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Application of Artificial Intelligence in Financial Technology and its Inclusion in Indian Banking and Financial Systems

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ABSTRACT: Artificial intelligence empowers banks and financial institutions in a fully redefined structure in which how they function in products and services, and most prominently enhance customer experience interferences.To uphold a sharp spirited edge, banking and financial companies need to cuddle AI and weave it into their business strategy formation and operations. Present article examines the dynamics of AI ecosystems in the banking and financial industry and howbecoming a most important disrupter by looking at some of the herculean unsolved issues in this field of business. Also, the financial inclusion is the recent concept that helps to achieve the overall development of the nation, through all the available financial services to the unreached people through financial institutions.It primarily aims to include everybody in the society by imparting them fundamental fintech services without looking into account about the person's income or savings.This article helps in studying the present scenario of Financial Inclusion in India with fintech, and the various efforts and initiatives taken by the RBI, GOI and other banking institutions for its flourishment.

Key Words: Artificial Intelligence, Financial Inclusion, Financial Technology, Banking and Financial Industries.

I. INTRODUCTION:

The Government of India and the Central Bank have been focusing on financial inclusion and use of financial technology using Artificial Intelligence through increasing financial literacy among the under privileged and by strengthening credit delivery mechanisms to targeted sections. To this end, the increase in financial literacy has not only increased the number of bank accounts, but also significantly reduced the account dormancy.The Pradhan Mantri Jan-DhanYojana (PMJDY), a people's welfare scheme launched by Prime Minister Narendra Modi in 2014 has a decisive impact on India's stride in achieving financial inclusion over the last few years and has been extremely effective in bringing the socially excluded within the preview of the banking system. Due to this India boasts of a comprehensive and robust financial system that has supported the economic progress the country. The extent of financial exclusion casts serious aspersions on the inclusiveness of India's growth and impedes future progress.The lack of such facilities disenfranchises poor people, trapping them in indebtedness and perpetuating a cycle of poverty and stagnation.All around the world thousands of business houses have looked the AI as a process giant in the field of Banking and Financial services industry (Ayushman Baruah, 2019).the traditional Banking and Financial services industries are approaching Fin-tech companies with a view to providing innovative services to their customers (Ashish Anantharaman, 2019). As the say "Necessity is the mother of Invention" universal technology has progressed over the years and those are influencing the people and their mindsets.The word AI was profound by John Mc-Carthy in the year 1956 and it is going to rule the world in the forthcoming days.Increment in the data pattern business has paved the way for the rising demand for AI.India had the second highest number of financially excluded households in the world at about 135 million.

Though there has been considerable progress in the process of inclusion over the past few years, India remains a long way from attaining universal financial inclusion.It can be viewed as a process of enabling access to credit, improving banking services or as a process of developing social and economic infrastructure available to the public.Having access to mainstream financial systems empowers people to succeed, driving the economy forward and ensuring financial sustainability into the future.Financial inclusion is a fundamental keystone of socio-economic development.The term financial inclusion is defined as the process of ensuring timely access to financial services and adequate credit where needed by vulnerable groups such as the weaker sections and low-income groups at an affordable cost. financial inclusion penetrated significantly into India's traditionally marginalized communities, reducing the gaps between rural and urban, below and above poverty populations and between men and women.The FII surveys show a steady increase in the number of adults registered bank accounts post the launch of PMJDY in August 2014. An 18 percent increase in the percentage of population with a registered bank account for the period between 2013 and 2015 demonstrates the success of the program in backing an all-inclusive economic growth.Thus people have changed their state of mind from cable networks to online network and this has been changed the world gradually towards adopting the new age technology Artificial Intelligence (AI).The banking sector is now realizing the comfort of data processing with the help of cutting edge technology such as AI, Blockchain and so on.But despite this growth, vast swathes of population still languish without access to formal financial services – a report by BCG in 2007 suggested that with barely 34 percent of its population engaged in formal banking.

Since the AI is processing a large number of data patterns more effectively than human beings, it seems to be a beneficial technology for the business houses, and thus it understands the customers and increases the insight.Thus it has become a smart technology amongst business houses today since the business houses are associated with a large number of data.In short, financial inclusion is not only about money and savings but about directly eradicating the state of social exclusion existing in the economy.

II. LITERATURE REVIEW:

Some of the research work done in this direction has been discussed below:

Sr. No	Author	Year	Statement
1	Sadhan Kumar Chattopadhyay	2011	In a working paper for RBI on “Financial Inclusion in India: A case study of West Bengal”. The researcher made an attempt to examine the extent of financial inclusion in West Bengal. According to the study there has been an improvement in outreach activity in the Banking sector, but the achievement is not significant. An Index of Financial Inclusion (IFI) has been developed in the study using data on three dimensions of financial inclusion viz. -Banking Penetration (BP), availability of Banking Services (BS) and usage of the Banking System (BU). The study provides a comparable picture between different states on the basis of IFI rankings.
2	Sharma Dipasha	2018	This study critically assessed one of the financial inclusion policy “Pradhan Mantri Jan Dhan Yojana” introduced by the govt of India in 2014. It assessed that Andaman and Nicobar, Puducherry and Chandigarh came out to be the top three State indexes for Financial Inclusion under the policy. Status of infrastructure was found to be the most significant determining factor. Other factors were labour force participation, poverty and regional disparity.
3	Sahu	2013	In her study took per-capita income, literacy, population, branch density, no of SHGs and per capita net state domestic product (PNSDP) as the indicators of financial inclusion and found per capita net state

			domestic product as a lone indicator having very significant impact on the growth of financial inclusion.
4	Gupta and Singh	2013	Studied the impact of literacy rate on financial inclusion amongst the different states of India. The results showed literacy having insignificant impact on financial inclusion and the authors concluded that literacy rate does not affect the financial inclusion.
5	CRISIL	2016	Measured the extent of financial inclusion in India in the form of an index. It makes use of the non-monetary aggregates for calculating financial inclusion. The parameters used by the CRISIL Incused took into account the number of individuals having access to various financial services rather than focusing on the loan amount.
6	Sathiyan and Panda	2016	Examined the pattern, progress, and determinants of financial inclusion in India during the post-reform period for Indian states for the years 2001 and 2011. The results revealed positive association between the increase in the number of bank accounts availed by households with the factors such as the number of bank branches, population dependency per branch, and industry concentration in the state. The authors suggested that effective implementation of the financial literacy programs and leveraging existing bank branches will go a long way in achieving greater financial inclusion
7	Dr. Swamy V. and Dr. Vijayalakshmi	2010	“Role of financial inclusion for inclusive growth in India-issues and challenges” claimed that importance of financial inclusion arises from the problem of financial exclusion of nearly three billion people from the formal financial services across the world. India has 135 million financially excluded households, the second highest number after China. Through graduated credit, the attempt must be to lift the poor from one level to another, so that they come out of poverty. They identified twenty one steps for twenty first century financial inclusion. There is a need for co-ordinate action between the government and others to facilitate access to bank accounts among the financial excluded

Objectives:

- To suggest the future prospects of financial inclusion
- To study the present scenario of financial inclusion
- To study the major initiatives and policy measures taken by Reserve Bank of India and Government of India for financial inclusion
- To understand the financial inclusion and its importance

DIMENSIONS OF FINANCIAL INCLUSION

Sr. No.	Dimention	Explanation
1	Branch Penetration	Penetration of a bank branch is measured as number of bank branches per one lakh population. This refers to the penetration of commercial bank branches and ATMs for the provision of maximum formal financial services to the rural population
2	Credit Penetration	Credit Penetration takes the average of the three measures: number of loan accounts per one lakh population, number of small borrower loan accounts per one lakh population and number of agriculture advances per one lakh population
3	Deposit Penetration	Deposit penetration can be measured as the number of saving deposit accounts per one lakh population. With the help of this measure, the extent of the usage of formal credit system can be analyzed

Among the three dimensions of financial inclusion, the credit penetration is the key issue in the country as the all-Indian average ranks the lowest for credit penetration compared to the other two dimensions. Such low penetration of credit is the result of lack of access to credit among the rural households.

FINANCIAL INCLUSION SCHEMES IN INDIA:

Sr. No.	Schemes
1	Pradhan Mantri Jan Dhan Yojana (PMJDY)
2	Atal Pension Yojana (APY)
3	Pradhan Mantri Vaya Vandana Yojana
4	Stand Up India Scheme
5	Pradhan Mantri Mudra Yojana
6	Pradhan Mantri Suraksha Bima Yojana (PMSBY)
7	Sukanya Samriddhi Yojana
8	Jeevan Suraksha Bandhan Yojana
9	Credit Enhancement Guarantee Scheme (CEGS) for Scheduled Castes (SCs)
10	Varishtha Pension Bima Yojana (VPBY)
11	Venture Capital Fund for Scheduled Castes under the Social Sector Initiatives

III. DISCUSSIONS:

- The Reserve Bank of India should mandate that commercial banks have a certain percent of their portfolio in small loans. In addition to that, important social considerations should be factored into loan decisions. The government could add extra incentives to lend at rural areas.
- Reserve Bank of India and government of India should give suggestion to commercial banks to promote the financial product and services of banking through all the educational institution
- The community based financial system like hit funds need to be revived and strengthened.
- India needs to develop a low-cost bank branch model, possibly attached to village post office. Use e-advertising about the financial products so that people with shortage of time can be accessed more easily through internet.
- The government should encourage the banks to adopt financial inclusion by means of financial assistance, advertisement and awareness programme etc. to achieve the inclusive growth
- Business correspondents should be remunerated appropriately so that they will work loyalty and regular check should be made on them to check any of their corrupt practices
- The government of India should develop financial literacy among the population, particularly in low-income families. That can be done by teaching it in primary, secondary school and colleges
- Any government payments under the government schemes should be strictly routed through the service area bank account. This will make people in rural areas to compulsory have an account in their service area branch to avail the government benefit

IV. CONCLUSION:

Financial inclusion is not a short-term goal. It is a progressive initiative, which will evolve itself over a period of time.The opportunities and challenges provide useful insights regarding innovative ways of economic value addition, which help the Nation, reach a growth trajectory that is sustainable.The more gaps between rich and poor will make the society uneven and create lot of social problems. The short-term opportunities should be made use of and the shortcomings should be duly corrected in order to accelerate the process of inclusion. In achieving inclusive growth in India, the Financial Inclusion will play a vital role and help the nation to drive away the not only rural poverty but also urban poverty in India.It is rightly said by the Prime Minister Narendra Modi. “Mahatma Gandhi tried to end untouchability in the society, if we want to eradicate poverty; we need to get rid of financial untouchability”. Lending is not limited only to consumers with credit scores or credit cards. Thanks to fintech, it is available to everyone and it is reinventing lifestyles. Also, Fintech, powered by AI, helps in assessing credit scores of users based on various factors like digital footprint and other alternative data points, thus lending to NTC customers and therefore significantly increasing the number of „creditworthy‟ people in the country by introducing them to the market, safely and affordably.Fintech companies in the country are filling in the gap left behind by the traditional banking sector, and this is happening by using the power of technology and innovation in Artificial Intelligence. Today, AI has become the de-facto technology used by all fintech companies to build their platforms.Thus in the upcoming days, it is going to reinstate the human being and would cater quicker services with the most suitable solutions at an affordable cost. Bots are the kind of innovation in the AI-powered sector and it is usage has been growing gradually.Though the usage of AI powered technologies in the budding stage the way in which it is functioning leads to the growth and development of banking and the financial sector it could be also be anticipated that the prospects of AI-powered technologies would lead to minor losses and offer better trading with utmost customer satisfaction.

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