

MODELLING THE FACTORS AFFECTING CUSTOMERS' INTENTION TO USE ARTIFICIAL INTELLIGENCE POWERED CHATBOT SERVICES IN BANKS

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ABSTRACT

Indian banks are using AI-powered chatbots to provide better customer service through real-time communication and problem-solving. This research study aims to compare customer intent in using chatbot services offered by private and public sector banks. Additionally, the study investigates the significant factors that explain customer behavioral intent to use AI-powered chatbot services. The paper collected primary data from Indian public and private sector bank customers in Delhi-NCR through Google form links, Instagram, and Facebook. The Unified Theory of Acceptance and Use of Technology (UTAUT) 2 was assessed, and statistical tools such as paired sample t-tests and multiple regression were used to test the hypotheses. The results of the multiple regression analysis showed that hedonic motivation plays a significant role in understanding the intent of public sector customers to use chatbots, while habit plays a significant role for private bank customers.

The authors observed a significant difference between public sector bank customers and private bank customers in terms of behavioral intent to use chatbot services, concluding that private bank customers are more intent on using chatbots compared to public sector customers.

Keywords: Chatbots and artificial intelligence have been subjects of interest and discussion due to their perceived complexity. Technological anxiety, risk, and social influence.

JEL Codes: C32, E31, E52, H62

INTRODUCTION

The acceptance of robots in chats is referred to as a chatbot. A chatbot is a smart, user-friendly, and readily adoptable technology. It is available 24/7/365 to provide one-to-one conversations and customized offers (Sarbabidya & Saha, 2020). The same is adopted in banking services to provide automated communication with

customers. Such advanced banking features uplift customer motivation and ease of direct connection (Elena, 2020). The study has used primary data collected from bank chatbot users using a random sampling method through a structured questionnaire (Magaji, 2021). The banking chatbot offers numerous advantages to the banker such as cost-saving, early fraud detection, reduced human errors, and many more (Kurode, 2018). Banks should focus on chatbot-centric services to provide customer service and thus ensure the growth and development of the bank and the economy as a whole. Chatbots act as a viable and informative interaction layer between banks and customers

(Anetta, 2021). This study provides a deeper understanding of how bank customers perceive chatbots as upgraded technology in banking services and communication channels in both private and public banks (Alzaidi, 2018). The UTAUT2 theory is framed with independent factors, namely social influence (SI), facilitating conditions (FC), performance expectancy (PE), hedonic motivation (HM), price value (PV), effort expectancy (EE), and habit and behavioral intention (BI), to use chatbot services as a dependent factor to predict a higher intention to use chatbot services (Reena, Kanda, Chanchal, & Vij, 2023). Artificial intelligence (AI) powered chatbots adopted



Fig.1: Use cases of chatbot in banking

Source: Sinha, S. (2022)

by banks can be used in several ways, such as quick detection of fraud transactions, checking account transactions and statements, answering basic queries of customers, timely notification of customers, and transferring funds from one account to another, and the like.

LITERATURE REVIEW

The literature review provides a robust understanding of the use of chatbots in the banking industry, concerning how Indian banks react to the adoption of AI-powered chatbots. Presently, several banks in Indonesia have adopted chatbot technology in banking customer service. The AI application in customer service helps prepare banks for the upcoming challenges related to fraud and customer service (Wicaksono & Zahra, 2022). Gupta and Sharma (2019) investigated the use of chatbots in the banking industry as a preferred option for customers, evidenced by a positive correlation between utility, accessibility, threats, and customers' attitudes towards chatbots. Cardona et al. (2019) studied customers' intention to use a chatbot in the insurance sector and concluded that the sample population is highly aware of technology and its use, preferring to recommend it to others. Richad et al. (2019) and Anetta et al. (2021) studied behavior intention and concluded that perceived usefulness, perceived ease of use, and innovativeness play a positive significant role in shaping customer behavior. Sarbabidya and Saha (2020) observed that chatbots, as one of the banking service framing customer interaction tools, have been positively affected by ease of use, relationship services, responsive

service, advisory services, value-based useful services, and maintaining customer privacy and security. Rani et al. (2023) aim to study the working of chatbots in the banking sector and conclude that most of the questions customers query for are already available on websites, so there is a need for updated features in chatbot assistance. The author develops a baseline for how customers in emerging markets interact using chatbots and concludes that technological experience and age play a significant role in the UTAUT model and impede intention to use (Aaron & Smith, 2020). Based on the existing literature review, the research topic is in its pre-seeding phase and includes qualitative analysis of banking performance. Very few studies have analyzed the chatbot acceptance model in banking (Richad et al., 2019), (Cardona et al., 2019), and comparison is the least, which becomes a research gap. Thus, the paper compares the public sector and private sector bank customers' intention to use AI-powered chatbot services.

OBJECTIVES OF THE STUDY

To compare the customer intention to use chatbot services powered by public and private sector banks.

To examine the significant factors that explain the customer's behavioral intention (BI) to use AI-powered chatbot services.

CONCEPTUAL MODEL PROPOSED

The conceptual model above depicts the extended theory of UTAUT (Venkatesh et al.,

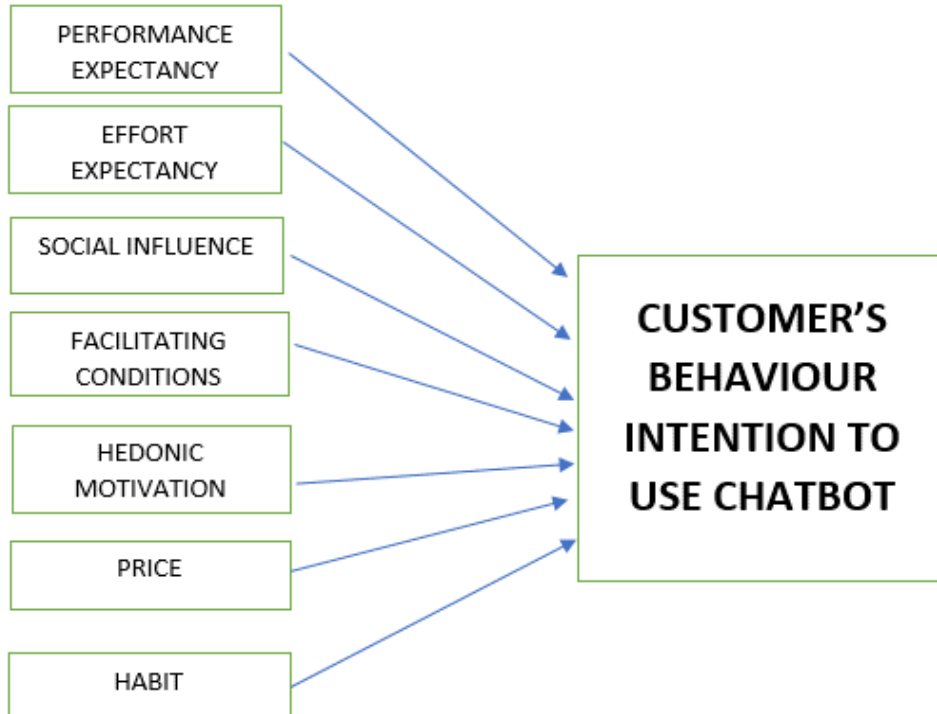


Fig.2: Conceptual Model

Source: Author's creation

2003) provided by Venkatesh et al. (2012). It is considered a base theory to analyze the substantial factors that explain the behavioral intention (BI) of customers to use a banking chatbot. This is one of the few studies that have considered the UTAUT 2 theory concerning chatbot acceptance among customers, but a comparison of public and private sector bank customers in India was missing. Through this model, the authors have tried to understand and compare the public and private sector bank customers' intention to use AI-powered banking chatbot services effectively.

SETTING OF HYPOTHESES

To test the behavioral intention of customers in the private and public sector banks towards the use of chatbot services in banking, based on seven parameters: social influence (SI), facilitating conditions (FC), performance expectancy (PE), hedonic motivation (HM), price value (PV), effort expectancy (EE), and habit (Venkatesh et al., 2019). Hypothesis testing was conducted on primary data collected via structured questionnaires from customers of public and private segment banks. To test the hypotheses, the authors have separately set the following hypotheses for each parameter based on the UTAUT2 theory (Venkatesh et al., 2012):

Factor	Definition	Items
Performance expectancy	It is expressed in terms of increasing performance by using systems and updated technology at the workplace.	<p>PE1: chatbot are useful and effective in my daily life</p> <p>PE2: With the help of the chatbot, I can achieve important things regularly</p> <p>PE3: Things can be accomplished by saving time using a chatbot.</p> <p>PE4: Productivity enhanced using chatbot.</p>
H₁₁: There is a significant change in the chatbot's performance expectancy of public sector and private sector customers		
Effort expectancy	It determines the level of ease while using the system	<p>EF1 Chatbot provides clear and understandable interaction for me</p> <p>EF2 How to use a chatbot is easy for me</p> <p>EF3: Chatbot is easy to use for me</p> <p>EF4: Chatbot also makes me skilful to interact effectively.</p>
H₁₂: There is a significant change in chatbot's effort expectancy of public sector and private sector customers		
Social influence	It expresses the degree that claims the importance of a system by which others get influenced to use the same.	<p>SI1: People whose opinions matter to me prefer to use chatbot.</p> <p>SI2: People who impact my behaviour intention think that I should continue using a chatbot.</p> <p>SI3: Important people in my life think that I should continue using chatbot.</p>
H₁₃: There is a significant change in the social influence parameter of public sector and private sector customers		
Facilitating conditions	It explains factors of people and the surrounding social environment that can affect the use of the system.	<p>FAC1: Necessary resources are available to me for using a chatbot.</p> <p>FAC2: Necessary knowledge imparted to use a chatbot</p> <p>FAC3: Compatible with other technologies for a chatbot is satisfactory.</p> <p>FAC 4: Others are also familiar with the chatbot and are ready to help me when required.</p>
H₁₄: There is a significant change in chatbot's facilitating conditions of public sector and private sector customers		
Hedonic motivation	It expresses the fun and pleasure derived from adopting newer technologies in the workplace.	<p>HM1: Using a chatbot is enjoyable.</p> <p>HM2: Using a chatbot is gratifying.</p> <p>HM3: Using a chatbot is very pleasure.</p>

H₁₅: There is a significant change in chatbot's hedonic motivation of public sector and private sector customers
Price Value**User conduct cost-benefit analysis for the price as cost and benefits as time-saving by using new technology**

PV1 Chatbot prices are affordable.
PV2: Chatbot support value for money.
PV3: The price of the chatbot provides a satisfactory value for money.

H₁₆: There is a significant change in the chatbot's price value of public sector and private sector customers
Habit**It is the measurement of constant behaviour towards any stimulus that gets adapted to the user's beliefs.**

HT1: I am habitual in using chatbot.
HT2: I am addicted to using chatbot.
HT3: Chatbot is a must-use.
HT4: Chatbot is naturally used by me every time.

H₁₇: There is a significant change in the habits of public sector and private sector customers concerning chatbot
Customer's intention to behave while using chatbot services**Behavioural intention is the level at which someone has planned to do or will not do something in the future source**

BI1:I intend to use a chatbot in future for very and every purpose.
BI2:I will always try to use chatbot in my daily routine
BI3:I plan to continue the use of chatbot more often.

RESEARCH METHODOLOGY

Measurement items are kept the same as in previous literature (Venkatesh et al., 2012). A five-point Likert scale extending from Strongly Disagree (1) to Strongly Agree (5) is used in all statements. The respondents are the existing customers of private banks and public banks from Delhi/NCR, who are considered as the target audience. The random sampling method was adopted for the selection of the sample. After that, the snowball sampling method was followed to obtain responses from bank customers. A total of 102 responses were received, which were found suitable for the study. The final sample of 51 private bank customers and 51 public segment bank

customers was considered for data analysis. The survey data obtained was analyzed using both descriptive and quantitative techniques. Descriptive statistics explain the use of respondent profiles, whereas quantitative techniques involve various statistical tools, namely t-test and Multiple regression analysis. The data was evaluated using Microsoft Excel and specialized software - The Statistical Package for Social Science (SPSS).

The quantitative results revealed that 47.06% of respondents are male and the remaining 52.94% are female. The highest proportion of respondents by age group is 67.76% in the 0-30 years category, followed by 26.48% in the 31-45 years category, and 11.76%

Table.1: Profile of the respondents

Demographic	Frequency	Percentage	Cum. frequency
Gender			
Male	48	47.060%	47.060%
Female	54	52.940%	100%
Age (in years)			
0- 30	63	61.76%	61.76%
31-45	27	26.48%	88.24%
46-60	12	11.76%	100.00%
Bank type			
Public sector Bank	51	50.00%	50.00%
Private sector Bank	51	50.00%	100.00%
Years of experience in using chatbot			
Less than 1 year	40	39.21%	39.21%
1-2 years	30	29.42%	68.63%
2-3 years	12	11.76%	80.39%
More than 3 years	20	19.61%	100.00%

Table 2: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PE PVT	3.80	51	.739	.103
	PE PSB	3.41	51	.765	.107
Pair 2	EE PVT	4.11	51	.617	.086
	EE PSB	3.65	51	.783	.110
Pair 3	SI PVT	3.78	51	.638	.089
	SI PSB	3.29	51	.745	.104
Pair 4	FC PVT	4.00	51	.567	.079
	FC PSB	3.59	51	.778	.109
Pair 5	HM PVT	3.54	51	.809	.113
	HM PSB	3.40	51	.904	.127
Pair 6	PV PVT	4.04	51	.762	.107
	PV PSB	3.39	51	.781	.109
Pair 7	HABIT PVT	3.17	51	.960	.134
	HABIT PSB	3.12	51	.852	.119

Source: Output from SPSS 21.0

in the 46-60 years category. The majority of survey respondents who have not used a chatbot for a longer period are recorded based on their experience with a chatbot in years. The highest is less than 1 year, with 40 respondents (39.21%), followed by 1 – 2 years, with 30 respondents (29.42%), followed by more than 3 years, with 20 respondents (19.61%), and 12 respondents (11.76%) for 2-3 years.

Data Analysis and Results

Social Influence (SI), Facilitating Conditions (FC), Performance Expectancy (PE), Hedonic

Motivation (HM), Price Value (PV), Effort Expectancy (EE), Habit, Public sector banks (PSB), and Private sector banks (PVT).

The table above showcases the mean values and standard deviation (SD) of all seven parameters of private segment bank customers and public segment bank customers. It is quite evident from the above table that private sector customers have higher average mean values compared to public sector customers. This means that private sector customers' intention to use AI-powered chatbot is higher compared to public sector customers.

Table 3: Paired Samples Test

		Paired Differences			T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	PE PVT - PE PSB	.392	1.163	.163	2.408	50	.020
Pair 2	EE PVT - EE PSB	.461	1.090	.153	3.019	50	.004
Pair 3	SI PVT - SI PSB	.490	.999	.140	3.506	50	.001
Pair 4	FC PVT - FC PSB	.417	1.010	.141	2.947	50	.005
Pair 5	HM PVT - HM PSB	.137	1.242	.174	.789	50	.434
Pair 6	PV PVT - PV PSB	.654	1.081	.151	4.318	50	.000
Pair 7	HABIT PVT - HABIT PSB	.049	1.345	.188	.260	50	.796

Source: SPSS Output sheet

The paired sample T-test enables inspecting the significant difference in behavior intention (BI) to use AI-powered chatbot services between public segment and private segment customers. The results of the T-test indicated that the mean difference score is significant at the 0.05 level for five variables, i.e., Performance expectancy (PE), facilitating

conditions (FC), social influence (SI), effort expectancy (EE), and price value (PV), which represents a significant difference in customer perception for both banks in the above-stated variables. Private bank customers have a noteworthy positive intention to adopt chatbot as banking services compared to public sector customers. As a result, the alternate hypothesis

Table 4: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	29.700	7	4.243	20.647	.000 ^b
	Residual	8.836	43	.205		
	Total	38.536	50			

a. Dependent Variable: BI PSB

b. Predictors: (Constant), HABIT PSB, EE PSB, SI PSB, PV PSB, HM PSB, PE PSB, FC PSB

Source: SPSS Output sheet

Table 5: Multiple Regression Coefficient- Public sector bank customers

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-.731	.359		-2.036	.048
	PE → BI	.248	.175	.216	1.422	.162
	EE → BI	.213	.183	.190	1.164	.251
	SI → BI	.057	.174	.049	.328	.744
	FC → BI	.169	.188	.150	.898	.374
	HM → BI	.260	.112	.268	2.312	.026
	PV → BI	.118	.132	.105	.889	.379
	H → BI	.111	.103	.108	1.083	.285

Source: SPSS Output sheet

of parameters no. 1, 2, 3, 4, and 6 is acceptable (H11, H12, H13, H14, and H16), and the alternate hypothesis of parameters no. 5 and 7 is rejected (H15 and H17).

The model conducted by public sector bank customer analysis by running R square value through SPSS stands out as 0.771, which indicates that 77.10% of the change in behavioral intention of public sector customers to use chatbot services is explained by seven independent factors considered in a research study.

The study uses the ANOVA (Analysis of Variance) test to identify the informed variation between samples to determine the presence of considerable differences in the behavioral intention of customers. The use of the F test implies the mean difference significance of collected responses given for samples. Checking the F test states that a value below 0.05 is evidence to reject the H0 in favor of H1. The above table depicts that the model so designed is acceptable and momentous as the value in the significance is 0.00, less than the 0.05 criterion value.

Multiple regression analyses the relationship between constructs with multiple measurement items. This study attempted to describe the customers' behavioral intention towards chatbot technology usage by considering the extended UTAUT 2. The above table explains that the only alternate hypotheses of the Hedonic motivation parameter are accepted as relationships between these variables are strong (t value = 2.312 and $p < 0.05$). All other alternate hypotheses are rejected as the association between variables is weak ($p > 0.05$). Hedonic motivation, as an independent variable, has a positive and adequate impact on public sector customers' intention to use AI-powered chatbot services (Paraskevi et al., 2023).

The model conducted private sector bank customer analysis in SPSS to estimate R square value, which turned out to be 0.657. This indicates that 65.70% of the change in behavioral intention of private sector customers to use chatbot services is explained by seven independent factors considered in the research study.

Table 6: ANOVA (2)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.869	7	3.410	11.790	.000 ^b
	Residual	12.436	43	.289		
	Total	36.305	50			

a. Dependent Variable: BI P

b. Predictors: (Constant), HABIT PVT, HM PVT, PV PVT, FC PVT, PE PVT, EE PVT, SI PVT

Source: SPSS Output sheet

Table 7: Multiple Regression Coefficient- Private sector bank customers

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.151	.706		-.214	.831
PE → BI	.132	.202	.115	.655	.516
EE → BI	-.079	.219	-.057	-.362	.719
SI → BI	.270	.239	.202	1.128	.265
FC → BI	.186	.201	.124	.926	.360
HM → BI	.008	.140	.008	.059	.953
PV → BI	.060	.121	.054	.496	.622
H → BI	.453	.123	.511	3.697	.001

a. Dependent Variable: BI PVT

Source: SPSS Output sheet

The above table depicts that the model so designed is acceptable and momentous as the value in the sig. column is 0.00 less than criterion value.

The above table explains that the only alternative hypotheses of the Habit parameter are accepted as relationships between these variables are strong (t-value = 3.697 and $p < 0.05$). All other alternative hypotheses are rejected as the association between variables is weak ($p > 0.05$). Habit, as an independent variable, has a positively noteworthy impact on private sector customers' intention to use AI-powered chatbot services (Almahri, 2020).

DISCUSSION AND CONCLUSION

Chatbot applications powered by AI are becoming one of the popular communication tools for improving customer service in the

banking sector, particularly regarding grievance handling, quick updates, and fraud detection. It has now become imperative for big banks to offer chatbot services to their customers. Most banks implement chatbot services to reduce costs and enhance the customer experience. The findings of the study confirmed that the five parameters, namely price value (PV), social influence (SI), effort expectancy (EE), performance expectancy (PE), and facilitating conditions (FC), have shown significant differences in the perception of using chatbot between public and private bank customers. Private bank customers have a higher intention to use chatbot compared to public bank customers. Furthermore, the multiple regression results showed that hedonic motivation plays a significant role in the intention of public bank customers to use chatbot, whereas habit plays a significant role in the intention of private sector bank

customers to use chatbot. In summary, private bank customers are habitual users of chatbot services, whereas public bank customers mostly use chatbot for fun and pleasure.

BIBLIOGRAPHY

1. Aaron Smith, H. N. (2020). Artificial Intelligence in Banking A Mini Review. SSRN Electronic Journal.
2. Aggarwal, B., Agarwal, H., & Talib, P. (2019). Application of Artificial Intelligence for Successful Strategy Implementation in India's Banking Sector. *International Journal of Advanced Research*, 7(11), 157-166.
3. ALT, M.-A., VIZELI, I., & SĂPLĂCAN, Z. (2021). Banking with a Chatbot: A Study on Technology Acceptance. *Studia Universitatis Babeş-Bolyai Oeconomica*.
4. Almahri, F. A. J., Bell, D., & Merhi, M. (2020, March). Understanding student acceptance and use of chatbots in the United Kingdom universities: A structural equation modelling approach. In *2020 6th International Conference on Information Management (ICIM)* (pp. 284-288). IEEE.
5. Alzaidi, A. A. (2018). Impact of Artificial Intelligence on the Performance of the Banking Industry in the Middle East. *International Journal of Computer Science and Network Security*, 18(10), 140-148.
6. Ambrish Kumar Mishra, A. P. (2021). Impact of the COVID-19 Outbreak on the Performance of the Indian Banking Sector. *International Semantic Intelligence Conference*.
7. Anetta, M. V. (2021). Banking with a Chatbot – A Study on Technology Acceptance. *Studia Universitatis Babeş*, 66(1), 13-35.
8. Ashish Bagewadi, D. D. (2020). Analysis of the Banking Sector in India: Post COVID-19. *International Journal of Research and Analytical Reviews*, 7(3), 299-308.
9. Cardona, D. R., Werth, O., Schönborn, S., & Breitner, M. H. (2019). A Mixed Methods Analysis of the Adoption and Diffusion of Chatbot Technology in the German Insurance Sector. *Proceedings of the 25th Americas Conference on Information Systems (AMCIS)*, Cancun, Mexico.
10. Christian Catalini, C. F. (2018). Machine Intelligence vs. Human Judgment in New Venture Finance.
11. Das, S. R. (2019). Future of Fintech. *Financial Management Wiley*, 10.1111(48), 981-1007.
12. Dhingra, A. B. (2020). Analysis of the Banking Sector in India. *International Journal of Research and Analytical Reviews*, 7(3), 299-308.
13. Donepudi, P. K. (2017). AI and Machine Learning in Banking: A Systematic Literature Review. *Asian Journal of Applied Science and Engineering*, Volume 6, No 3.
14. Dr Navleen Kaur, M. S. (2020). Banking 4.0: The Influence of Artificial Intelligence on the Banking Industry and How AI is Changing the Face of Modern-day Banks. *International Journal of Management*, 11(6), 577-585.
15. Dubey, V. (2019). Fintech Innovations in Digital Banking. *International Journal of Engineering Research and Technology*, 597-601.
16. Elena Carletti, S. C. (2020). *The Bank Business Model in the Post-COVID-19 World*. London, UK: IESE Banking Initiative.
17. Fintech Innovations in Digital Banking. (2019). *International Journal of Engineering Research and Technology*, 8(10), 597-601.
18. Gupta, A., & Sharma, D. (2019). Customers' Attitude towards Chatbot in the Banking Industry in India. *International Journal of Innovative Technology and Exploring Engineering*.

19. Hair, J. F., Hult, G. T., Ringle, C. M., & Sarstedt, M. (2016). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). *Quantitative Techniques for Business & Management Research*.
20. Hong, J.-C., Han, C.-J., Dai, C.-Y., Hwang, M.-Y., Lin, P.-H., & Lee, C.-C. (2012). Technology Anxiety and Implicit Learning Ability Affect Technology Leadership to Promote the Use of Information Technology at Elementary Schools. *International Educational Technology Conference IETC 2012* (pp. 555-563). *Procedia - Social and Behavioral Sciences*, 64(2012).
21. Im, I., Kim, Y., & Han, H.-J. (2007). The Effect of Perceived Risk and Technology Type on Users' Acceptance of Technology. *Information and Management, ScienceDirect*.
22. Inaki Aldasoro, I. F. (2020). Effect of COVID-19 on the Banking Sector. *BIS Bulletin*.
23. Jewandah, D. S. (2018). How Artificial Intelligence is Changing the Banking Sector. *International Journal of Management, Technology and Engineering*, 8(VII), 525-531.
24. Jonathan Donner, A. T. (2008). Mobile Banking and Economic Development.pment: Linking adoption, impact and use. *Asian Journal of Communication*, 18(4).
25. Keenam, J. M. (2020). Covid, Resilience and the built environment. Springer, *Environment systems and decisions*, 40, 216-221.
26. Kunwar, M. (2019). Understanding how Automation and Machine learning are transforming the financial industry. *Artificial Intelligence in Finance*, p. 36.
27. Kurode, T. (J.2018). Review of applicability of Artificial Intelligence in various financial services. *Journal of Advance Management Research*, 06(01), 2019-214.
28. Magaji, E. B. (2021). Emerging-market consumers' interactions with banking chatbot. *Telematics and Informatics*, 65.
29. Marie Paule, O. P. (2020, May). Banking model after Covid-19: Taking model risk management to the next level. Mckinsley and Company.
30. Moore, G. C., & Benbasat, I. (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. *Adoption of Information Technology Innovation, Information Systems Research*, 2(3), 192-222.
31. Namratha, S. J. (2019). Impact of Artificial Intelligence in Chosen Indian Commercial Bank- A Cost Benefit Analysis.
32. Phillipe Dintrans, B. H. (2019). Artificial Intelligence in Financial Services: From nice to must-have. *India: Cognizant*.
33. Paraskevi, G., Saprikis, V., & Avlogiaris, G. (2023). Modeling Nonusers' Behavioral Intention towards Mobile Chatbot Adoption: An Extension of the UTAUT2 Model with Mobile Service Quality Determinants. *Human Behavior and Emerging Technologies*, 2023(1), 8859989.
34. Rajesh Bansal, A. B. (Sep). Recovery, Resilience and Adaptation: India from 2020 to 2030. *Carnegie India, Washington DC*.
35. Rani, R., Kanda, J., Chanchal, C., & Vij, T. (2023). A Study on chatbot in the Indian Banking Sector. *Contemporary Studies of Risks in Emerging Technology*, 35-47.
36. RBI Director, I. (2020). *Artificial Intelligence in Banking*. Delhi: RESERVE BANK OF INDIA.
37. Richad, R., Vivensius, V., Sfenrianto, S., & Kaburuan, E. R. (2019). Analysis of factors influencing millennials' technology acceptance of chatbot in the banking industry in Indonesia.

- International Journal of Civil Engineering and Technology, 1270-1281.
38. Salunkhe, R. T. (2019). Role of Artificial Intelligence in providing customer service with Special reference to SBI and HDFC Bank. *International Journal of Recent Technology and Engineering*, 8(4), 12251-12260.
 39. Sannya, L., Susastra, A. C., Roberts, C., & Yusramdaleni, R. (2019). The analysis of customer satisfaction factors that influence chatbot acceptance in Indonesia. *Management Science Letters*, 1225-1232.
 40. Sarbabidya, S., & Saha, T. (2020). Role of Chatbot in Customer Service: A Study from the Perspectives of the Banking Industry of Bangladesh. *International Review of Business Research Papers*.
 41. Sengupta, S. M. (2020). Impact of COVID-19 on Indian economy. Mumbai: Indira Gandhi Institute of Development Research.
 42. Sinha, S. (2022). Chatbot for banking: Everything you need to know. Ameyo. Retrieved from <https://www.ameyo.com/blog/chatbot-for-banking-everything-you-need-to-know/>
 43. Veerla, V. (January 2021). To study the impact of Artificial Intelligence as Predictive model in banking sector: Novel approach. *International Journal of Innovative Research in Technology*, 7(8), 94-105.
 44. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-478.
 45. Venkatesh, V., Thong, J. Y., & Xu, X. (2019). Consumer acceptance and use of Information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*.
 46. Vijai, D. C. (April 2019). Artificial Intelligence in the Indian Banking Sector. *International Journal of Advanced Research*, 7(5), 1581-1587.
 47. Villar, A. S., & Khan, N. (2021). Robotic process automation in the banking industry: a case study on Deutsche Bank. *Journal of Banking and Financial Technology*.
 48. Wicaksono, B. P., & Zahra, A. (2022). Design of the use of chatbot as a virtual assistant in banking services in Indonesia. *IAES International Journal of Artificial Intelligence (IJ-AI)*, 23-33.