DIGITAL FINANCIAL INCLUSION IN INDIA – A REFERENCE TO THE DEMAND SIDE

*Angana Deb**

Abstract: Reserve Bank of India has been working towards the goal of financial inclusion for almost two decades. Several policy initiatives have been implemented to provide formal financial services to the unbanked people of India both by the Government of India and Reserve Bank of India. However, most of these measures primarily focus on the supply side of the problem. For that reason, even if some successes have been witnessed, there remains a huge mass of Indian adults still excluded from formal financial system. Recently, the direction has been shifted to "digital financial inclusion" as it has been realized that remarkable advancement in technology and internet penetration can be leveraged upon to achieve the goal of financial inclusion in India. In this paper, the notion of "digital financial inclusion", its scope and challenges have been analysed. The policy measures taken in India towards the objective of digital financial inclusion have also been briefly discussed. The agenda of digital financial inclusion has been discussed with a special reference of the the demand side. Hence, it is suggested that, in the coming years, to accelerate financial inclusion in India through digital mode, policy makers should emphasize on the demand side factors like spreading digital financial literacy and enhancement of customer protection from cyber threats during online financial transactions.

Keywords: Digital Financial Inclusion, Digital Financial Literacy, Digital Banking in India.

Introduction

According to Global Findex 2017, globally about 1.7 billion adult people still remain unbanked, i.e., they do not have an account with a formal financial institution or e-money provider. Nearly all of them are from the developing countries (since universal financial inclusion has been achieved in almost all the developing countries) and 56 percent of them are women. Also, half of the unbanked people come from the poorest 40 percent of households of their respective economies as revealed by the Global Findex Report 2017. Also stated that, among the unbanked adults of the developing world, two-thirds have a primary education or less. It is quite fascinating fact to know that globally about 1.1 billion adult unbanked people or almost two-thirds of them have a mobile phone. In India, this ratio is more than 50 percent. However, there is a

* *Assistant Professor, Naba Barrackpur Prafulla Chandra Mahavidyalaya, Email: angana.deb@gmail.com*

gender gap in that as well. Unbanked women are less likely to have a mobile phone than their male counterpart. Globally 72 percent of unbanked adult male population have mobile phones, while this ratio is 62 percent for global unbanked women.

The agenda of financial inclusion and its role in fostering inclusive economic growth came into the focus of global policy-makers decades ago. There is abundant literature depicting importance of financial inclusion in fostering economic growth [Mohan (2006), Hassan et al (2011), Babajide et al (2015), Sulong et al (2018)]. However, the notion of "digital financial inclusion" is comparatively recent phenomenon. "Digital Financial inclusion" is defined as digital access to formal financial services and products by excluded and underserved populations. As mobile phones and cellular networks have become ubiquitous, digital financial services as a means to achieve universal financial inclusion has become a realistic proposition. Having a mobile phone and an active internet connection can potentially open an access to digital money accounts and other digital financial services. Mobile payment can even lower the cost of providing financial services by a large extent than physical bank branches, enabling the digital financial service providersto serve the lower-income group of the economy at an affordable cost. Digital Finance, through Mobile Service Operators, therefore opens a potential solution to bring the unbanked people into the formal financial sector without the need for major investment for additional infrastructure. Instead of the traditional brick and mortar banking models or physical bank branches, financial inclusion can be promoted through the use of digital financial services enabled by fintech companies, mobile network providers, internet connectivity and spread of digital and financial literacy among the people from the underprivileged section of the population. Banks, telecom companies or other non-bank institutions can use mobile phone application or other existing digital technologies to offer basic financial services and more tailored, customer-specific financial products to the customers at an affordable cost. Digital finance has also the potential to address the liquidity issues of small businesses. Small businesses are the backbone of a vibrant and dynamic economy. A very important component of financial inclusion policies has always been to identify the small and micro businesses, to wean them from malice of informal sources of finance.

Global Findex 2017, acknowledged the fact that all over the world, digital payments are on a rise. Use of digital payments by adults increased globally by 11 percent between 2014 to 2017. In emerging economies, use of digital monetary transactions rose by 12 percent during the same interval. Traditionally, financial services are provided by banks through their branches which are generally concentrated in cities and urban areas as the traditional brick and mortar banking are uneconomical for

rural and remote areas. As a result, the low-income and underprivileged people living in remote and rural areas are unserved by the banking system and are deprived of the basic financial services.Technological intervention through digital transaction platform, Mobile network operators and Fintech etc. has therefore more potential to address the problem of financial exclusion.By offering digital financial services through mobile money and branchless banking services, financial inclusion can be promoted without physical access to a traditional bank branch.

Literature Review

Sustainable Development, along with a new set of development goals were endorsed and adopted as 2030 Agenda by the 193 member nations of the United Nations General Assembly in 25 September, 2015. It recognized that "eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development". Even though financial inclusion or greater access to financial services was not explicitly mentioned in the Action Plan of UN as a means to achieve the ambitious goal of ending all forms of poverty from the world, the role of financial inclusion as a means of achieving sustainable development goals was elaborately discussed by Klapper et. al (2016) in their working paper. This paper argued that access to formal financial services is undoubtedly helpful in eradication of poverty as it empowers people to save more. Savings through a formal financial system also enhance ignore their capacity to absorb financial shocks and to accumulate wealth. With increased wealth and more savings, they can make better investment in education and health and thus expand human capital of the economy leading to more productivity, more consumption and accelerated economic growth. The study also claimed that farmers who have savings account with a formal financial institution are able to make bigger investments in the agricultural sector which enhances their income security and ensures food security for the growing population of the country. Exposure to formal financial services by women promotes gender equality as well, as it can give greater control to the women over their finances. Access to formal credit delivery system enables small businesses greater investment and increases their return to investment. "By providing a foundation for equitable growth and improving the lives of the poor, financial inclusion helps to reduce inequality and the likelihood of social turmoil". The working paper then emphasized the role of digital financial services to bring billions of poor people living in the emerging economies into the canopy of formal financial system. It was recommended that government wages, pensions, and other transfer payments are made through digital mode. It would not only reduce leakages and corruption but also would ensure that the fund is reaching their intended recipients. Digital financial services have the ability to ease the access to insurance, credit and other formal financial products. It was further

recommended that the policy makers of the emerging economies should take immediate action plan for strengthening digital infrastructure of the country and adopting a well-envisaged action plan for "digital financial inclusion". Gibson (2015) in his paper also argued that digital financial services have the potential to enhance the living standard of the disadvantaged people by giving them means to "create and sustain livelihoods, smooth consumption patterns and accumulate assets".

Lauer et al (2015) described that digital Financial service providers may be divided into four broad groups i) a full service banks offering its basic banking services and products through digital mode without the requirement of coming to the bank branches to avail them, ii) a limited-service or "differentiated banking model" offering some specified financial services via a mobile device or payment card and "point of sale"(POS) terminal, iii) a mobile network operator (MNO) issuing e-money, and iv) a non-bank agent other that a MNO issuing e-money. These four models operate through three components – a digital transactional platform, an agent network and the customer's access device. In the same paper, the authors have described some risks of digital financial inclusion on account of introduction of new market participants, management and storage of account data, holding of customer fund and use of agents as the principal customer interface.

However, even if most of the studies on financial inclusion focused in the supply side factors, there are few studies that emphasized on the demand side. Studies by Chattopadhyay (2011), Kundu (2015), and Kempson, et al. (2004) indicated that demand side factors influence the success of financial inclusion drive as much or more than the supply side factors. Ramakrishna et al (2018) conducted a survey in Thane District of Maharashtra to understand the views of the respondents on financial inclusion as a demand side approach. The study concluded that increasing educational level means more financial inclusion and suggested creation of a literate population in order to create financially included population. Prasad et. al. (2018) also conducted a similar survey on 300 households of Udaipur (Rajasthan) and came to the same conclusion that education level of people is a prominent factor that positively influences the awareness about digital financial transactions. Mukhopadhyay (2016) conducted a study across 22 states of India and concluded that merely giving access to the financial products and services may not yield satisfactory outcome. The need of the time is that the policymakers focus on the demand side of the problem to increase actual usage of these services. They also argued that one of the factors that cause low demand for financial services is low level of education among the people.

Methodology

This study is descriptive and analytical in nature and is completely based on secondary data collected and used from the Reserve Bank of India (RBI), the World

Bank, the Consultive Group to Assist the Poor (CGAP), the United Nations and research articles from reputed journals, websites and newspapers.

Digital Financial Inclusion in India

Reserve Bank of India set up a committee for recommendation on computerization of banks in as early as 1988. The era of digitalization in the Indian banking sector was initiated with the adoption of computerized banking services and policies of economic globalization by the Government of India in the early 1990s. Entry of private and foreign players in the Indian banking sector in the following years of the New Economic Policy dramatically changed the entire scenario of Indian banking. The new entrants brought advanced technology and modern customer-centric financial services and products with them. Indian banks had no other way but to adapt themselves with the changes for their survival in the competitive financial market. In order to remain competitive in the globalized Indian financial sector, they strived to offer digitalized banking services through adoption of new technology that in effect reduced their operational cost. In the following years, several modern and innovative financial instruments like debit cards, credit cards, ATMs, internet banking etc. were introduced in both the private and public sector banking. Eventually more digitalization and further intervention of advanced technology in banking business were implemented and changed the mode of banking dramatically. Banks started adopting technologies like Core Banking Platform, Core Banking Solutions, Fintech solutions, e-money, wallet services etc in the following years. The launch of United Payment Interface (UPI) in 2016 and Bharat Interface for Money (BHIM) in 2016 by National Payments Corporation of India (NPCI) were two more significant initiatives towards digital banking.

The notion of "financial inclusion" first came into picture only in the 2000s. In the Annual Policy Statement in 2005, this phrase was mentioned and in the same year, the report of the Internal Group to Examine Issues relating to Rural Credit and Microfinance (Khan Committee) recommended introduction of "no-frills" accounts with zero or low balance by the commercial banks. Rangarajan Committee was then appointed in 2008 to examine the status of financial inclusion in the country. This committee reported that a large number of unprivileged people still remained excluded from the formal banking sector. In 2009, Rajan Committee emphasized the need for a broad-based and inclusive financial sector that would offer payment services, savings account, insurance services and credit services to the unprivileged section of the population residing in rural and remote areas of the country. This committee further recommended a paradigm shift from large public sector lead banking sector burdened with the responsibility of financial inclusion towards collaboration with private sector players and well-governed small finance banks. The More Committee (2014) introduced the concept of Payments Banks as a part of the

vertically differentiated banking models, Payment Banks are specialized banks those, unlike traditional full-service banks offering payment, deposit and credit services, only accept deposits and offer payment services and not credit.

Even if the concept of digitalized banking services and financial inclusion were two distinct significant propositions of banking literature and policy making, the idea of "digital financial inclusion" started to pop up in the Indian banking policy discourse only in the early 2010s with the remarkable technological advancement taking place in the field of internet connectivity, cellular network operations and mobile phone technology. In India, share of adults having an account has risen more than double during the time period 2011 to 2017 and it is now 80 percent of the Indian adults. Between 2014 to 2017, account ownership among women also increased by more than 30 percentage points among women as well as among the 40 percent of the poorest households. However, despite these successes, because of the sheer size of the population of the country India contains a major share of the total unbanked global population. As in June 2017, 190 million adult Indians did not have any bank account. (Global Findex 2017). Here we mention some of the significant policy initiatives taken by the Reserve Bank of India and the Government of India to accelerate digital financial inclusion in India.

J-A-M Trinity: The concept of "Digital India", launched in 2014 was based on the idea that in a vast country like India, the delivery mechanism of basic government services and government payments cannot be performed only through the traditional public service mechanism. However, rapidly growing digital infrastructure and technology has the potential to meet the gap. With this aim, Direct Benefit Transfer (DBT) system was introduced in 2014. Eventually, 488 schemes and services from 63 ministries had been brought under the DBT. With this initiative, digital financial inclusion drive got a new impetus. JAM trinity or the cumulative of Jan Dhan Accounts, Aadhar Card and mobile banking, is perhaps, the most effective policy initiative towards the goal of digital financial inclusion in India. Pradhan Mantri Jan Dhan Yojana (PMJDY) was launched in 2015 with the objective of providing no-frills account to every adult Indian across the country, especially to the neglected and excluded section of the population. PMJDY accounts have become the default channel for Direct Benefit Transfer system (DBT) or delivery of government transfer payment to the actual beneficiaries. Individual identification needed to open a bank account has been contributed by secure and verifiable biometric system called Aadhar Card. Growing internet connectivity, efficient cellular network, smartphone penetration and advancement of Fintech companies have enabled Indian Government to open PMJDY accounts rapidly. With these accounts and ubiquity of mobile banking, JAM trinity has successfully given a boost to the digital financial inclusion drive in India. Within a span of four years, the total

number of accounts opened under the PMJDY expanded to 328 million, with ≠ 851 billion deposits as on September 28, 2018. Of these accounts, 59.1 per cent were opened at branches located in rural and semi-urban centres.

Payments Banks: RBI has launched the differentiated banking models and introduced licence to non-bank entities to enter the market of digital finance through a new banking model called the Payments Banks (PBs). For decades, the goal of financial inclusion has been always led by traditional banking institutions. Non-banking institutions, though offered e-money, it was never targeted the unbanked or excluded population of the country. RBI introduced specialised licence for limited-purpose banks specialised in small savings and payment services. These are called payments banks. They offer deposit and payment services through digital banking mode but cannot provide credit. As pointed out by the RBI, "the primary objective of establishing PBs is to harness technology so as to increase financial inclusion by opening small savings accounts and providing payments/ remittance services to migrant labourers, small businesses, low-income households and other entities in the unorganised sector, by using the digital medium.". These special types of banks are generally operated by fintech companies or mobile network operators as a large, well established and efficient network system is the basic requirement of this banking system. Functionality of payments banks are equivalent to that of pre-paid instrument (PPI). These banks are allowed to receive cash payments from its customers and store them in a digital wallet and customers can then make digital financial transactions from those wallets. At the end of 2019 March, there were seven payments banks operational in India. At the end of March 2017, total deposits of payments Banks were Rs. 685 million which increased to Rs. 4382 at the end of March 2018. Even if the payments Banks are showing signs of success, it is too early to comment on the efficiency of this new banking model in the drive of digital financial inclusion in India.

RuPay: Customers were issued a new Debit Card called the Rupay card in 2012 as a domestic alternative to Visa and Master Card as an open loop, interoperable, all-purpose payment system. These cards allowed account holders to withdraw money from ATMs and POS payments.

Centre for Digital Financial Inclusion (CDFI): CDFI was established in September 2014 with the objective of using technology in empowering the poor & excluded with tools/information and developing mechanisms to sustain and scale such solutions. Since its inception, CDFI has been engaged in extensive research, digital experiments and interactions, collaborations with various stakeholders in this space with an aim of developing digital solutions to support large benefit transfer programmes of the government and to enable the unprivileged people to use this fund through digital mode.

Pre-paid Instruments (PPIs): RBI as per the guidelines provided under the Payment and Settlement Act, 2005 defined Prepaid Payment Instruments (PPIs) as instruments of payment that facilitate buying of goods and services, including the transfer of funds, financial service and remittances, against the value stored within or on the instrument. PPIs have shown remarkable growth during the last decade. Transactions through PPIs, which aggregated to as low as Rs. 81 billion in 2013-14, increased manifold in subsequent years to reach Rs. 1,416 billion in 2017-18.

Unified Payment Interface (UPI): This instant real time payment system was developed by National Payments Corporation of India (NPCI) and was launched by RBI in 2016-17. UPI powers multiple bank accounts into a single mobile application of any participating bank. From its inception, the UPI has shown remarkable growth in the last couple of years in terms of number of and volume of transactions for processing instant payments. UPI system is being considered as one of the biggest potential drives to boost digital financial inclusion in India in the coming years. During 2017-18, 915 million transactions worth Rs. 1,098 billion occurred through UPI, rising to 1,579 million transactions worth Rs. 2,670 billion in 2018-19

Payment System Indicators 2015-2019

	Volume (million)				Value (÷ billion)			
Item	2015-16	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19
Total Paper Clearing	1,096.40	1,206.70	1,170.60	1,123.80	81,861	80,958	81,893	82,461
NEFT	1,252.90	1,622.10	1,946.40	2,318.90	83,273	1,20,040	1,72,229	2,27,936
IMPS	220.8	506.7	1,009.80	1,752.90	1,622	4,116	8,925	15,903
UPI	–	17.9	915.2	5,353.40	–	69	1,098	8,770
Credit Card Payment	785.7	1,087.10	1,405.20	1,762.60	2,407	3,284	4,590	6,033
Debit Card Payment	1,173.60	2,399.30	3,343.40	4,414.30	1,589	3,299	4,601	5,935
PPIs Payment	748	1,963.70	3,459.00	4,604.30	488	838	1,416	2,129

Source: Trend and Progress of banks in India, RBI Publication

Challenges and Future Goals

All these efforts to achieve digital financial inclusion primarily focus on the supply side. Numerous initiatives have been taken to expand potential reach and access of financial services, offering of convenient and secure digital transactions and provision of financial instruments tailored keeping in mind the individual needs of the people. Measures have also been taken to develop an efficient and resilient digital financial sector. Nonetheless, it has to be admitted that all these measures and initiatives have not given the expected outcome. Still now, a huge number of Indian adults are unbanked. Even for the people having an account under the PMJDY scheme, usage of these accounts is restricted mostly to benefit withdrawals. Till February, 2018, an estimated 31.20 crore Jan Dhan accounts with an aggregate deposit balance of over Rs 75,000 crore were opened till February, out of which 25.18 crore (or 81 per cent) were operative. This means that over 6 crore accounts or 19.29 per cent — opened under the Pradhan Mantri Jan-Dhan Yojana (PMJDY) are lying dormant (Business Standard, 2018). The ultimate objective of financial inclusion is not only having a bank account for every Indian adult, but also to enable them to have access to the formal credit delivery system, secure payment system and institutionalized financial instruments. In India, the problems of digital financial inclusion in recent times primarily arise from demand-side bottleneck.

Demand-side Factors

To address the problem of financial exclusion or the problem of the vast number of people in the developing world not having an account in the formal financial system, both demand side and supply sides have to be considered. Global Findex 2017 revealed that on the demand side, there are some basic problems. Primarily the low-income households think that they do not need an account as they have very low amount of money income or no income at all. Moreover, they are not very keen to have a bank account due to lack of financial literacy and awareness. Furthermore, they are unable to reach a formal financial service provider due to distance, lack of proper documentation, distrust on the financial system or due to religious concerns. Initiatives should be taken to take care of both the demand side and supply side of the problem. Undeniably, in India, a large number of the supply side hurdles have been addressed in the last few years through digital financial inclusion initiatives. But there remain the demand side factors those are even harder to remove and for the policy-makers, those pose greater challenge.

As mentioned earlier, from the demand side, problem arises due to low income, general illiteracy, lack of digital and financial awareness and inadequate information regarding financial products and services. Financial education enables people to access appropriate financial products and services through regulated institutions. The problems of low income or general illiteracy among people are not

in the purview of financial policy-makers. Those barriers can only be overcome through overall economic growth and general development in the education system. To accelerate financial inclusion from the demand side, the financial policy makers primarily focus on financial literacy. Financial literacy simply refers to knowledge and information that enable common people to easily understand and analyse various financial products and services, manage their personal finances and take effective decisions for their financial well-being through proper financial understanding and communication. Nevertheless, as we have moved from the notion of financial inclusion to digital financial inclusion, the need of the time now is not only to focus on financial literacy but on "digital financial literacy". Digital financial literacy suggests the basic understanding of digital financial products and services provided through internet banking or mobile phones and their functions and scopes. Hence, it refers to basic information and knowledge regarding electronic payment system like e-money or e-wallets, internet banking, online purchasing etc. However, in a digital financial world, safety and security of the digital finance is the most crucial part. Hence, the goal of digital financial literacy is not only to enable people to access digital finance but also to make them aware of the digital financial risks, existence of online frauds and cyber security risks and to empower them with the basic skill to minimize those risks. In recent years, policy makers have addressed these issues and several measures have been taken to spread digital financial literacy among people especially in rural areas.

Digital and financial literacy among the people of lower income class is very crucial factor towards digital financial inclusion. The ability to comprehend the implications of digital financial products and the awareness regarding the risks and customer protection has to improve on a larger scale. The RBI is promoting financial literacy centres in rural branches of various scheduled commercial banks. Financial literacy camps are being organized to spread awareness and enhance the digital skills of rural and underprivileged people having bank accounts. Since 2017, the Reserve Bank of India is observing Financial Literacy Week every year. The Financial Literacy Week in 2017 emphasized on basic digital banking and payments services like Unified Payment Interface (UPI), USSD, online borrowing from banks, online grievance redressal etc. In 2018 the main focus was on spreading awareness regarding the customer's liability for unauthorized electronic banking transaction and about safe digital banking. Initiatives have also been taken to simplify the operational procedures of complex digital financial instruments. Government of India has taken measures to make it mandatory that every government receipts, bills and fees for fertilizer depots, block offices, schools, colleges and universities, hospitals etc. are made through digital payment mode so that corruption and leakages in government transactions are minimized

and cashless payment mode is introduced to rural unbanked people.

Another aspect of the demand side policies is to strengthen customer protection in order to strengthen financial stability since there has been ample studies to suggest the fact that financial stability and financial inclusion go hand by hand [Hannig et al (2010), Morgan et al (2014), Gracia et al (2016)]. Customer protection and making the customers aware of their rights and privileges is even more important in an "an environment in which technology-leveraged banking has rapidly reached out to many first-time customers in rural and semi-urban areas" [Trend and Progress of Banking in India 2017-18]. The Reserve Bank of India adopted the Banking Ombudsman Scheme in 2006 and several Banking Ombudsman offices have been established. During 2017-18, the number of complaints received by the BO offices increasedby 25 per cent against 27 per cent in the previous year. 97 per cent of these complaints were disposed off in the current year as compared to 92 per cent in the previous year, reflecting improved efficiency of these offices. To address the problem of increasing cyber risks the RBI has planned to an Integrated Compliance and Tracking System portal to handle various supervisory functions including oversight of cyber security arrangements.

Conclusion

India has come a long way towards the goal of financial inclusion. The agenda of Reserve Bank of India has been reformed with time. In the earlier years, the agenda was to wean away the huge number Indian unbanked people from the informal sources of funds and associated malicious effects and to provide them with a savings account in a formal financial institution. With time, the agenda has broadened to provide them with diverse types of financial products and services including transactions, payments and insurance to meet their specific financial needs. With immense advancement in technology, massive progress in digital infrastructure and internet penetration and several innovative initiatives from the government and RBI, it has been possible to bring in a large number of previously unbanked people under the formal financial system. Nevertheless, there still remains a large chunk of the population outside the umbrella of institutionalized finance. Hence, now is the time for the policy makers to redefine the agenda again and to emphasize on the demand side measures as well. In the coming years, digital financial literacy and customer protection from cyber threats are going to play the key role. Whereas technology provides new opportunities and scopes for the growth of the banking sector, it also poses new challenges and intimidations. Cyber risks are threatening all over the economy with particular consequences in the banking sector. With increasing role of technology in financial services and the interconnection between telecom service providers and financial markets, cyber attacks are becoming multiplied both in terms of number of incidents and sophistication. Hence, it is of utmost importance that an integrated approach is taken towards ensuring a

secure digital payment system and protection of the participants. It is also equally important to take measures to spread cyber security awareness and continuous monitoring.

Conflict of Interests

The authors declare that there are no conflict of interests that are directly or indirectly related to this research work.

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