

# **The Study on Role of Artificial Intelligence in Micro-Financing, Banking and Financial Inclusion**

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**Abstract:** Artificial Intelligence is development of human intellect by machines. This is rapidly evolving and it has quickly built up itself as one of the technical foundations for modern financial business world. It facilitates problem-solving in every business, enable us to save time and also protects our savings, where progressively used in financial sector over the years. It is a key component of Bank and Micro-finance that helps to deliver affordable and dependable financial services and that provides systematic compliance management.

AI is currently advancing the finance and banking industries. The objective of research is to study role, uses of AI and also to analyse challenge that AI in those area. The descriptive nature of research uses primary and secondary source of data. Study concludes, there is improvements that leads to significant benefits for bank to reach their regulatory circumstances in order to reduce poverty and advance global economic growth which has creating significant progress in the financial sector.

**Keyword:** Technology, Poverty, Global Economic Growth, Management.

## Introduction:

Artificial intelligence (AI) was first used in 1956, it has gained popularity in recent years due to growing data volumes, sophisticated algorithms, and the enhanced processing and storage capabilities. Today, AI technology has advanced tremendously and generated a lot of interest in the financial sector and has entrenched itself into the most demanding and fast-paced sector. It has quickly established itself as one of the technical foundations of the entire modern financial industry. These become more customer-centric-technologically relevant with AI in all financial services.

To enable services like electronic banking, real-time transfer of money, and KiScore software, micro-finance and banking industries have expanded into IT and telecom. While these developments have made it possible for users to access the majority of banking services anytime – anywhere. The developments indicate that the banking and finance industry is moving quickly towards AI in order to increase the services and the efficiency while lowering costs. By providing 24-hours customer interactions, the financial sector may employ Artificial Intelligence to change consumer experience. It is one of the greatest analytical solutions available today.

The influence of AI on the finance and banking industries is significant which has radically redefined how these industries operate, develop services, and alter the consumer experience. AI supports the financial sector in streamlining and improving a financial transactional operation. India currently uses AI in its financial services to boost economic growth and give citizens better-quality financial services. Working with AI is regarded as trustworthy and comfortable by individuals.

### The Objective of Study:

1. To study Role and Impact of AI in Banking and Financial sector
2. To findout the challenge and implementation of AI in financial sector
3. To know the benefits of AI in Banking, Micro-finance and Financial Inclusion
3. To analyse AI's potential impact on the finance industry.

### Need of the Study:

In today's technologically advanced community, AI is creating the greater impact to understand the opinions of customers regarding the use of emerging AI technologies in their regular financial activities. To study how AI affects the financial sector's ability to promote or provide services.

Limitation of the study:

1. This study's focus is solely on the contributions and effects of artificial intelligence to banking, microfinance, and financial inclusion.
2. The study was only limited to some areas where AI is applied in the financial industries, such as banking security and ATM.

Hypothesis of the study:

Null hypothesis (H0):

1. Customers are not well aware about new technology that is AI in banking business.
2. The significant value of AI in today's financial sector is minimal, and advancement of AI has no adverse effects on the general public or financial transactions.
3. Artificial intelligence adoption does not assist the customer in facilitating flexible transactions that result in satisfaction.

Alternative Hypothesis (H1):

1. Customers are aware about modern technologies employed by retail and financial sectors.
2. In modern financial sector, artificial intelligence is essential, and its development has certain negative consequences on the general community or financial transactions.
3. The advantages of artificial intelligence has a higher influence while supporting the customer in facilitating flexible transactions that generate satisfaction.

Research Method:

The study has been carried out with the help of survey conducted in google form as a collection of primary sources of data and secondary data has been collected through the article, journals, magazines and websites.

Research sample size: The study has been collected data of 100 Random sample.

Review of literature:

1. All areas of the economy have recently seen an increase in the usage of artificial intelligence tools, in part due to the rising volume of digital data and improved computer power. implementing these methods for the offering of financial services could have significant advantages for financial firms as well as society at large.

The study figures out the advantages and applications that are used by financial firms, it highlights the technology's primary limitations and their potential effects on the proper operation of the financial system.

2. AI Technology is riding the luck of the market and pointing businesses in the direction of growth. The Indian banking industry is steadily moving towards employing AI as there is a growing requirement when compared to other areas, adoption has been slow in recent years. This may be because banking is still a business that relies heavily on labour and has operations that call for human engagement. These finance industries are aware of the need to reduce costs and boost customer service.

Artificial Intelligence in the Banking, Micro-Financing and Financial Inclusion.

The development of human mental processes by machinery through computer, such technology is meant to be Artificial intelligence. The application of machined technologies has recently produced ground-breaking advances in the financial sector. In order to provide real-time money transfers and e-banking, they are also expanding information technologies and telecommunications services.

According to collaborative research by According to research from Science and the National Business Research Institution, 32% of monetary service providers worldwide are already using new technology that makes predictive analysis. For many different causes, including increased competition in the financial sector, consumer demands for more individualised solutions, increased employee productivity, creating operational efficiencies, making effective decisions and actions, trending financial apps are increasingly adopting as a role of Artificial Industries in banking industries and financing sector.

Microfinance is a unit of banking services with relatively lower monetary values that are created primarily to satisfy the banking needs of unemployed individuals, underprivileged business owners, or with low incomes. The operation of financial services, including money transfers, loans, savings, and insurance. Microfinance aims to assist low-income individuals with opportunity to achieve financial independence by providing them with essential financial services.

Nowadays, this advanced technology has a rapidly increasing, is being adopted in the microfinance industry and is likely to revolutionize. Banks are capable of handling enormous volumes of data at speeding rates as a result, there are increased revenues, decreased costs, and increased profits.

The Impact of AI in Banking, Micro-Financing and Financial Inclusion.

1. Collecting and analysing data's - The lack of data availability is most difficult challenges microfinance organisations must overcome. Microfinance mostly caters to the segment of society with little access to financial services. AI gathers and analyses enormous volumes of data and organises it into comparable representations with the use of mobile devices and the internet. In this manner, the organisations are able to reach more people and fulfil their full potential.

2. Guides in assessing creditworthiness - Microfinance organisations may now identify people and firms and assess their creditworthiness with the help of AI. This is done by analysing their location, market conditions, buying behaviour, social media behaviour, public data, etc., in the absence of any credit history with the mainstream banking.

3. Cost saving - Saving money is most useful artificial technological features. It aids microfinance organisations in reducing operating expenses associated with repetitive tasks. It reduces human mistake while simultaneously saving money. Today, a lot of microfinance businesses use AI-based chat software that can answer consumer questions. A higher amount of business may be handled by AI with far greater efficiency and accuracy, assisting businesses in expanding and serving wider markets.

4. Statistical or Predictive Analysis - Data can have special patterns and connections that AI can identify that were previously apparent to traditional technology. It will be common advantage form AI, encompassing widely used predictive analytics as well as applications for natural language and semantics that are general-purpose.

5. Regulatory Adherence - Banking is the industries that is most tightly regulated globally. The use of banks by banking customers to commit financial crimes is prohibited in government regulation. To handle these issues, banks employ an internal AI compliance team.

6. AI can assist the financial inclusion plans and policies and managing the risk incurred in the financial operation.

7. Increase customer satisfaction - Consumers are always looking for a more convenient experience. For instance, ATMs were successful because they allowed users to access necessary services, when banks were shut. This degree of comfort has only stimulated advancement in AI. Recording and collection of basic required data of customer is accelerated by AI technology, which also removes errors.

Financial firms can more effectively manage credit risk with the use of AI, it facilitates the creation of credit ratings. enhanced financial services marketing. The financial industry has started adopting AI technology into their services as they have become a fundamental component of the globe. The financial activities sector has seen a tremendous development in artificial intelligence, which is entirely redefining in a secure way.

#### Benefits of AI in Financial Services.

Many advantages are provided to financial activities. The fact that AI offers so many potentials for automation may be its greatest benefit. Financial institutions may improve a variety of operations' productivity, Personalized banking, trading, anti-fraud system, sales forecasting, stock market prediction, and credit card and loan decisions and efficiency by using automation. Apart from that, AI helps remove human biases and other mistakes brought on by emotional or psychological aspects since it may sometimes replace people in specific circumstances. There is a concern that artificial intelligence is more effective at data analysis. Computers can recognisetrends in data due to machine learning, which helps firms produce more accurate reports and gives decision-makers insightful data.

AI's challenges for banking, microlending, and financial inclusion.

1. Ancient Infrastructure - business processes frequently result in new needs for the data, infrastructure, and technology needed to create and scale models. The development of AI banking applications can be computationally difficult, resulting in prohibitive upfront costs, and replacing large legacy systems is expensive.

2. Governance Structures and Regulations -Any use of new technologies might clash with the strictly controlled financial services industry. Banks that are expanding their usage of artificial intelligence must adhere to governmental regulatory guidelines. The need for compliance on the part of the bank arises from more services, such as internet transactions and net-banking fall under the purview of privacy regulatory rules and several financial sectors are struggling with their resistance to change or adopt new strategies.
3. Absence of a Well-Defined Strategy - In a technological world that is always evolving and requires considerable investments in new equipment and human resources, executives might not fully embrace Smart technology. In that situation, implementing a company-wide strategy to fully utilize AI's technical potential would be difficult, and the banking sector is already experiencing a disconnect between client demand and reaction owing to a lack of supporting data to implement operational modifications.
4. Creates the situation of Unemployment
5. Lack of Trust, Security and Training for the employee which creates unhealthy relation with customers.

### Data Interpretation

#### 1. Awareness about the Impact and Advantages of AI in Modern Financial Service?

From the study that conveys that majority - 90% people are aware about the Impact and uses of Artificial Intelligence (AI) in a contemporary financial service

#### 2. Role that AI plays in the development of the microfinance sector

From the study it is clear that respondents are aware about role of AI in development of microfinance sector. It has major impact determining creditworthiness, predict future investment, risk management, collection of data, creditworthiness in microfinance.

### 3. Benefits of AI in banking sector and micro-lending sector

From the study, we come to know that there is a greater AI's influence on banking through fraud prevention and providing security, customer support and helping desk.

### 4. AI's contribution to the expansion of financial inclusion.

The study states that Ai helps in framing better financial inclusion strategies where majority were agreed and also providing enhanced marketing services, managing credit risk and better fraud prevention.

### 5. The biggest challenge for implementation AI in banking and financial industries?

The study conveys as some of the financial sectors are still following traditional practice, majority of the respondents are 35% are unaware about AI and lack of clear strategies, and legacy infrastructures are the challenge of implementation of AI in Finance.

### 6. Future Impact of AI on the Financial and Banking Area.

From the study, it is clear that AI has vital Role in the future financial sector - providing personalized financial advices, guides in making decisions, better customer enhanced services and the negative be impact will be that increase in fraudulent activities.

### 7. Impact of AI Implementation on the Financial Sector in a Negative Approach

From the study, it's clear that the AI implementation in financial sector may cause both positive and negative impact, the major drawback that 55% of respondents were conveyed that it creates unemployment situation as AI technology going to replace the Human.

### 8. Is AI a need for financial services and banking in the future?



From the study, we came to know that, majority of the respondents are agreed at 90% with AI is very much needed for the future in the financial activities.

### Testing of hypothesis

1. The null hypothesis—that consumers are completely aware of the new technology AI in the banking and financial sector—was supported by 10% of respondents, therefore this is accepted, while the alternative hypothesis, that customers are fully aware of the technology AI, was rejected.
2. The role of AI in contemporary financial sector is minimal, and it has NO negative effects on the general population. In this case, alternative hypotheses were accepted, and the majority of respondents were not in favour of null hypothesis. According to 65% of respondents, AI plays a significant role in financial sector operations, and 52% of respondents felt that AI had a negative impact on the financial industry.
3. AI does not provide flexible transactions for the customer. Here, 90% of respondents supported the alternative hypothesis that AI has greater power and facilitates flexible transactions, despite respondents being against null hypotheses.

### Suggestion and Recommendation

1. Banks should concentrate more of an emphasis on educating the public about the usage of AI-based applications in the financial activities, particularly by offering AI awareness programs to those age over 40.
2. As AI systems are vulnerable to cyberattacks, rigorous regulatory requirements and appropriate security measures should be established by government and financial institutions.
3. From the study's main recommendations is that there should be a good balance between using AI and hiring AIs since they can be hazardous to careers of many individuals. As a result, excessive AI use is contributing to the unemployment problem since, citing an old proverb, "Taken in excess, even nectar is poisonous and additional time is required to strengthen AI-human trust.

All industrial sectors, particularly the financial firms, are definitely experiencing a digital boom. To save operational expenses and boost effectiveness, conventional

finance has changed by implementing new technologies like blockchain, cloud computing, and artificial intelligence. The banking firms and financial activities are on the verge of an artificial intelligence revolution, despite the reality that it is still in its infant.

### Future Role and Impact of the Artificial Intelligence on financial services

The implementation of AI in finance is revolutionizing the way people of dealing with money. Financial risk management, quantitative trading, credit decision-making are among the many of the procedures that AI helps the financial sector optimize and improve. Currently, financial and banking firms are updating to modern technology that AI has many economic benefits with favourable circumstances including Fraud Detection and providing strong Security, Customer Support - Help Desk, Digitalization and automation in back office processing that makes financial activities much more convenient for financial institutions and general public like Personalized financial advice is provided through smart wallets as part of an improved customer experience that includes robotic automation, better analytics, realistic interactive decision-making, and customer care participation through chat boxes.

The banking and financial services sector is one of largest and most powerful in the whole globe, financial organizations may modernize the outdated services and make money from them with the use of AI. The latest AI technologies have several potential applications in the financial services industry. sAI has the capacity to bring stability to the whole industry and advance the global economy.AI-based solutions have a lot to offer to financial institutions.

Yet, implementing AI in financial sector will be both profitable and challenging, but AI is shaping the banking, Micro-finance and financial inclusion these sectors with Modern technology based financial activities.

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