



ANALYZING CUSTOMER RESPONSE TO CONVERSATIONAL BANKING: A FACTOR-BASED ASSESSMENT

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Abstract: In today's fast-paced world, businesses have exciting opportunities to enhance customer satisfaction through advanced information and communication technologies. Banks, in particular, are adopting innovative electronic communication channels to stay competitive and satisfy customers. This study aimed to investigate customer attitudes towards conversational banking, using AI-powered digital assistants. It identified key determinants influencing customer acceptance or resistance to this new approach. Through factor analysis, it was revealed that customer acceptance plays a crucial role in the success of conversational banking. Understanding these determinants enables banks to improve the overall banking experience. Addressing customer concerns about safety and security fosters trust and increases acceptance of AI-powered digital assistants in conversational banking.

keywords: Conversational Banking, Digital Assistants, Chatbots, Customer Acceptance, Customer Resistance

1. INTRODUCTION

Technology implementation in banking has helped Indian banks cross many barriers, reach out to more people and save time. Customer service has occupied a major part of the technology overhaul. Banks are looking at various ways to make it easy for customers to reach out to them, often even while sitting at home. The next big thing in customer service in banking is the use of artificial intelligence to create chatbots for easy user experience [1] Conversational banking is a form of digital banking that empowers banks and customers to interact in real-time through text messaging, voice, mobile apps, and websites. With better communication, customers receive convenience and a more rewarding experience while banks are able to learn more about their customers' needs to offer personalized solutions [5]. The revolution with chatbots in online banking has been incredibly phenomenal. Banking chatbots are providing excellent customer service and improving how customers interact with banks and other financial institutions. In fact, chatbots are revolutionizing the way banks offer their services to customers [4]. Banks now put great effort into customer service since it has become a massive driver of customer satisfaction. It is necessary to rank ahead in the competition by providing outstanding products and services, brand recognition, trust, cost, and innovation.

1.1. BENEFITS OF CONVERSATIONAL BANKING

- Loan assistance: Chatbot can provide loan assistance by imitating bank staff on digital platforms
- Customer onboarding: Financial institutions can automate customer onboarding processes via conversational banking. AI chatbots can collect necessary data for onboarding and verify it to qualify new customers. By providing digital onboarding services on various channels, you can improve customer satisfaction.
- Automated customer service: One of the common applications of conversational banking is the automation of customer service via chatbots.
- Personalized notifications: Chat banking can automate sending personalized notifications concerning:
 - a. Personalized credit card bonus campaigns.
 - b. Transaction history.
 - c. Two-factor authentication code for secure payments.
 - d. Due day of debt payments and so on.[6]

The benefit of conversational banking is twofold:

1. Satisfied customers tend to remain loyal, actively participate, and increase their spending.
2. Banks achieve higher efficiency, reduced costs, and increased revenue streams through strategic operations.

It's a win-win strategy that can deliver a big ROI for financial services companies [5].

2. REVIEW OF LITERATURE

Chatbots are more accessible than calling because sometimes people speak with an indistinguishable accentuation and the account service isn't capable to help them. Security is important for consummate addicts especially when the chatbot handles financial data. Attainability has to be taken into account when administering chatbots [7]. Chatbots designed with AI are one of the most promising strategies of a banking business that can lead the bank to win the satisfaction vote of their loyal customers. chatbots are still a WIP and will keep improving. Every customer has specific needs and banks are needed to make sure they pitch them in the same way. This can be done smartly by optimizing their marketing plans on these chatbots [1]. Digital assistants will help online retailers to provide a better online shopping experience by eliminating overall customer dissatisfaction and privacy concerns regarding conversational commerce [2]. Chatbots still suffer from problems linked to their toddlerhood, working with high failure rates and doper skepticism when it comes to the operation of AI-hung chatbots [10]. [8] explores the services provided by chatbots in the Indian banking sector. HDFC Bank and State Bank of India use chatbots to clear all general queries of customers. ICICI Bank uses a chatbot to clear general queries, pay bills, transfer funds and recharge. Chatbot provided by Yes Bank can be used to check balance, view recent transactions, send money, pay bills, and much more. Acceptance of accessible chatbots is less considerable than expected as most available chatbots fail to fill users' requirements due to uncertain purposes, senseless responses, or unsatisfactory usability [9].

3. RESEARCH METHODOLOGY

This study outlines the chosen research areas and the rationale behind their selection. It also discusses the research design, approach, population, sample, sampling procedures, and data collection methods employed during the study.

3.1 NEED AND SCOPE OF THE STUDY

The study focuses on voice-driven interfaces and chatbots, which offer personalized services to customers. The structure of the study is as follows: It begins with an overview of the conceptual framework, research methods, and study results. Subsequently, the conclusions and limitations of the research are presented. The primary objective is to identify the factors contributing to customer satisfaction and the acceptance of digital assistants. By doing so, the study aims to assist banks in understanding variables that may cause customer resistance, leading to general dissatisfaction and privacy concerns related to conversational banking.

3.2 OBJECTIVES

The study was undertaken with the following objectives in mind:

1. To identify the key determinants or variables that influence customer acceptance or resistance towards conversational banking.
2. To identify the influential factors that can shape future strategies for enhancing customer satisfaction.
3. To analyze the various factors that contribute to customer acceptance or resistance in conversational banking.

3.3 RESEARCH METHODOLOGY AND SOURCES OF DATA

Sample Design: The study focused on the Indian banking industry, specifically examining the State Bank of India (SBI) from the public sector and HDFC from the private sector as representatives.

Data Source: Primary data was collected through a well-structured questionnaire, while desk research involved reviewing various published and unpublished materials related to the study area.

Sampling Method: The study selected approximately 400 respondents from SBI and HDFC in Bengaluru, using a convenience random sampling approach. The sample represented diverse age groups, genders, income levels, and educational backgrounds.

Type of Questionnaire: The study utilized a structured questionnaire with a five-point Likert scale, ranging from "strongly disagree" to "strongly agree."

Statistical Tools: The statistical analysis involved in this study utilized factor analysis with SPSS 19.0 version as the chosen tool.

4. DATA ANALYSIS

The research findings reveal the demographic distribution of the respondents as follows: 58.3% of the participants fell within the age group of 18-23, 28.6% were between 24-30 years old, and 13.1% were aged 31-40. Out of the 396 respondents, 58.3% were male, and 41.7% were female, indicating a relatively balanced gender representation.

In terms of educational qualifications, the respondents were predominantly well-educated, with 49.15% being graduates, 38.6% holding postgraduate degrees, and 12.3% having completed their PhDs. These figures suggest a high level of literacy among the participants.

Regarding family income, the study observed that the majority of respondents (58.6%) reported a family income ranging from Rs 3 lacs to 5 lacs. Additionally, 29.2% had a family income exceeding Rs 5 lacs, while 12.2% fell within the income range of 1 lakh to 3 lakhs.

4.1 CRONBACH ALPHA SCORE FOR RELIABILITY MEASUREMENT

To assess the questionnaire's reliability, Cronbach's Alpha was utilized, yielding a high overall reliability score of 0.945. This indicates a strong internal consistency and reliability of the questionnaire in measuring the intended variables.

Table.1. Reliability Statistics

Reliability Statistic	
Cronbach's Alpha	N of Items
.945	12

4.2 DESCRIPTIVE STATISTICS

Descriptive statistics were employed to determine the mean and standard deviation of the items. Notably, the item 'Customer apprehension of the bank account being hacked' exhibited the highest mean, highlighting customers' significant concern regarding safety in conversational banking.

Table.2. Descriptive Statistics

	Mean	Std. Deviation
Chatbots or voice assistants make banking easier	5.92	1.179
It helps to get quick answers in emergency	6.06	1.085
It helps in opening a new bank account	5.74	1.272
Transferring money between the accounts is easy	5.73	1.348
Loan applications or credit card applications	5.82	1.224
To file an Insurance claim	5.93	1.142
Raising the daily limit	5.85	1.190
Paying one bill	5.85	1.220
Concern about bank account being hacked	6.31	.796
Chatbots may contain malicious viruses with it	6.27	.787
Don't feel safe while sharing card details	6.27	.819
Privacy concerns that voice assistants are always recording audio	6.27	.785

4.3 FACTOR ANALYSIS

Factor analysis was performed on all the items to assess their relative significance, resulting in the identification of two key factors: Customer Acceptance and Customer Apprehension. Together, these factors explained a substantial 83.419% of the total variance. Notably, Customer Acceptance emerged as the primary factor, accounting for 50.462% of the total variance.

Table.3. Total Variance Explained

Total Variance Explained									
Compon ent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulati ve %	Total	% of Variance	Cumulati ve %	Total	% of Variance	Cumulati ve %
	1	7.578	63.151	63.151	7.578	63.151	63.151	6.055	50.462
2	2.432	20.268	83.419	2.432	20.268	83.419	3.955	32.958	83.419
3	.568	4.732	88.151						
4	.519	4.325	92.476						
5	.306	2.550	95.026						

6	.261	2.174	97.200						
7	.126	1.053	98.253						
8	.086	.720	98.973						
9	.064	.537	99.511						
10	.029	.242	99.753						
11	.025	.205	99.958						
12	.005	.042	100.000						
Extraction Method: Principal Component Analysis.									

Table.4. Rotated Component Matrix

Rotated Component Matrix ^a		
Variables	Component	
	1	2
Chatbots or voice assistants make banking easier	.773	
It helps to get quick answers in emergency	.801	
It helps in opening a new bank account	.757	
Transferring money between the account's is easy	.874	
Loan applications or credit card applications	.916	
To file an Insurance claim	.910	
Raising the daily limit	.910	
Paying one bills	.881	
Concern about bank account being hacked		.938
Chatbots may contain malicious virus with it		.938
Don't feel safe while sharing card details		.942
Privacy concern that voice assistants are always recording audio		.937
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization. ^a		

Among the items analyzed, certain tasks stood out as crucial, with Loan applications or credit card applications having the highest importance score (.916), closely followed by filing an insurance claim (.910) and raising the daily limit (.910).

Regarding Customer Apprehension, this factor played a significant role, explaining 32.958% of the total variance. Key concerns expressed by customers included not feeling safe while sharing card details (.942), apprehensions about their bank account being hacked (.938), and worries about chatbots potentially containing malicious viruses (.938).

5. CONCLUSION

According to the findings, a significant number of respondents utilized chatbots for online buying, while the majority preferred their mobile devices for conversational commerce. Through factor analysis, the components were categorized as Customer Acceptance and Customer Skepticism. Consumer acceptance of digital assistants was influenced by various factors, including query handling, ease of payment, product variety, customer support, quick decision-making, advertising impact, cash benefits, and discounts. These factors contributed to customer satisfaction, as they enhanced the overall shopping experience. On the other hand, consumer rejection of digital assistants was driven by concerns such as hacking, misuse of personal information, global risks associated with artificial intelligence, security threats, unauthorized access, and privacy issues. These factors led to customer dissatisfaction, as customers were apprehensive about the potential risks and drawbacks associated with using digital assistants.

6. LIMITATIONS OF THE STUDY

Like all research studies, this one also possesses certain limitations that should be acknowledged. One potential limitation is the possibility of biased responses from the respondents. Additionally, some participants might lack comprehensive knowledge about Digital Assistants, which could impact the accuracy of their answers. Moreover, this study specifically focused on certain aspects of Conversational Commerce, but there remains scope for other researchers to explore additional dimensions within Retailing, Finance, Telecommunications, and other domains.

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