

CUSTOMERS PERCEPTION TOWARDS THE USE OF CHATBOTS IN BANKING WITH RESPECT TO CHENNAI CITY

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ABSTRACT

Artificial Intelligence (AI) is fast evolving for companies across the world to personalise experience for individuals. The technology itself is getting better and smarter day by day, allowing more and newer industries to adopt the AI for various applications. Banking sector is becoming one of the first adopters of AI. And just like other segments, banks are exploring and implementing the technology in various ways. The applications of AI include smarter chat-bots for customer service, personalising services for individuals, and even placing an AI robot for self-service at banks. Beyond these basic applications, banks can implement the technology for bringing in more efficiency to their back-office and even reduce fraud and security risks. This study relates to the use of chatbots in the banking sector and the perception of the customers of using chatbots for banking transactions. The purpose of this research is to identify and analyze the customers' perception on the various aspects of Chatbot services.

KEYWORDS: Artificial Intelligence, Chatbots, Banking.

INTRODUCTION

AI is not new to India. Research institutions and universities have been working with various AI technologies for decades, and especially in the area of social transformation. With enabling technologies becoming a lot more accessible and inexpensive, AI is now becoming mainstream, with large enterprises and start-ups looking at different opportunities.

Application of AI and ML (machine learning) to different functions within the banking industry has enabled them to offer a far more personalised and efficient customer service. By achieving that, banks have also been able to gain better insights into their customers' preference and expectations from the bank. Accordingly, automation of back-end workflows has shown better outcomes. Many large financial institutions are already investing in such technologies in the near future.

State Bank of India, the largest bank in India, last year conducted "Code for Bank" hackathon to encourage developers to build solutions leveraging futuristic technologies such as AI and Blockchain into the banking sector. Private banks like HDFC Bank and ICICI Bank have already introduced chat-bots for customers service. Some have even gone ahead with placing robots for customers service. Last year, Canara Bank installed Mitra and Candi_robots at some of its offices. "Payment companies are using AI to offer personalised payment experience to consumers. By applying AI and analyzing past payment patterns, payment systems can prompt

the preferred payment instrument which best suits a purchase at the time of checkout. The use of artificial intelligence in banking provides the following benefits:

Fraud Detection: Anomaly detection can be used to increase the accuracy of credit card fraud detection and anti-money laundering.

Customer Support and Helpdesk: Humanoid Chatbot interfaces can be used to increase efficiency and reduce cost for customer interactions.

Risk Management: Tailored products can be offered to clients by looking at historical data, doing risk analysis, and eliminating human errors from hand-crafted models.

Security: Suspicious behaviour, logs analysis, and spurious emails can be tracked down to prevent and possibly predict security breaches.

Digitization and automation in back-office processing: Capturing documents data using OCR and then using machine learning/AI to generate insights from the text data can greatly cut down back-office processing times.

Wealth management for masses: Personalized portfolios can be managed by Bot Advisors for clients by taking into account lifestyle, appetite for risk, expected returns on investment, etc.

ATMs: Image/face recognition using real-time camera images and advanced AI techniques such as deep learning can be used at ATMs to detect and prevent frauds/crimes.

A wide implementation of a high-end technology like AI in India is not going to be without challenges. From the lack of a credible and quality data to India's diverse language set, experts believe a number of challenges exist for the Indian banking sector using AI.

SBI, which is India's largest public-sector bank with 420 million customers, is embarking on its AI journey from the point of view of both employees and customers. To fuel its AI mission, this year, SBI launched a national hackathon, "Code For Bank" for developers, startups and students to come up with innovative ideas and solutions for the banking sector, focusing on technologies such as predictive analytics, fintech/blockchain, digital payments, IoT, AI, machine learning, BOTS and robotic process automation.

A chatbot is a computer program that simulates human conversation or chat through artificial intelligence. The person can use them to order something, ask something or just have a conversation. It is just a Google Assistant but instead of using the voice, we have to type a question to get an answer. Chatbots allow humans to interact with the computer based on natural language, this can be text-based or voice-based. Chatbots are dialogue systems that communicate with a user through natural language and a user interface. Basically, a Chatbot processes the input of a user and responds accordingly.

Chatbots are currently being used by most of the banks in order to ease the transactions and provide instant services to its customers. The chatbots used by bank provide various services such as answering queries related to the banking operations, providing superior customer services throughout the year, handling several customer requests, providing information about the banking products and services. Apart from these services, the chatbots also suggest customized products to its customers.

The chatbots are said to provide uninterrupted support 24*7 and thus help in improving the customer relationships, as it reduces the waiting time of the customers in the banks. The chatbots are said to be beneficial as it helps the customers in performing the everyday banking tasks conveniently. Moreover, it is easier and free to access and interact with the chatbots for various banking transactions. The use of chatbots has claimed to be less risky in terms of data security and privacy. The responses of the chatbots are up to date and correct and they act as a reliable source.

REVIEW OF LITERATURE

Amisha Gupta, Deepti Sharma This research investigates the customer's attitude towards the chatbots in Banking Industry of India. The author used correlation analysis to determine and understand the attitude of customer for acceptance and adoption of chatbots in banking industry. Data is collected through Primary survey. 100 people were targeted, out of which 72 responded. The study concludes a positive correlation between the attitude and the adoption of chatbots. As part of the conclusion author made some suggestions and recommendations discussing the implementation of chatbots in the banking industry of India.

Taylor & Francis This research looks at chatbots as a form of an information system. It observes the effect of the three quality dimensions of the information system success model on customer experience, further leading to love for the bank brand. As chatbots are a new technology platform, consumers may find some risk in its use. Hence, the moderating role of perceived risk between the three quality dimensions and customer experience is also observed. The survey method was employed to conduct the study. Data were collected from 258 respondents. The results provide a definite direction for banks to strengthen the consumer-brand relationship by offering chatbots suiting their customers' expectations.

OBJECTIVES OF THE STUDY

- To determine the type of information accessed by the customers from the chatbots in banks.
- To determine the customer's perception on chatbots services provided by the banks with regard to the reliability and convenience.

RESEARCH METHODOLOGY

Primary and secondary data were used for the study. Primary data was collected through questionnaire method. Questionnaires were distributed among the bank customers of SBI, AXIS , ICICI and HDFC Banks. The research is restricted to Chennai city only. The sample size tested for the research is 50. Secondary data was also collected through information published online. Data analysis was done through IBM SPSS STATISTICS by way of Friedman Rank Test, Percentage analysis and Chi-square test.

TABLE 1 SHOWING DEMOGRAPHIC DETAILS OF RESPONDENTS

S.NO	PARTICULARS	CATEGORY	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
1.	GENDER	Male	40	80.0	80.0	80.0
		Female	10	20.0	20.0	100.0
		Total	50	100.0	100.0	
2.	QUALIFICATION	Ug	36	72.0	72.0	72.0
		Pg	10	20.0	20.0	20.0
		Professional	4	8.0	8.0	8.0
		Others	2	4.0	4.0	100
		Total	50	100.0	100.0	
3.	AWARENESS	Yes	35	70.0	70.0	70.0
		No	15	30.0	30.0	100.0
		Total	50	100.0	100.0	
4.	USAGE OF CHATBOT SERVICES	Daily	7	14.0	14.0	14.0
		Weekly once	22	44.0	44.0	44.0
		Monthly once	21	42.0	42.0	100.0
		Total	50	100.0	100.0	
5.	MODE OF ACCESS OF CHATBOTS	Mobile/smart phone	34	68.0	68.0	68.0
		Computer/laptop	16	32.0	32.0	32.0
		Total	50	100.0	100.0	

INTERPRETATION

The above table indicates that 72% of the respondents are aware about the chatbot services provided by various banks for the banking transactions. The chatbot services are used by most of the customers of the banks on a weekly basis. Mobile phones or smart phones are said to be the most significant mode of access of chatbot services, where the customers queries are responded quickly, as it has a user friendly interface.

TABLE 2 SHOWING CHI SQUARE TEST

PARTICULARS	DEGREE OF FREEDOM	X ² VALUE	P VALUE
Chi square	1	0.452	0.05

HYPOTHESIS

H₀: There is a significant relationship between the use of chatbot services and its convenience

H₁: There is no significant relationship between the use of chatbot services and its convenience

INTERPRETATION

The above table discloses the results that there is an association between the use of chatbot services and its convenience in using. The calculated value 0.452, which is more than the table value 0.05 at 1 degree of

freedom and 5% significance level. Thus, the alternate hypothesis is accepted. It is evident that the chatbot services helps in resolving customer queries. The chatbots and virtual assistants help in instantly solving the customer complaints and queries as it reduces the waiting time of the customers and provides uninterrupted support 24*7.

TABLE 3 SHOWING CHI SQUARE TEST

PARTICULARS	DEGREE OF FREEDOM	X ² VALUE	P VALUE
Chi square	1	0.359	0.05

HYPOTHESIS

H₀: There is a significant relationship between the use of chatbot services and its reliability

H₁: There is no significant relationship between the use of chatbot services and its reliability.

INTERPRETATION

The above table discloses the results that there is an association between the use of chatbot services and its reliability. The calculated value 0.359, which is more than the table value 0.05 at 1 degree of freedom and 5% significance level. Thus, the alternate hypothesis is accepted. It is therefore evident that the chatbots are more reliable as the responses provided by the chatbots are up to date. Further, the use of chatbots is less risky in terms of data security and privacy.

TABLE 4 SHOWING USAGE OF SERVICES PROVIDED BY CHATBOTS

AREAS OF SUBSTITUTE OF AI IN BANKING	MEAN RANK	RANK
Deposit related	4.78	5
Loan related	4.15	1
Funds transfer	4.22	2
Other services	4.39	3
General enquiry	4.56	4

INTERPRETATION

Friedman Rank Test reveals that deposit related queries in banking has the highest rank and has identified it as the top priority segment in the usage of chatbot services followed by general enquiries, other services, funds transfer and loan related queries.

FINDINGS OF THE STUDY

- There is higher level of awareness and usage of chatbot services in banking among the respondents.
- The chi-square test reveals that there is an association between the use of chatbot services and its

convenience and reliability. The chatbots and virtual assistants help in instantly solving the customer complaints and queries as it reduces the waiting time of the customers and provides uninterrupted support 24*7. Further, the use of chatbots is less risky in terms of data security and privacy and thus reliable.

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CONCLUSION

Consumers in banking industry are keen to adopt the chatbots as a result to curiosity, convenience and technology advancement. As a result, it can be concluded that banks should start testing and using chatbots as an important tool to interact with their clients. It is very much possible with the advancement of technology and the upgrading of consumers knowledge more and more communication will occur with the help of chatbots. In the light of the growing Information Technology, banking companies should adapt to this technological shift.

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