A STUDY ON ATTITUDE OF CUSTOMERS TOWARDS ARTIFICIAL INTELLIGENCE IN BANKING IN TIRUNELVELI DISTRICT
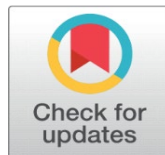
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ABSTRACT

With Artificial Intelligence technologies increasingly integrated into various banking functions such as customer service, fraud detection, and personalized financial planning, understanding customer perceptions becomes critical for effective implementation. Through a survey of 50 respondents, this research explores customer awareness, trust, and concerns regarding AI in banking. The findings indicate a generally positive attitude towards AI, with respondents appreciating its potential for improving banking efficiency and convenience. However, concerns about data privacy and the ethical implications of AI remain significant. The study concludes that while customers are receptive to AI, banks must address concerns through transparent practices and robust data security measures to build trust and ensure broader acceptance.

Keywords: Artificial Intelligence, Technologies, Banking, Customer Service, Customer Perceptions, Banking Efficiency, Convenience, Etc

1. INTRODUCTION

The rapid advancement of technology has revolutionized the banking industry, with Artificial Intelligence (AI) playing an increasingly pivotal role. AI is transforming traditional banking services by automating processes, improving customer service through chatbots, enhancing fraud detection, and offering personalized financial products. As banks shift towards AI-driven solutions to improve operational efficiency and customer experience, understanding customer attitudes towards this transformation becomes crucial.

Tirunelveli District, like many other regions, is witnessing the gradual integration of AI in banking. However, the success of these innovations largely depends on how customers perceive and interact with these technologies. While AI has the potential to offer faster, more accurate services, concerns about data privacy, transparency, and the implications for human jobs still loom large.

This study aims to explore the attitude of customers in Tirunelveli District towards AI in banking. By examining customer awareness, trust, benefits, and concerns regarding AI, the research seeks to provide insights that can help banks in the region tailor their AI strategies in line with customer expectations and concerns. Understanding these perceptions is critical for banks to ensure a smooth transition to AI-powered services while fostering customer confidence and satisfaction.

2. REVIEW OF LITERATURE

Kruthika Sawant *et al.* (2023), in their research study stated that the banking industry is undergoing ground-breaking reforms, with a focus on the client as the primary driver. Customers that are tech aware and often interact with cutting-edge technologies want banks to provide smooth experiences. In order to meet these expectations, banks have expanded their industrial landscape to encompass retail, IT, and telecom through the use of services like mobile banking, e-banking, and real-time money transfers. While these advancements have allowed customers to access the majority of banking services whenever they choose, they have also cost the banking sector money. This research paper aims to explore the current state of AI in banking and financial services, as well as its potential impact on the industry as the banking and financial services sector has seen major operational changes as a result of the growing usage of artificial intelligence (AI). Many industries, including customer service, fraud detection, risk management, and investment management, are using AI technology.

Geetha (2021) in her paper focuses on the artificial intelligence (AI) in the Banking and financial services in Chennai to oversee the application of artificial intelligence methodology in the banks as well as responses from the clients or consumers. Banks and other financial institution can mine the financial transaction data generated by the proliferation of digital payments and banking to better monitor, predict and respond to consumer behaviour. To identify the information used in the banking and financial services, the data is collected from secondary sources based on the literature review. A structured questionnaire is framed to collect the primary data of customers have toward AI application. Findings: the result of the study that the private banks and private financial institution are using various AI services for the customers benefit so that customers satisfied with their services in addition to those financial services as to improve services more effective manner because some of them are dissatisfied with the banking services. The result also suggested that the customers more commitment from representatives to the banking and financial services by giving development innovative preparing to improve the AI procedures in the workplace

3. OBJECTIVES OF THE STUDY

- To study the socio-demographic profile of the respondents in the study area.
- To examine the attitude of respondents towards AI in banking sector in the study area.

4. METHODOLOGY

This study employs a descriptive research design to examine the attitude of customers towards the adoption of Artificial Intelligence (AI) in banking services in Tirunelveli District. A quantitative approach was used to gather data from a large sample of bank customers, providing a broad understanding of their perceptions and attitudes towards AI. The study is cross-sectional in nature, capturing customer attitudes at a specific point in time. The primary data for the study has been collected through a sample group of 50 respondents using a structured questionnaire in Tirunelveli district. The secondary data has been collected from various journals and books.

5. DATA ANALYSIS

This section deals with the analysis of data and their interpretation. The following table 1 shows the socio-demographic profile of the respondents,

TABLE 1
SOCIO-DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Socio-demographic Variable	Categories	No of Respondents	Percentage
Gender	Male	25	50
	Female	25	50
Marital status	Married	32	64
	Unmarried	18	36

Educational qualification	HSC	6	12
	UG	34	68
	PG	10	20

Source: Primary data

The table 1 shows that 50% of the respondents are male and 50% of the respondents are female. Also, 64% of the respondents are married and the remaining 36% of the respondents are unmarried. The above table also shows that 12% of the respondents have completed HSC, 68% of the respondents are undergraduates and 20% of the respondents are postgraduates.

6. RELATIONSHIP BETWEEN CUSTOMER SATISFACTION TOWARDS AI IN BANKING AND THEIR SOCIO-DEMOGRAPHIC CHARACTERISTICS – CHI SQUARE TEST

The researcher has identified 4 variables namely, Chatbots and virtual assistants, Fraud detection, Enhanced credit models and Personalized recommendations to examine the satisfaction level of customers towards AI in banking. In order to test whether there is any relationship between the satisfaction level of customers towards AI in banking and their socio-demographic characteristics, Chi-square test has been applied to test the following null hypothesis,

H_0: **There is no significant relationship between the between the satisfaction level of customers towards AI in banking and their socio-demographic characteristics**

TABLE 2
RELATIONSHIP BETWEEN CUSTOMER SATISFACTION TOWARDS AI IN BANKINGAND THEIR SOCIO-DEMOGRAPHIC CHARACTERISTICS – CHI SQUARE TEST

Customer Satisfaction	Value	Gender	Marital Status	Educational Qualification
Chatbots and virtual assistants	χ^2 value	11.899	2.049	3.782
	p- value	(0.001)	(0.000)	(0.000)
Fraud detection	χ^2 value	6.515	4.129	5.743
	p- value	(0.003)	(0.031)	(0.020)
Enhanced credit models	χ^2 value	8.542	6.156	2.009
	p- value	(0.000)	(0.011)	(0.003)
Personalized recommendations	χ^2 value	16.328	3.466	9.104
	p- value	(0.000)	(0.043)	(0.000)

Source: Primary data.

The above table 2 shows that there is significant relationship between the satisfaction of customers towards AI in banking and their socio-demographic characteristics such as gender, marital status and educational qualification of the respondents since the p-value is less than 0.05.

7. SUGGESTIONS

- Banks should inform customers about how AI is being used in their services, including its benefits and limitations. Transparency about data usage, decision-making processes, and security measures can build trust and reduce skepticism.
- Implement robust data security protocols to protect customer information from breaches.
- Allow customers to customize their interactions with AI services, such as choosing preferred communication channels
- Organize workshops, webinars, or online tutorials to educate customers about AI in banking, its benefits, and how to use AI-driven tools effectively.
- Ensure that AI algorithms used in banking services are unbiased and fair, particularly in sensitive areas like lending and credit scoring. Regularly review and update these systems to prevent any form of discrimination.
- Implement mechanisms to gather regular feedback on AI services, such as surveys, suggestion boxes, and in-app feedback options.

8. CONCLUSION

The study on the attitude of customers towards Artificial Intelligence (AI) in banking in Tirunelveli District reveals a complex interplay of curiosity, cautious optimism, and concern. The majority of respondents demonstrated a positive attitude towards the adoption of AI technologies, recognizing the benefits such as improved efficiency, personalized services, and enhanced security measures. However, concerns around data privacy, the potential for job displacement,

and the transparency of AI systems persist. The research findings suggest that while customers in Tirunelveli District are open to AI innovations in banking, their trust in these technologies is contingent on clear communication from banks regarding data protection policies and ethical usage of AI. Furthermore, younger customers and those with higher technological literacy tend to exhibit a more favourable attitude towards AI, highlighting the need for banks to invest in customer education to bridge knowledge gaps.

CONFLICT OF INTERESTS
None

ACKNOWLEDGMENTS
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