

A Theoretical Study on the Impediments of Artificial Intelligence in Banking Industry

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Abstract

In recent years technology has become pertinent element of success for businesses and manufacturing industries. Technologies have also changed the ways in which the organizations perform their businesses. Artificial intelligence has become the buzz word in the field of technology in the recent scenario with enormous power to transform the traditional methods & to bring wide range of benefits. This technological innovation is gaining all the attraction of corporate world also has become the key issues of any nation's strategy. Due to rapid rise in digitization and online banking, there is growing need to adopt & implement Artificial Intelligence technology in banking organizations too. AI has become important disruptor for banking industry. AI substantially reduces operating cost, increases efficiency & improves customer satisfaction. As the use of technology increases, it also brings numerous risks & challenges along with legal & governance issues. Machines decisions are going to replace human decisions, but how reliable, ethical & logical these decisions stay, becomes the question of everyone's mind. Numbers of barrier are present for this technological driven innovation of AI. The study aims to focus on the challenges that banking organizations are experiencing. Banks are encountering all the hurdles starting from AI adoption to reluctance of customers for acceptance of AI driven decisions.

Keywords: Artificial Intelligence, technology, Banking, barriers, challenges.

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1. Objectives: Major aims of the study are as follows-

1. To explore the role of AI technology in banking industries
2. To address the issues and problems regarding Artificial Intelligence technology.
3. To understand the barriers and challenges that banking organization are facing while adopting & implementing AI.
4. To study the measures & steps for overcoming AI challenges in banking.

2. Introduction

The concept of AI is so broad & scope is so wide. Financial sector is adopting it first time, so financial institutions often struggle while implementing this technology. Some crucial aspects that make AI technology so friendly & innovative are – data availability, computing power & algorithm efficiency. Machine learning- which is the sub fields of AI is a dominant technology in banking systems used in chat bots, image recognition, detecting fraud & anti money laundering systems. Banking mainly use AI in five major areas-

1. Investments
2. Underwriting
3. Regulatory Compliances
4. Reporting

5. Customer relationship management

According to Accenture's survey of banking customers, it was found that 71% of the respondents would like to prefer computer generated support; on the other hand 78% of the respondents would use automated support for investments. AI has transformed banking and shifted the system from traditional one to technological one. Banking sector is accepting AI from the ground level to achieve maximum customer relationship management with improved efficiency. Though reaping wide range of benefits, lines of challenges are present for banks to AI implementation. Following are the apparent barriers for banking- ^[1]

1. Data Quality- the power of algorithms is totally dependent on data quality, which is an important input. Biases in data are also the issues that impacts the decision making process of credit scoring & underwriting. ^[2]
2. Black Box Effect- algorithmic results are not verifiable because of statically inference. ^[3]
3. Diagnosing & modifying algorithms becomes complex problem. No explanation is available as to why

algorithm provided right or wrong answer. That could be disturbing for a banker while having rationale trading & decision makings. [4]

4. Narrow Focus- specific algorithms are able to detect specific problems only. Lack of emotional intelligence & empathy. E.g. anti money laundering AI system may not be aligned to other practices. [5]
5. Responsibility-The question of responsibility & accountability becomes crucial, in case something goes wrong. The challenge of liability & accountability embarks.
6. 5Cyber threats- AI based banking, introduction of online banking & digitization brings the threat of cyber security. Cyber criminal's activities rapidly boosted up in last few years. [6]
7. Customer's privacy- banking organizations retain massive data & when banking, finance & information technologies come together, a wide spectrum of customer's valuable information also pops in which is all time present on World Wide Web with vulnerability. Hence data privacy becomes the issue. [7]
8. Regulations- lack of strict regulations becomes the hurdles for ethical AI decisions, for security issues & for data privacy of banking organizations.
9. Lack of skilled Manpower- reluctance on the part of banking employees & lack of tech savvy man power becomes another issue while adopting AI applications and systems in banking.
10. Customer reluctance- though AI is brining enormous benefits for banking industry, but customers are still lacking in knowledge & acceptance of decisions taken by AI based system, they still prefer to stick with human decisions rather than machine decisions. [8]
11. Continuous Updates of AI systems- AI technology based banking systems need update requirement time to time, due to this modification sometimes the problem of storing old data and tuning with old algorithms works as blunder.

The Global Association Of Risk Professional's Report noted that 81% of Finserv risk professional are already getting benefits from AI technologies in terms of improves process automation, credit scoring & data preparation.

According to Chandra Shekar (2018) the data privacy & data access is a central aspect of any banking industry while implementing AI applications. Due to various languages spoken population set, number of challenges exists for Indian banking industry. Banks in India need to develop a system like GDPR (general data protection regulations) like European regulations on data privacy & data access. A right kind of data structure mechanism is crucial for data privacy. The biggest challenge is the shortage of trained AI tech savvy & data science skilled human resources in banking sector. Hidden issue of moral implication, where there is no universal right or universal wrong also create challenges.

- **Methodology-** To understand the challenges & barriers those are encountered by banking organizations while implementing & adopting Artificial Intelligence technology, we had a qualitative study based on secondary data sources which are derived from web. Number of case studies, articles & papers were gone through to have in depth detailing of usage, role & applications of AI technology in bank also the hurdles that are prominent, can hamper the growth of AI in

banking were addressed.

- **Findings-** The study noticed that introduction of AI technology in banking is at its nascent stage, complete adoption and implementation is yet to be done. But the technology is already brining in so much advantages, yet lacking on some important issues - on the part of employees and customers as well as data quality & privacy. Success of AI technology in banking depends upon customer orientation. The acceptance and trust in AI application by customers that provide better security, data privacy & user friendliness.
- **AI In Banking Vendor and Capability Map 2019** found that the use of chat bots is over hyped in banking industry. The major focus of AI enabled application remains on efficiencies, but banks emphasizes on risk rather than efficiencies that also with lack of proper regulations. Banks need to revitalize the data infrastructure in future timings.

3.Conclusion & Suggestions-

Rapid adoption of the AI technology by banking organizations also calls for bigger challenges. Number of barriers for AI system needs a disciplined framework of protocol with right approaches. Banks need to address major impediments that blocks AI system progress. Banking authority is required to fix the challenges in a systematic manner. E.g. fixing explainable AI technology for black box problems, feeding a healthy data supply to combat data quality, cyber security with improved cyber threat detection. Though, Artificial Intelligence technology is moving at a slow pace in banking industry, though fast adoption is being noticed to reap maximum benefits. While deriving the benefits the threat & challenges always exists. The next phase of AI is coming in so rapidly, as AI model & development rises, risk management team is also required. Some suggestions for overcoming AI challenges are-

1.Liability- the accountability should rest with those who have produces and fed algorithms rather than banking systems who take decisions.

2.Technical resources- to overcome the problem of skilled man power and AI friendly staff, banking organization should rely on technical human resources who are well known to AI systems and decisions. Investment in AI equipped systems is also a need of time for banks to be successful.

3.Trust in AI- Trust is the first & a foremost criterion for adoption and implementation of AI technology in banking. Trust must be there at all the levels- company, client & customer level while dealing with money and finances. In forthcoming future scenario Customer orientation is the key to achieve growth & success in AI systems for banking.

4.Transparency- to bring transparency, strict regulatory framework & compliances on the part of banking industry becomes essential.

Timely measuring & tracking the progress of the AI enabled application in banking system is very substantial to overcome the barriers & challenges, because it is tough to identify whether investment has reaped rewards or not, whether decisions are accurate or not, results are ethically right or wrong, how technology is impacting the operations of a banks in reducing cost & increasing efficiencies,

affecting a customer's behavior towards machine decisions and retaining more trust in AI systems.

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References

1. M.K. Chandrashekar, Embracing Artificial Intelligence- An Inevitable Challenge for Banking Industry in India. 5(10), (2018).
2. D. Faggella, The biggest barriers to AI in banking, (2019).
3. Impact Of AI: Opportunities & Challenges, (2019).
4. S. Meuneir, THE IMPACTS AND CHALLENGES OF ARTIFICIAL INTELLIGENCE IN FINANCE, (2018).
5. P. Plochan, 5 Fixes for common AI challenges, (2019).
6. S. Ranjan, D.R. Gupta, D.A. Gupta, (n.d.), ARTIFICIAL INTELLIGENCE IN FINANCIAL ACUMEN: CHALLENGES AND OPPORTUNITIES, (2008).
7. M. Ryzhkova, E.Soboleva, A. Sazonova, M. Chikov, Consumers' Perception of Artificial Intelligence in Banking Sector, SHS Web of Conferences, 80 (2020).
8. J. Truby, R. Brown, A. Dahdal, Banking on AI: Mandating a proactive approach to AI regulation in the financial sector, Law and Financial Markets Review, 14(2) (2020)