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CONSUMER PERCEPTION TOWARDS ARTIFICIAL INTELLIGENCE DRIVEN CHATBOTS OF SELECT BANKS IN BANGALORE

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ABSTRACT

The significance of artificial intelligence emphasizes the importance of adopting artificial intelligence (AI) and its applications in the banking industry to improve the overall customer experience by improving the quality of services offered to clients. The goal of this research paper is to provide a comprehensive review of the existing literature addressing the different uses of artificial intelligence that are currently available and their impact on the banking industry. The study will specifically address the influence of AI on the banking sector. Following a comprehensive study of the present body of literature, a methodical overview of machine learning applications in the banking industry is provided. Millions of customers and employees of financial institutions agree that using artificial intelligence to digital banking results in enhanced efficiency. Artificial intelligence (AI) aids in a range of procedures aimed at reducing the amount of labor performed by people. Services such as monitoring credit scores, forecasting breakdowns, emergency alarm systems, detecting fraud, detecting phishing websites, measuring liquidity risk, evaluating client loyalty, and leveraging AI systems are examples of these procedures. On the other hand, a variety of supplementary apps, such as messaging bots, augmented reality, and mobile banking, among others, might improve the user experience.

Keywords: Digital Banking, Chat bots, AI, Banks, Customers.

1. INTRODUCTION

The term "human intelligence" describes the capacity of an individual to pick up new skills and adjust to their surroundings. Reasoning, decision-making, learning, problem-solving, and communication are some of the components. While the subject of human intelligence is still hotly contested, extraterrestrial or artificial intelligence has long piqued the interest of brilliant minds, including scientists, writers, philosophers, and mathematicians. Intelligent technologies have sparked the quest to better understand human intelligence and to duplicate and replicate it. Although there have been sporadic conceptualisations of nonhuman intelligence over the ages, 1956 is regarded by experts as the inception year of artificial intelligence as a field of study. More specifically, a conference from Dartmouth College in the United States is thought to have been the catalyst for it all. Since then, research on artificial intelligence (hereafter referred to as AI) has progressed slowly, received little attention from academics, and has not seen widespread industry adoption. But because of recent developments in big data, computational technology, and industry demand, artificial intelligence (AI) is quickly changing businesses, sectors, and customer experiences.

Financial services are typically thought of as high-involvement settings since they are at the forefront of implementing new technology, which has sped up the development of "Fin Tech," which includes artificial intelligence. For instance, it's anticipated that the financial services industry in Asia Pacific will spend US\$ 4.29 billion on AI by 2024. AI is currently utilised in chatbots, trading using algorithms, robot-advisory, asset and wealth management, fraud detection, risk management, cyber security, relationship management, and regulation. As a result, AI has gained in importance in financial services marketing, demanding a detailed review of the literature. This type of review is critical for leading (future) empirical research, assisting business practitioners and policymakers, and establishing the framework for theoretical conceptualizations. The amount of scholarly

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research on artificial intelligence (AI) and its applications in financial services marketing has increased significantly during the previous five years.

2. REVIEW OF LITERATURE

Jakšič (2019), Banks don't have time to get comfortable. They must reassess their edge over their rivals in light of the significant shifts brought about by IT advancements and pressure from Fin Tech businesses. The focus of this essay is on the importance of maintaining tight relationships with bank customers, which is fostered by relationship banking. Banking relationship focus on simplifies incentives and meets bank clients' long-term demands. However, the existence of IT-driven economics of scale and rivalry between Fin Tech start-ups and IT corporations may entice banks to transaction banking. This assesses the significance of behavioural biases, artificial intelligence, and distances in this context. The consequences for stability in banking are examined. We contend that relationship banking is capable of overcoming its shortcomings, but in order to thrive, it must adapt to the current environment. **Trivedi (2019)**, In today's digitally connected culture, banks offer chatbots to improve customer service. Chatbots are investigated as a type of information system in this study. It monitors how the three information technology model quality criteria affect the client experience, thereby strengthening their link with the bank's brand. Users may face various risks when using chatbots because they are a relatively new technological platform. As a result, perceived risk appears to have a moderating effect on the relationship between each of the three quality elements and customer experience. The survey method was used to conduct the research. 258 people responded with information. The findings show banks in what way to improve the customer connection by creating chatbots that exceed expectations of the customers. **According to Kaur (2020)**, artificial intelligence (AI), often known as machine intelligence, is the emulation of cognitive abilities in machines. It is intelligence that robots exhibit as opposed to innate knowledge that human exhibit. AI is rapidly evolving, from self-driving cars to Siri. In general, artificial intelligence is built on two fundamental ideas. It begins by investigating the inner workings of human minds, namely how cognitive processes function, and then using machine learning to help display those workings. In the banking industry, artificial intelligence extends beyond chat bots. One of the numerous areas that artificial intelligence has taken over is banking. The major goal of this study was to learn about how artificial intelligence affects current banking. **Mhlanga (2020)**, the study studied how AI affects digital financial inclusion and it is a popular way to engage the poor in finance. Fin tech companies leverage AI and its numerous applications to promote digital financial inclusion, which includes low-income earners, poor, and small enterprises in the mainstream financial market. To investigate AI's impact on digital inclusion of financial, this conceptual and documentary study examined peer-reviewed journals, reports, and other authoritative media. This study found that AI greatly impacts digital financial inclusion in risk assessment, measurement, and management; information asymmetry; chatbot-based customer care and helpdesk; fraud detection and cyber security; and customer support. Governments, financial institutions, and non-financial organizations worldwide should adopt and scale up AI tools and applications to help vulnerable non-financial groups engage in the formal financial market with fewest difficulties and maximum benefits. **Xu (2020)**, AI in customer service analyzes real-time service scenarios utilizing digital and/or physical data to deliver tailored suggestions, alternatives, and answers to even the most complicated customer concerns or problems. We conducted three field studies to assess consumer preferences for AI versus human online banking customer support. In low-complexity activities, consumers were more inclined to employ artificial intelligence (AI) to solve problems than human customer care, but in high-complexity jobs, they preferred human customer service. Customers' intents to use AI versus human services were mediated by their perceived problem-solving skills, with job difficulty as a boundary condition. We outline our study and its findings before offering advice for banks looking to use AI customer service's unique capabilities to better engage and communicate with consumers.

3. SIGNIFICANCE OF THE STUDY

The motive of the study is to show the Consumer perception towards Artificial Intelligence driven by Chatbots of Select Banks in Bangalore.

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4. STATEMENT OF THE PROBLEM

It gives a feel of talking to a person directly via chat, Chatbots can reply but can't able to think according to the customers' mindset, 24/7 and 365 days responses is available, There is no timeline for chatbot, No need of rest like ordinary employer working in Banks, Small queries can be solved using bots and AI technology, The person to person interaction is completely lost, Customer feels welcomed while entering into the website, Chatbots acts as a directional guide which helps the customer to reach or search required information, Technical Glitches may affect the function of chat bots, which may be difficult for customers to access.

5. OBJECTIVES

To study the consumer perception towards gender based Artificial Intelligence driven by Chatbots of the Selected Banks in Bangalore.

To study the consumer perception towards age based Artificial Intelligence driven by Chatbots of the Selected Banks in Bangalore.

6. HYPOTHESES

H01: There is no significant difference between consumer perception towards Artificial Intelligence driven by Chatbots of Select Banks and gender of the respondents.

H02: There is no significant difference between Consumer perception towards Artificial Intelligence driven by Chatbots of Select Banks and age of the respondents.

7. RESEARCH METHODOLOGY

The collecting of data demands not only the listing of information but also its precise documentation. The commitment influence of the respondents is measured in the current study utilizing a wide range of various approaches, and the research was done in an environment realistic of the real world. It is critical for the success of a study to collect reliable data.

7.1 Sample Design

The approaches of random samples were used to get the main data. Questionnaire was used to perform a field survey. The employees participating in the trial is using a straight forward simple random sampling technique, with 150 as sample size.

7.2. Statistical Tools

The ANOVA, Descriptive, and Simple percentage analysis has been used to analyze the connection towards Influence on buying behaviour and digital marketing of electronic products.

8. Gender of the respondents

The gender based respondents in consumer perception towards artificial intelligence driven chatbots of select banks presented in Table 1.

Table 1 Gender Classification

S. No.	Gender	No. of Respondents	Percentage
1	Male	88	70.40
2	Female	62	49.60
Total		137	100.00

Source: Primary Data

Table 1 shows that it can be noted that out of total respondents 150 investigated in the study among that 88 respondents of 7.40 percent are males and rest of 126 respondents of 49.60 percent are females in the study. It is concluded that majority of the respondents are male category of respondents in the study.

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9. Age of the respondents

The age based respondents in consumer perception towards artificial intelligence driven chatbots of select banks presented in Table 2.

Table 2 Age Classification

S. No.	Age of the Respondents	No. of Respondents	Percentage
1	Upto 25 years	18	14.40
2	26 to 40 years	75	60.00
3	41 to 55 years	37	29.60
4	Above 55 years	20	16.00
Total		150	100.00

Source: Primary Data

Table 2 shows that the majority of the respondents (60 percent) belong to the age category of 26 to 40 years, followed by 37 respondents of 29.60 percent who belong to the age category of 18 to 25 years, 20 respondents of 16 percent who are above the age category of 55 years, and 18 respondents of 14.40 percent who belong to the age category of 41 to 55 years in the study.

Consumer perceptions towards artificial intelligence

It is critical to have chatbots powered by generative artificial intelligence to reduce the amount of time that customers must wait for assistance while increasing the amount of time that employees take to answer their inquiries. In this chapter, we will go over the mechanics of how these chatbots work, ensuring that they are available at all hours of the day and night and provide prompt responses. In this section, we will look at how commercial firms have used chatbots to improve their customers' overall experience. This will be accomplished by analysing realistic examples from the real world, and the dates were collected and presented in Table 3.

Table 3 Consumer perception towards Artificial Intelligence driven by Chat boat of Select Banks

S. No.	Sources	SA	A	N	D	SD	Total
1	It gives a feel of talking to a person directly via chat.	62	68	10	5	5	150
		41.33	45.33	6.67	3.33	3.33	100.00
2	Chatbots can reply but can't able to think according to the customers' mindset.	68	43	24	12	3	150
		45.33	28.67	16.00	8.00	2.00	100.00
3	24/7 and 365 days responses is available.	61	59	15	11	4	150
		40.67	39.33	10.00	7.33	2.67	100.00
4	There is no timeline for chat bots.	47	35	46	7	15	150
		31.33	23.33	30.67	4.67	10.00	100.00
5	No need of rest like ordinary employer working in Banks	78	44	15	6	7	150
		52.00	29.33	10.00	4.00	4.67	100.00
6	Small queries can be solved using bots and AI technology.	63	53	20	7	7	150
		42.00	35.33	13.33	4.67	4.67	100.00
7	The person to person interaction is completely lost.	40	62	20	12	16	150
		26.67	41.33	13.33	8.00	10.67	100.00
8	Customer feels welcomed while entering into the website.	52	56	22	6	14	150
		34.67	37.33	14.67	4.00	9.33	100.00
9	Chatbots acts as a directional	65	47	19	11	8	150

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	guide who helps the customer to reach or search required information.	43.33	31.33	12.67	7.33	5.33	100.00
10	Technical glitches may affect the functions of chat bots, which may be difficult for customers to access.	33	60	27	21	9	150
		22.00	40.00	18.00	14.00	6.00	100.00

Source: Primary Data

Table 3 shows that 86.67 percent agree that it gives a feel of talking to a person directly via chat, no need for rest like an ordinary employer working in banks (81.33), and 24/7 and 365-day responses are available (80.00), which are important factors since more than 80 percent agree with these statements. The small queries can be solved using bots and AI technology (77.33), chatbots act as a directional guide who helps the customer reach or search for required information (74.67), chatbots can reply but can't think according to the customer's mindset (74.00), and customers feel welcomed while entering the website (72.00) are also important factors in the study. The person-to-person interaction is completely lost (68.00), and technical glitches may affect the functions of chat bots, which may be difficult for customers to access (62.00) are moderately important factors. However, 54.67 percent agree, while 14.67 percent disagree, that there is no timeline for chatbots among the respondents.

12. Hypothesis

12.1. The age of the respondents was analysed with the help of an ANOVA, and it is presented in Table 4.

Table 4 Age and Consumer Perception with AI

Age		N	Mean	F Value	Sig.
It gives a feel of talking to a person directly via chat.	Age Upto 25	18	4.22	0.954	0.416 (NS)
	26 to 40	75	4.28		
	41 to 55	37	4.11		
	Age Above 55	20	3.90		
	Total	150	4.18		
Chatbots can reply but can't able to think according to the customers' mindset.	Age Upto 25	18	4.11	0.326	0.807 (NS)
	26 to 40	75	4.15		
	41 to 55	37	3.97		
	Age Above 55	20	3.95		
	Total	150	4.07		
24/7 and 365 days responses is available.	Age Upto 25	18	4.28	0.749	0.525 (NS)
	26 to 40	75	4.15		
	41 to 55	37	3.95		
	Age Above 55	20	3.90		
	Total	150	4.08		
There is no timeline for chat bots.	Age Upto 25	18	3.61	4.697	0.004*
	26 to 40	75	3.91		
	41 to 55	37	3.46		
	Age Above 55	20	2.80		
	Total	150	3.61		
No need of rest like ordinary employer working in Banks	Age Upto 25	18	4.50	1.129	0.339 (NS)
	26 to 40	75	4.25		
	41 to 55	37	4.11		

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	Age Above 55	20	3.90		
	Total	150	4.20		
Small queries can be solved using bots and AI technology.	Age Upto 25	18	4.44	4.571	0.004*
	26 to 40	75	4.03		
	41 to 55	37	4.30		
	Age Above 55	20	3.35		
	Total	150	4.05		
The person to person interaction is completely lost.	Age Upto 25	18	4.11	1.966	0.122 (NS)
	26 to 40	75	3.73		
	41 to 55	37	3.51		
	Age Above 55	20	3.20		
	Total	150	3.65		
Customer feels welcomed while entering into the website.	Age Upto 25	18	4.67	4.698	0.004*
	26 to 40	75	3.80		
	41 to 55	37	3.84		
	Age Above 55	20	3.25		
	Total	150	3.84		
Chatbots acts as a directional guide who helps the customer to reach or search required information.	Age Upto 25	18	4.39	2.850	0.040*
	26 to 40	75	4.15		
	41 to 55	37	3.78		
	Age Above 55	20	3.50		
	Total	150	4.00		
Technical glitches may affect the functions of chat bots, which may be difficult for customers to access.	Age Upto 25	18	3.56	0.473	0.701 (NS)
	26 to 40	75	3.64		
	41 to 55	37	3.62		
	Age Above 55	20	3.30		
	Total	150	3.58		

Source: Computed from Primary Data

It gives a feel of talking to a person (0.954), replies only but can't change customers' mindset (0.326), 24/7 and 365 days responses (0.749), no need for rest like an ordinary employer (1.129), person-to-person interaction is completely lost (1.966), and technical glitches may affect (0.473). are not significant, and the stated hypothesis is accepted.

However, no timeline for chatbots (4.697), small queries can be solved (4.571), customers feel welcomed (4.698), and chatbots help the customer reach or search for required information (2.850) are significant at the five percent level, and the stated hypothesis is rejected.

12.2. The gender of the respondents was analysed with the help of the 't' test, and it is presented in Table 5.

Table 5 Gender and Consumer Perception with AI

Gender		N	Mean	't; value	Sig.
It gives a feel of talking to a person directly via chat.	Male	88	4.26	1.193	0.235 (NS)
	Female	62	4.06		
Chatbots can reply but can't able to think according to the customers'	Male	88	4.15	0.986	0.326 (NS)
	Female	62	3.97		

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mindset.					
24/7 and 365 days responses is available.	Male	88	4.30	3.062	0.003*
	Female	62	3.77		
There is no timeline for chat bots.	Male	88	3.78	1.924	0.057 (NS)
	Female	62	3.37		
No need of rest like ordinary employer working in Banks	Male	88	4.33	1.670	0.098 (NS)
	Female	62	4.02		
Small queries can be solved using bots and AI technology.	Male	88	4.28	3.036	0.003*
	Female	62	3.73		
The person to person interaction is completely lost.	Male	88	3.74	0.982	0.328 (NS)
	Female	62	3.53		
Customer feels welcomed while entering into the website.	Male	88	4.01	1.968	0.052 (NS)
	Female	62	3.60		
Chatbots acts as a directional guide who helps the customer to reach or search required information.	Male	88	4.16	2.015	0.046*
	Female	62	3.77		
Technical glitches may affect the functions of chat bots, which may be difficult for customers to access.	Male	88	3.57	0.143	0.887 (NS)
	Female	62	3.60		

Source: Computed from Primary Data

It gives a feel of talking to a person (1.193), reply only but can't change customers' mindset (0.986), no timeline for chatbots (1.924), no need for rest like an ordinary employer (1.670), person-to-person interaction is completely lost (0.982), customers feel welcomed (1.968), and technical glitches may affect (0.143) are not significant, and the stated hypothesis is accepted. However, 24/7 and 365-day responses (3.062), small queries can be solved (3.036), and chatbots help the customer reach or search for required information (2.015) are significant at the five percent level, and the stated hypothesis is rejected.

13. SUGGESTIONS

1. Chatbots are really good and necessary for the upcoming technological world, but they have to be used appropriately and wisely.
2. The chatbots are to be made as user-friendly as possible, as many websites are management-based bots that are not customer-oriented.
3. Like applications, chatbots need to be updated every month as new technical issues or queries can be solved and updated as per customer requirements'.

14. CONCLUSION

The unique qualities, robots and advisors are a particularly interesting development in the field of creative fintech. Unlike other projects, robot-advisors are powered by artificial intelligence (AI) technologies, which are automated platforms that use analytical intelligence to replace human advisory services. The growth of robotic and artificial intelligence (AI) systems, which are projected to progressively replace many human jobs in the next several years (especially those involving machinery, analysis, intuition, and empathy), necessitates an understanding of this service innovation. More specifically, from the perspective of the customer, people must adapt to new mechanical service providers that fill the social function that a human employee typically fills. According to recent research, this advancement constitutes a disruptive innovation that businesses must carefully comprehend and include if they hope to successfully convert in the medium term. According to TAM, the study framework makes two contributions to the body of prior research on the uptake of robots as advisors.

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