aids smooth financial transactions as explained in the case.

The findings of the study can be summarised as follows: 1. India Posts utilises the existing social structure and leverages the trust factor villagers have on the postman thereby villagers will not resist the introduction of IPPB. 2. The large physical network already in place help to connect the remote parts of the nation. There by making the project scalable from 650 IPPB centres to a larger number. 3. Training of postmen and grameen daak sevakars place a crucial role as their job description takes a complete new face. Both GOI and Ministry of Communications should have a well devised training program as the major actor is the postman. 4. Easy to use and access technology for the postman and the customers. A local language version of the interface can reduce the hesitation of participating in IPPB. 5. The IPPB should largely ensure that all the customers’ financial needs are met without much effort from customer. 6. The already existing Aadhaar details are used to promote digital transactions and further replace the debit and credit cards with Aadhar. 7. It is impossible to physically build such huge network across the nation connecting remote places again by any institution. Thereby many Indian, International and other financial consortiums are interested to partner in this project. 8. Third party services such as insurance, mutual funds can assure the secure future of its customers. 9. High onus lies on one actor (postman or grameen daak sevakars), failure of getting customers to trust him/ her will fail the project completely. 10. Economic and social development is implicit in the project. With paperless transactions and reduction in transportation the environment is also conserved, resulting in overall sustainable development.

The above findings illustrate the role of IPPB as a sustainable solution for financial inclusion. IPPB at a glimpse can be indicated as ensuring financial literacy, providing financial inclusion, payments and remittances and ease of accessibility.

5. Conclusion

The study can benefit three groups- policy makers, institutions and researchers. The study analyses the development project at its initiation phase. Most development project research is done evaluating the efficiency or effectiveness of the project. This study highlights the pros and cons of the project thereby assisting the policy makers to take necessary actions before complete roll out of the project. The study view the project from the supplier perspective of banking services. Thereby aids institutions to understand the points of focus for smooth implementation of the development project. The study illustrates the use of ANT in ICT for development context with the help of an interpretive case study. IPPB has a power to empower the rural folk of India, provided the scalability and sustainability of the project is carefully addressed by policy makers and institutions.

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