

A Comparative Study on AI & Customer Satisfaction in Public & Private Sector Banks

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Abstract: The operational psychology of organizations has altered over the past several years as a result of technology. Artificial intelligence (AI) is becoming more necessary and in demand, and the Indian banking industry is steadily moving in that direction. Banks are experimenting with and applying technology in a variety of ways. Every day, artificial intelligence improves and becomes smarter. Compared to other industries, banking has seen faster adoption of AI. This occurred as a result of the banking industry's continued reliance on manual labor for many tasks. The Indian banking industry is looking for methods to use artificial intelligence to improve customer service and engage them through providing various financial tools in the form of digital banking application. This essay examines how Private sector and Public sector banks adopt artificial intelligence (AI) with Special reference to SBI and ICICI Bank.

Keywords: Artificial Intelligence, Application of Technology, Customer Service and engagement and Digital Banking application.

INTRODUCTION

Banking: A bank is a monetary organization that is authorized to acknowledge checking and investment funds stores and makes credits. Banks additionally offer related types of assistance, for example, individual retirement accounts (IRAs), testaments of store (Albums), cash trade, and safe store boxes.

This industry has been creating without jumps and bobs since the nationalization of the banks in India and tending to the requests of the various areas of society. As of late the financial area has gained speedy ground by utilizing IT as a stage and attempting to take off more noteworthy heights. Client heart has provoked banks to take on the most reasonable prescribed procedures on the planet that attention on critical issues including the market, clients, rivalry, innovation and society.

Artificial intelligence: Artificial intelligence is one of the hottest topics in the current situation. AI is referred to as a simulation related to human intelligence; AI is accomplished by studying the method of human brain and analyzing through their cognitive process.

The historical backdrop of man-made reasoning (artificial intelligence) started in times long past, with legends, stories and gossip tidbits about fake creatures supplied with knowledge or cognizance by ace skilled workers. The seeds of present day artificial intelligence were planted by **savants** who endeavored to depict the course of human reasoning as the mechanical control of symbols. This work finished in the creation of the programmable advanced PC during the 1940s, a machine in view of the theoretical substance of numerical thinking. This gadget and the thoughts behind it roused a small bunch of researchers to start truly examining the chance of building an electronic cerebrum.

With special reference to SBI and ICICI: State Bank of India (SBI) was established on 1 July 1955. This bank is considered to as largest public sector bank in India. (Before 1955, SBI was known as “Imperial Bank of India”). SBI stands at 49th rank with respect to its total assets and stands at 221st in a list of 500 in Fortune Global. Very recently i.e., on 14 September 2022 SBI occupied position of 3rd top lender and reached a market capitalization of 5 Trillion.

ICICI Bank is the 2nd largest private sector bank soon after HDFC; this bank was found on 1955 but was incorporated in the year 1994 under ICICI group. One fair statement is that, ICICI was not found by any individual perhaps the World Bank started ICICI bank. This bank is well known for its offerings like, private life insurance services, investment banking etc.

State Bank of India (SBI) is the biggest public area banking administrations supplier in the country. To convey powerful financial administrations, the bank profits by man-made reasoning. SBI Keen Colleague (SIA), a man-made intelligence fueled savvy visit collaborator, addresses client enquiries quickly and assists them with regular financial undertakings like a human does. Created by a computer based intelligence banking stage Payjo, this savvy visit partner is prepared to deal with almost 10,000 enquiries each second or 864 million in a day, which is practically 25% of the questions are handled by Google every day, reports noted.(AI applications used: SIA, YONO App).

ICICI Bank, a main confidential area bank in India, has applied programming mechanical technology in more than 200 business processes across different elements of the organization. Through this, the bank turned into the principal in the country to convey a computer based intelligence framework at a huge scope in different cycles. As indicated by the report, ICICI bank has scaled its RPA drive to north of 750 programming advanced

mechanics taking care of almost 2 million exchanges day to day, which is 20% of the exchange volumes. (AI Applications used: (iPal, ila).

Review of Literature:

- 1) Anchal Arora and Sanjay Gupta (2023), Customer experiences in the era of artificial intelligence (AI) in context to FinTech: a fuzzy AHP approach. . Where they express about the era of Artificial intelligence with respect to their customer satisfaction. In this article written by Anchal Arora and Sanjay Gupta they try to explain much more about their article in the field of fintech and our observation on that stands as below.
 - 2) Reem Al- Araj and Hossam Haddad (2022). The effect of AI on service quality and Customer in Jordanian Banking Sector. The scholars have clearly explained in this article about how essential AI is in their banking sector in order to reach their customer satisfaction. As, AI statistically involves in providing quality support to the customers in Jordanian
 - 3) MichailsDouplos and ConstantainZopounidis(2022). Operational Research and Artificial intelligence Method in Banking. In this clearly states that Operational research (OR) and artificial intelligence (AI) methodologies are frequently used in empirical and methodological research that focuses on the banking industry.
 - 4) Daniel Belanche and Luis Vicente(2019), Artificial intelligence in Fintech: (Understanding Robo-advisors adoption among customers). They both with the involvement of their team has clearly explained about the concept and its involvement as following: Purpose The goal of this study is to provide a research paradigm to better understand robo-advisor adoption by a wide spectrum of potential clients in light of the growing influence of Artificial Intelligence (AI) on financial technology (FinTech).
 - 5) Ruchika Gupta and Gagan Kukreja (2017), Artificial intelligence Fostering Fintech This article completely stands on the emerging trends and causes in the fintech with the use of artificial intelligence. Ruchika Gupta and Gagan Kukreja presented this article in order to explain adoption of fintech . This essay examines the development of fintech in India, the difficulties it faces, and the opportunities presented by high penetration, the demographic dividend, connectivity to contemporary, reasonably priced technology, low Smartphone penetration rates, and government initiatives like Digital India and Make in India
- Research Design:** Primary Data is connected with the interview of both SBI and ICICI. Statistical tools are used in the analysis. Secondary data are connected through various research papers, Google, RBI etc.

Objectives

- Fraud Detection and Regulatory Compliance.
- Improved Investment Evaluation in comparison with SBI & ICICI.
- Better Customer Experience and satisfaction in terms of operational cost and improved loan facilities.

ANALYSIS

1) Customer's Response on SBI

Gender	SBI Account Holders	%
Male	68	67%
Female	33	33%
Total	101	100%

Customer's Response on ICICI

Gender	ICICI Account Holders	%
Male	62	62%
Female	38	38%
Total	100	100%

INFERENCES:-

Totally 101 responses were collected from SBI and 100 from ICICI. Out of it 68% and 62% from male and 33% and 38% from female with respect with SBI and ICICI respectively.

Independent t-test between Gender and AL Facility offered by banks

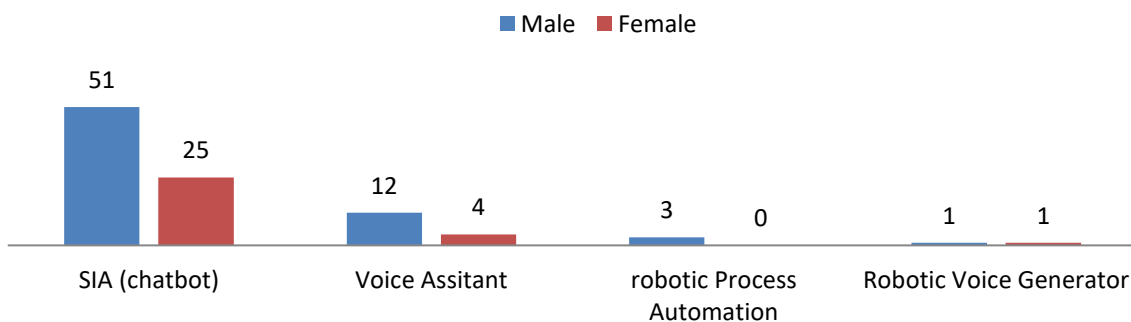
Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
If yes which of the following	Male	130	4.831	2.7227	.2388
AI tool that your Bank offers	Female	71	4.268	2.6184	.3107

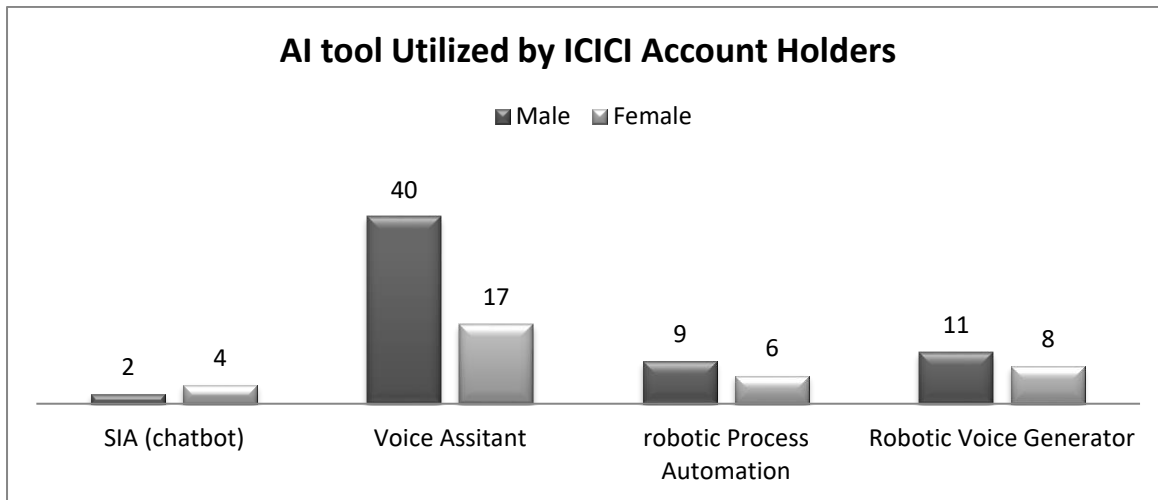
2) If yes, which of the following AI tool that your Bank offers to you?

Gender	SIA (chatbot)	%	Voice Assistant	%2	robotic Process Automation	%3	Robotic Voice Generator	%4	All the option	%5	SIA & Voice assistant	%6
Male	51	67%	12	75 %	3	100 %	1	50 %	1	100 %	0	0%
Female	25	33%	4	25 %	0	0%	1	50 %	0	0%	2	100 %
Total	76	100 %	16	25 %	3	100 %	2	100 %	1	100 %	2	100 %

AI tool Utilized by SBI Account Holders



Gender	SIA (chatbot)	%	Voice Assistant	%2	robotic Process Automation	%3	Robotic Voice Generator	%4	All the option	%5	SIA & Voice assistant	%6
Male	2	33%	40	70%	9	60%	11	58%	1	100%	Male	62
Female	4	67%	17	30%	6	40%	8	42%	0	0%	Female	38
Total	6	100%	57	30%	15	100%	19	100%	1	100%	Total	100



Inferences- it is found in the analysis that SBI customers are more aware of AI and making use of different AI provided by the banker. In depth it even upholds that which AI tool is adopted more and therefore we can come to an conclusion that SIA chat bot is performing better in order to build customer experience.

Independent Samples Test

		Leven's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
If yes which of the following AI tool that your Bank offers	Equal variances assumed	3.567	.060	1.421	199	.157	.5632	.3964	-.2186	1.3449
	Equal variances not assumed			1.437	148.907	.153	.5632	.3919	-.2112	1.3376

Null hypothesis: There is no association between gender and AI services offered by Banks

Alternative hypothesis: There is association between gender and AI services offered by Banks

Interpretation:

Since P value is .06 more than 0.05 hence reject the alternative hypothesis at 5 percent level of significance.

There is no association between gender and AI services offered by banks.

3) With the use of AI do you feel is there any improvement in the security of online performance

Gender	Yes	%	No	%2	Not Sure	%3	Gender	SBI Account Holders
Male	60	70%	3	100%	5	42%	Male	68
Female	26	30%	0	0%	7	58%	Female	33
Total	86	100%	3	100%	12	100%	Total	101

Gender	Yes	%	No	%2	Not Sure	%3	Gender	ICICI Account Holders
Male	47	64%	2	40%	13	59%	Male	62
Female	26	36%	3	60%	9	41%	Female	38
Total	73	100%	5	100%	22	100%	Total	100

Inferences- it is found in the analysis that SBI customers are more aware of AI and feel more safe in using AI for their banking transactions. (86 respondents) on the other hand account holders of ICICI agrees that there is less improvement in online performance.

4)With the help of AI, do you feel that banking service are available round the clock to the customers

Gender	Agree	%	Strongly Agree	%2	Disagree	%3	Strongly Disagree	%4	Neutral	%5	Gender	SBI Account Holders
Male	44	69%	10	59%	1	33%	1	100%	9	69%	Male	68
Female	20	31%	7	41%	2	67%	0	0%	4	31%	Female	33
Total	64	100%	17	100%	3	100%	1	100%	13	100%	Total	101

Gende r	Agre e	%	Strongl y Agree	%2	Disagre e	%3	Strongl y Disagre e	% 4	Neutra l	%5	Gende r	ICICI Accoun t Holder s
Male	41	61%	9	64%	2	100 %	0	0 %	10	59%	Male	62
Femal e	26	39%	5	36%	0	0%	0	0 %	7	41%	Femal e	38
Total	67	100 %	14	100 %	2	100 %	0	0 %	17	100 %	Total	100

Inferences- it is found in the analysis that both SBI& ICICI customers are strongly agreeing that AI services are available round the clock. This leads for the appraisal of AI tool in terms of customer engagement. Therefore, it leads to a better banking service and retain their customers and their interest in digital banking operations.

5)With the help of AI, do you feel that customer convenience is increased.

Gender	Yes	%	No	%2	Neutral	%3	Gender	SBI Account Holders
Male	57	70%	0	0%	11	55%	Male	68
Female	24	30%	0	0%	9	45%	Female	33
Total	81	100%	0	0%	20	100%	Total	101

Inferences- Yes, I agree that customer convenience have increased by the help of AI as it helps to communicate with the bank's chat bot 24/7, get answered for all the bank related queries and much more benefits are been offered by the AI tools. it is found in the analysis that SBI customers are feeling that AI is very convenient and more use full for them and they can make use of banking services without wasting much of their time and

Gender	Yes	%	No	%2	Neutral	%3	Gender	ICICI Account Holders
Male	50	65%	1	0%	11	55%	Male	62
Female	27	35%	2	0%	9	45%	Female	38
Total	77	100%	3	0%	20	100%	Total	100

without going to bank for any transactions. Moreover, this analysis shows that customers are better experiencing the digital banking service which is a plus point for the bank. There is no huge difference between SBI & ICICI in this statement; both the banks are observed to have a positive response.

6) With the help of AI do you able to get loan in a very short time from the banker.

Gender	Yes	%	No	%2	Gender	SBI Account Holders
Male	55	70%	13	59%	Male	68
Female	24	30%	9	41%	Female	33
Total	79	100%	22	100%	Total	101

Gender	Yes	%	No	%2	Gender	ICICI Account Holders
Male	51	64%	11	55%	Male	62
Female	29	36%	9	45%	Female	38
Total	80	100%	20	100%	Total	100

Inferences- getting loan sanctioned would be a great challenge for the customers, this might be due to huge application process. But it is found in the analysis that SBI customers are getting loan in a fast manner as compared to ICICI banks and this is because SBI completes the application process just in 4 clicks. On the

other hand we cannot blame ICICI as it is private sector it would have its own application procedure which will be time consuming.

7) Are you regularly receiving any warning from the banker through AI regarding digital scams and other alters.

Gender	Yes	%	No	%2	Gender	SBI Account Holders
Male	47	69%	21	64%	Male	68
Female	21	31%	12	36%	Female	33
Total	68	100%	33	100%	Total	101

Gender	Yes	%	No	%2	Gender	ICICI Account Holders
Male	42	62%	20	63%	Male	62
Female	26	38%	12	38%	Female	38
Total	68	100%	32	100%	Total	100

Inferences- AI tools are used in a wrong way to scam people and it is the duty of the respected bank to alert their customers and bring the awareness about the digital fraud. And it is found in the analysis that ICICI customers very frequently receive warning from the banker through AI regarding digital scams and other alters as compared to SBI in this context we see majority of the people in SBI disagrees compared to ICICI.

15) Are you satisfied by the AI banking service provided by the bank?

Gender	Yes	%	No	%2	Gender	SBI Account Holders
Male	61	70%	7	50%	Male	68
Female	26	30%	7	50%	Female	33
Total	87	100%	14	100%	Total	101

Gender	Yes	%	No	%2	Gender	ICICI Account Holders
Male	58	64%	4	40%	Male	62
Female	32	36%	6	60%	Female	38
Total	90	100%	10	100%	Total	100

Inferences- Major motive of Banks is to improve customer satisfaction, it is found in the analysis that ICICI customers very satisfied with AI services as compared to SBI, we see majority of customer of SBI disagrees compared to ICICI.

16) If yes, rate their AI banking services.

Gender	1	%	2	%2	3	%3	4	%4	5	%5	Gender	SBI Account Holders
Male	5	50%	1	33%	22	73%	31	74%	9	56%	Male	68

Female	5	50%	2	67%	8	27%	11	26%	7	44%	Female	33
Total	10	100%	3	100%	30	100%	42	100%	16	100%	Total	101

Overall Satisfaction of SBI Account Holders

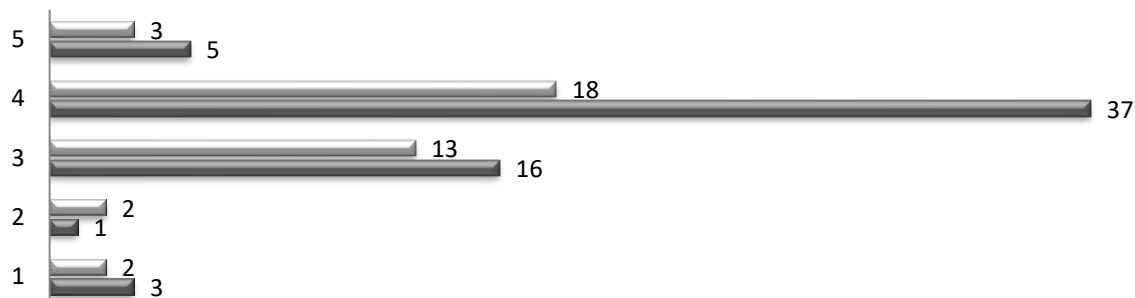
■ Female ■ Male



Gender	1		2	%2	3	%3	4	%4	5	%5	Gender	ICICI Account Holders
Male	3	60%	1	33%	16	55%	37	67%	5	63%	Male	62
Female	2	40%	2	67%	13	45%	18	33%	3	38%	Female	38
Total	5	100%	3	100%	29	100%	55	110%	8	100%	Total	100

Overall Satisfaction of ICICI Account Holders

■ Female ■ Male



Inferences-Whatever the business be, Customer satisfaction plays a major role. It is found in the analysis that SBI customers are very satisfied with AI services as compared to ICICI as the rating of 5 in the scale of 1-5 is more in SBI compared to ICICI. And we come to this conclusion just by looking at the table where it shows majority of the customers are satisfied with overall service provided by their bank.

SUGGETIONS:

1. ICICI Bank has to update their AI tool in order to improvise their online performance which in turn leads the bank to be well recognized in the industry.
2. ICICI Bank has to update their AI tool with all the information regarding their services offered to their Account holders as the current survey says there is no expert advice.
3. ICICI has to improve their Loan approval process as it is the headed source to generate income to the bank.
4. SBI has to improvise their fraud detection tool; the AI tool offered by SBI less frequently alerts their customers about the digital scams.

CONCLUSION:

To have a brief explanation we can convey that Artificial intelligence has involved in a better way in both the private and public sector bank and we come to a conclusion that how AI tools are been used by SBI and ICICI bank in terms of satisfying their customer, detecting the frauds performed digitally and how can a AI tool helps in improving their returns. This article gives an exact picture of how SBI and ICICI banks are dealing with the Artificial intelligence in the digital world and what are their customer' s feedbacks. In this article we find SBI to face ahead in its banking services offered to their customer compared to ICICI.

Future Scope:

Man-made reasoning (simulated intelligence) has previously shown to be very valuable in different fields and ventures, and its future applications are simply expected to develop. AI will find better position in the future and moreover it will play a major role in the banking sector. The fate of man-made intelligence in the financial area is supposed to be huge, as the business is progressively taking on simulated