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# ROLE OF FINTECH AND AI IN THE ADVANCEMENT OF INDIAN RURAL AND URBAN FINANCIAL SYSTEMS

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***Abstract*— Fintech is an abbreviation for "Financial Technology". It imparts alternate solutions for Banking and non-Banking financial services. Fintech is rapid growing concept in the financial sector. The economic growth and welfare of any nation depends upon the peoples' reachability towards their financial product and services offered by them. The study of this paper explains the evolution of the fintech industries and current use of financial technology in the Indian Rural Financial Systems and Services. The term fintech provides digital transaction more secure and easily understandable for the user. Fintech Services reduce the operational cost and it is very user friendly. Fintech services in Indian scenario are the fastest growing in the world and are working as a game changer for the habits and behavior of the Indian financial systems.**

***Keywords*— AI, Open Banking Systems, Block Chain, Financial Systems & Services, Crypto Currency.**

## I. INTRODUCTION

FinTech, was introduced by a New York banker in 1972. While there is no widely accepted definition of what falls under the term FinTech, as it provides various digital payment platforms like, mobile applications, forex, financing, and remittances, investments, distributed ledger technologies, mobile wallets, digital currencies, artificial intelligence and robotics in finance, crowd funding, insurance, and wealth management, with an expanded definition considered to include ancillary technology solutions targeted at financial services. Technology interference assists banks reduction of cost, to enhance customer reachability and betterment of Business Risk Management. This would directly or indirectly reflect the effectiveness of the financial organizations' efforts to bring-in underprivileged people to the mainstream financial system, especially in rural or grassroot areas to support in achieving Government's aim of financial growth in urban and rural areas.

The planning commission, Govt. of India is also looking forward to achieve a 'Sustainable, Faster, and More Inclusive Growth' in its approach to the twelfth 5 years plan (2012-2017). The policies formulated by planning commission clearly encourage nationwide access to financial product and services at an easily affordable cost, especially to the backward and underdeveloped group. The primary objective of financial inclusion is to impart financial services to unserved people of the nation in a honest, transparent and equitable manner to unlock its growth potential. Financial inclusion should not only be seen as a beneficent activity or a regulatory compulsion but also as an unexplored opportunity for a business involving a large section of the population. Financial inclusion not only aims for welfare of the people but also has a significant commercial prudence. Few financial institutions like microfinance, banks, organizations etc. are providing their services in rural areas for focusing on including them in organized financial system. We need to provide financial services at the affordable cost to the unserved and underprivileged people of the nation along with motivating and educating them towards these services. We should develop the platform for catering rural people which is economical, have wide reachability and ease of access. Modern information and communication technology can act as a tool to develop a platform which helps us to extend the financial services in remote rural and grass root areas. ICT allows us to collect, transfer and transform the data and information and collaborate with other entities in an advanced, productive, innovative and accessible manner. ICT will act as an extremely viable option through which we can provide services to the segment which is financially excluded in the nation. ICT not only acts as a competitive medium but also helps to bring down the cost of transaction for the customer. It will strengthen our back-end operation and also makes front end operation user friendly. The Reserve Bank of India and other commercial banks have taken several initiatives since last several years to improve financial inclusion in rural areas with the help of ICT. However still there is a great scope for the banks to improve their operation by using modern ICT and extend their services to the segments which are financially excluded. It would be very interesting to find out the contribution of ICT towards the financial inclusion in the nation and identifying and studying different applications of ICT that banks are adopting. This would directly or indirectly reflect the effectiveness of the financial inclusive programs till date and also the efficiency of the financial institutions to bring-in potential customers to the mainstream financial system, especially in rural area.

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**Fintech:** It is used to elaborate new technology that is used for the improvement and automatization of the delivery and implementation of financial services. It is also used for helping companies, business owners, and consumers for the betterment of managing their financial operations, processes, and lives by utilizing specialized software and algorithms those are used in computers and most widely in smartphones.
Artificial Intelligence: The simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision. It is most widely used branch of computer science and applications that focuses on the development of machine intelligence, for working like human being.

**Blockchain:** Blockchain is a system of recording data and information in a way that makes it difficult or impossible to hack, change and cheat the standard system. It is a decentralized, distributed, and oftentimes public, digital ledger consisting of records know as blocks that are used for recording transactions across multiple computers so that any involved block cannot be changed retroactively, without the alteration of all subsequent blocks.

## II. LITERATURE REVIEW:

Technology plays an important role in the fulfillment of objective of sustainable development via financial inclusion and this can be very well understood by a keynote addressed by Dr. K. C. Chakrabarty, Deputy Governor, RBI "We have encouraged banks to leverage technology to attain greater reach and penetration while keeping the cost of providing financial services to the minimum. While we remain technology neutral, we require banks to seamlessly integrate whatever technology they choose, with their CBS architecture".
Financial inclusion acts as a win-win approach for both the banks and unserved population. Uncovered people, mostly rural area people get benefits by financial services, and on the other hand, banks will get new avenues of business. Rural income tremendously increases in very short span of time due to large expenditure by Government in rural development and employment program like "MANREGA". As a result, consumption in rural area is also growing at faster rate than urban area. Banks can offer their lending facility across the fields like business, education, home loans etc., which will gradually increase the level of rural income. One of the major reasons of financial exclusion is financial illiteracy. There is a lack of awareness about the financial services among the people and they are also struggling to find a platform for consulting. Financial literacy hence would be very crucial for increasing the penetration of financial products and services. In India, presently financial inclusion is confined to make sure the ease and access of saving accounts but internationally it has a very wide scope. It depends upon the involvement level of customer with financial products and services. There is also a need to motivate the new financially included customer towards the use of various financial products and services, which is very clear by C.J. Punnathara in his analysis based on latest progress and trends in banking sector.

## III. VIEW POINT OF FINANCIAL INCLUSION IN INDIAN SYSTEMS:

Financial inclusion is not only about extending financial services to excluded people, but also it involves providing huge range of financial services, including credit facilities, insurance, & remittance products. The government led approaches meet financial inclusion, initially deals with the expanding branches, opening special institution like Cooperative Banks, Rural regional banks and setting up the compulsory credit target. Its success has been mixed, and has been showing decreasing returns.
India's under-privileged people mainly working as agricultural and non-agriculture wage laborer and micro-entrepreneurs are widely excluded from the formal financial system. Accessibility of credit from the financial institution is also one of the major reasons to be undertaken. Various government and banks initiatives towards financial inclusion does not have significant impact on the financial excluded people, since large number of people are still depending on the traditional way for their credit needs. There is a need of new approach in this area which leads us to a set of financial sector reforms that explicitly prioritize inclusion.

## IV. VIEW POINT OF TECHNOLOGY IN FINANCIAL INCLUSION:

There are two major hindrances in the way of financial inclusion, one is from the side of financial excluded section and the other is from financial service providers. The excluded section of the society suffers from scarcity of financial literary and fundamental education of finance and technology; as a result, leading to limited access to financial services. They find informal systems of credit to be more Convenient & user friendly in comparison to formal financial systems which they find very tough in their nature. IT will act as a bridge between last customers and service providers. ICT helps banks to reduce their front-end and back-end cost significantly. The ATMs play a vital role in cost reduction, and has revolutionized the banking delivery chains. Going beyond ATM, online banking transactions are having very negligible transactional cost as compare to physical cash transactions where handling cost is too high. The banks are trying to extend online banking services as a preferred mode of transactions for SMEs along with large co-operations. Banks are also using Rural Internet Kiosks in Indian Rural Areas to carry out such transactions. Mobile banking comes as a very handy tool due to lack of infrastructure cost for the banks, while there is no additional cost investment is required for the customers. Banks are using technology initiatives such as Geographical information system (GIS), Global positioning

System (GPS), GPRS (General Packet Radio Services). GPS and GPRS are mobile based technology, with the combination these two banks can monitor the location of their BCs and direct them accordingly. Banks have adopted Core banking solution (CBS), which links all the branches of the banks with each other. It motivates customers to operate from any branch regardless of their bank account in any other branch. It also works on the principle of "Anywhere, Any-Time" banking and hence helps to customer's convenience. National electronic fund transfer (NEFT) and Real time gross settlement (RTGS) are two centralize payment system provided by the banks. NEFT allows the customer to transfer fund electronically from any bank branch to customer having an account with any other bank branch in the nation. Whilst RTGS allows us to transfer the funds at real time.

## V. VIEW POINT OF ARTIFICIAL INTELLIGENCE IN FINANCIAL TECHNOLOGY INCLUSION:

- AI helps In prevention from any fraud.
- AI models also offers smart and customized financial products and services.
- AI aids the build-up of a credit history.
- AI can simplify the account opening process for unbanked adults.
- AI improves customer services and communication.

## VI. CONCLUSION:

The result of this study shows that Fintech industry can alter the financial services in India. Majority of people in the nation do not have access to the banking and financial services, as a result they remain excluded from economic development of the nation. The main reason for slowing down inclusion is the absence of appropriate delivery model and products which satisfy the financial need of low-income families. There exists a big difference between the growth expectations and the ground realities in context of 'mobilization and utilization of funds' that support inclusive growth of the nation. There is a need of effective tools or mechanism for bridging this gap, while bring in more and more people from every part whether rural or urban to take part in the mainstream financial activities and this would be possible through the usage of information and communication technology.

Mobile banking and ATM are two promising options for achieving financial inclusion. These technologies are adding new avenues in providing banking services to the unbanked population. Even though, till now we are unable to utilize these technologies up to their potential especially in rural areas. Various benefits of AI and Fintech were identified particularly its potential to improve the efficiency and risk management process of financial services providers. AI and big data have many benefits for financial inclusion as it facilitates the provision of smart financial products and services to banked adults, and simplify the bank account opening process for unbanked adults. Another major issue is the shortage of skilled AI workers. The major concern that AI will increase unemployment in the financial ecosystem.

The Indian Government is also focusing on and encourages fintech industry and promote new ideas and innovations refer to the fintech industry. Fintech is an emerging concept in the financial industry.

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