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ROLE OF AI DRIVEN BANKING SERVICES IN ENHANCING CUSTOMER EXPERIENCE IN RETAIL BANKING: A MARKET SEGMENTATION APPROACH

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ABSTRACT

Modern internet-based banking has given way to online and mobile banking, leading to a shift in customer expectations and behaviours. Customers now demand more than just basic financial transactions; they seek personalized, convenient, and efficient banking. The adoption of AI in retail banking represents a paradigm shift in the industry's approach to customer engagement. Traditionally, banks relied on static, one-size-fits-all solutions that could not adequately address the diverse needs and preferences of their customers. This study analyses the customers' perceptions have been studied for the AI driven banking. The sample size in the study is 250 banking customers. With the help of cluster analysis, it was found that the customers can be segmented in the three major categories namely Service Quality Oriented Customers, Financially Rationale Customers and Cautious Customers. The segments have exclusive perceived benefits and expectations from AI driven banking.

Keywords: AI Driven Banking, Customer Experience, Service Quality, Cluster Analysis, Perceived Benefits

1. INTRODUCTION

One of the primary drivers of AI's success in personalizing customer experiences is its ability to process and analyze vast datasets with remarkable speed and accuracy (Shetty et al., 2022). By utilising machine learning algorithms, AI systems can shift through transaction history, spending patterns by providing product recommendations, and service offerings. Consequently, customers receive personalized communications and offerings that resonate with their financial needs, fostering a sense of trust and loyalty. AI-powered chatbots and virtual assistants are revolutionizing the way customers interact with banks. These intelligent virtual agents are available around the clock, providing instant responses to customer inquiries and requests. AI-driven chatbots can understand the nuances of customer queries, enabling them to provide meaningful and context-aware responses. Enhancing customer satisfaction not only lightens the workload on human customer support agents but also empowers them to prioritize more intricate tasks. This evolution is particularly evident in India, internet availability and Generation Z population (Hameed & Nigam, 2023). AI-

driven banking services also enhance the customer journey by simplifying and automating routine banking tasks (Kaur et al., 2020). For instance, AI-powered algorithms can analyze spending patterns and automatically categorize expenses, helping customers gain a better understanding of their financial habits. AI can also automate bill payments, fund transfers, and investment decisions based on predefined criteria or customer preferences, making banking more effortless and convenient. In addition to improving customer interactions and streamlining processes, AI-driven banking services play a crucial role in enhancing security (Ashta & Herrmann, 2021). In the AI era, banks are under constant pressure to safeguard customer data and financial assets. AI algorithms can analyze patterns of fraudulent activity and detect anomalies in real-time, flagging potentially suspicious transactions for further investigation. This proactive approach to security not only protects customers from financial loss but also builds trust by demonstrating a commitment to safeguarding their interests. Another compelling aspect of AI in retail banking is its potential for financial inclusion. Banks have the potential to broaden their financial services, reaching segments that have traditionally been underserved or excluded from the conventional banking system (Sheth et al., 2022). AI algorithms can evaluate alternative data sources to weigh the creditworthiness and provide loans to those who may not have a conventional credit history. Artificial intelligence (AI) simulates human intelligence in machines and is rapidly advancing across various sectors, including banking (Kaur et al., 2020). This technology enhances customer experiences by facilitating seamless 24/7 interactions, not limited to retail banking but also extending to investment and financial management. This offers a glimpse into the multifaceted applications of AI, attracting more customers and fostering growth in the banking industry, particularly by optimizing back and middle-office functions. AI-driven banking services are thus at the forefront of revolutionizing the retail banking industry by personalizing customer experiences. Through the power of data analysis, machine learning, and automation, banks can offer tailored solutions, enhance customer interactions, and improve security, all while expanding access to financial services. By understanding the multifaceted role of AI in personalizing customer experiences, this paper will explore in greater detail the various AI applications that are reshaping the retail banking landscape. AI in banking, however, has brought disruptions to traditional practices. Surprisingly, despite Generation Z's comfort, actual usage remains insignificant. This suggests that although this demographic is comfortable with the technology, they may not see a compelling advantage in utilizing AI-driven banking services.

2. LITERATURE REVIEW

AI technology in the banking sector significantly impacts consumer experiences and expectations. Banks' utilization of AI-driven virtual agents like chatbots for customer interactions and the role of neo banks in the industry were explored by El-Gohary et al. (2021) and it was found that consumers increasingly expect digital transformations in banking, particularly through mobile apps. At the same time, banks' underutilization of AI technologies, especially chatbots, hinders improvements in customer experiences. Younger generations are more receptive to AI due to its convenience. Limited consumer awareness of neo bank capabilities also contributes to the underutilization of online-only accounts, despite their services resembling traditional banks.

AI applications, including credit scoring, fraud detection, and automation, streamline tasks and reduce manual workloads for both customers and employees. Mobile banking, chatbots, and augmented reality notably enrich customer interactions, offering heightened convenience and engagement. The banking sector's steadfast commitment to embracing cutting-edge technology ensures robust security measures and aligns with customer expectations in the digital age. Customers increasingly favour internet and mobile banking for their effectiveness and convenience. The integration of AI optimizes processes, fortifying the customer-banking relationship and mutually benefiting both parties. To remain competitive, banks must adeptly harness AI-driven solutions to augment efficiency and adapt to the ever-evolving needs of customers (Satheesh & Nagaraj, 2021).

AI has the potential to modernize banking processes, reduce reliance on legacy systems, and significantly improve operational efficiency. The future envisions AI-powered Virtual Assistants handling various tasks, potentially making physical bank branches obsolete. This shift towards AI-driven digital banking is already underway, allowing customers to perform transactions and access services remotely. The adoption of AI in banking is driven by the need to streamline operations, cut costs, and enhance customer service. It represents a departure from traditional banking practices, marking a significant leap into the future of banking. As AI continues to advance, it promises to reshape the industry, benefiting both financial institutions and customers (Ris et al., 2020).

AI's integration into the banking sector delivers substantial outcomes. In predicting bank collapses based on financial indicators, artificial neural networks (ANNs) outperform other methods, achieving a precision and recall rate of 75.7%. Machine learning algorithms, including naïve Bayes, RF, and DLNN, effectively detect cyber threat actors. While accuracy remains crucial, precision, recall, and F1 score metrics vary depending on the specific application. This highlights AI's potential for improving decision-making and operational efficiency in banking. As technology continues to advance, AI is poised to assume an increasingly significant role in risk management, elevating customer experiences, and boosting profitability within the financial industry. There is also a necessity for a standardized AI integration framework, recognizing the broad-reaching influence of Industry 4.0 across diverse sectors (Farishy, 2023). The rise of Artificial Intelligence (AI) as a central element of digital disruption has been evident since 2015, as indicated by CB Insights data reflecting its increasing prominence in public company executives' earnings calls. Within the global banking sector, AI has instigated transformative shifts, holding tremendous potential for the future. Leveraging AI's capabilities alongside advanced data analytics has proven to be a formidable tool in combatting fraudulent banking transactions while simultaneously bolstering regulatory compliance. AI streamlines banking operations, leading to cost reductions and heightened productivity and it is also crucial to acknowledge that while AI offers substantial advantages, it also presents associated risks and costs that demand meticulous management. Regulatory constraints may pose challenges to the seamless integration of AI within the banking sector (Manjaly et al., 2021).

AI technologies within the financial sector leverage customer behavior data to enhance the overall customer experience. As Ecuadorian banks increasingly integrate AI algorithms and techniques, they stand to gain from the improvement of customer perception factors. These factors serve as crucial differentiators in a fiercely competitive banking landscape, driving the development of innovative digital banking products and services (Tulcanaza-Prieto et al., 2023). “Perceived intelligence” and “perceived anthropomorphism”, significantly enhance users' perceptions of both informational and emotional support. These perceptions, in turn, exert a direct influence on user satisfaction and their intention to continue utilizing retail banking services. Particularly, the provision of informational support emerges as a crucial factor driving user satisfaction and their intent to persist in using these services. Also, higher levels of emotional support from AI result in an unexpected decrease in the intention to continue using these services. This paradoxical outcome suggests that an excess of human-like attributes in AI interfaces might raise concerns among users regarding identity and privacy, potentially impacting their willingness to embrace AI-driven retail banking services (Lin & Lee, 2023).

In Zimbabwe's banking sector, the integration of AI technology is still in its nascent stages, primarily motivated by the objectives of elevating customer satisfaction, reducing operational expenses, and fortifying risk management practices. Banks have initiated the incorporation of AI into their systems, leveraging its capabilities to automate operations, optimize efficiency, and reinforce security protocols. Common AI applications encompass predictive maintenance, complaints handling, and fraud prevention. Still, the potential of AI in enhancing customer interactions and experiences remains largely underutilized, with limited deployment of chatbot solutions. The absence of robust biometric authentication measures leaves customers vulnerable to cybersecurity threats and fraud risks. Concerning employment implications, employers do not anticipate significant job displacement due to AI but emphasize its role as a complement to human activities (Shambira, 2020).

AI aids in fraud prevention, early detection, and enhances security. Banks leverage AI for client identification, chatbots, voice assistants, customer relationship enhancement, and personalized insights. The future success of the banking industry hinges on its adeptness in embracing AI technology, acquiring the necessary expertise, and adapting to the digital era's requirements, while responsibly addressing associated opportunities and challenges. The adoption of AI in the banking industry signifies significant potential and corresponding responsibilities, emphasizing the need for a thoughtful and ethical approach to its implementation (K & Panakaje, 2023). The rapid progression of technology, primarily driven by AI has compelled the banking sector to incorporate AI solutions for efficiently addressing customer queries and complaints. This entails a strategic blend of autonomous AI processes and human intervention methods. In the context of digital natives, their perceptions and attitudes toward mobile banking and AI-enabled mobile banking activities hold significant relevance. There exists a notable contrast in how digital natives assess the relative advantages of traditional mobile banking in comparison to AI-powered mobile banking. While the relative advantage significantly influences the adoption of conventional mobile banking services, it wields a lesser impact on AI-enabled mobile banking. This suggests a multifaceted layer of complexity tied to AI-driven services, extending beyond the domains of convenience and speed (Manser Payne et al., 2018).

In the realm of global organizations, customer service quality holds paramount importance, with high customer satisfaction being a key goal. Notably, the banking and financial sector has been a front-runner in deploying AI-driven solutions globally. However, in India, AI adoption rates lag behind more developed economies. Factors affecting AI implementation were explored from an employee perspective within this sector. Challenges in India include data reliability and security concerns, with more prominent AI adoption in front-office activities compared to backend and middle-office functions. Despite potential cost reductions and improved customer experiences, AI adoption remains limited in the Indian banking and financial sector (Deepthi. B et al., 2022).

AI is wielding substantial influence in the financial sector, reshaping operational facets to bolster efficiency and enrich customer experiences. Conventional banking establishments are swiftly integrating computational intelligence technologies, exemplified by the introduction of products like Chatbots, in a bid to keep stride with fintech enterprises that have long embraced AI innovations. The adoption of these technologies is imperative for financial institutions to align with the expectations of contemporary, tech-savvy clientele who increasingly favour the accessibility and simplicity of conducting financial operations via smartphones (Donepudi, 2017).

AI's ascent extends across sectors, prominently within banking, where initial achievements chiefly pertain to investment banking and backend operations but still, AI's integration into customer-centric commercial banking has remained constrained. Hurdles encompass technological actualization, seamless integration of AI into processes, ensuring transparency and privacy for users, and comprehensive documentation. These underscore AI's potential to significantly benefit commercial banks, contingent upon effectively addressing associated challenges (Königstorfer & Thalmann, 2020). There are also regional and educational disparities in AI adoption. Reinforcing security measures, fine-tuning marketing strategies will strengthen this influence and AI adoption will continue to shape the banking sector (Noreen et al., 023).

Ryzhkova et al. (2020) focused on AI's role in delivering digital assistance, financial guidance, and evaluating clients' financial situations and found that Russian businesses and consumers hold a generally positive view of AI. Employees at Sberbank exhibit a favorable attitude toward AI, perceiving it as a tool to streamline routine tasks rather than a threat to job security. They actively utilize AI both in their professional roles and daily lives. Primary concerns revolve around technical glitches, unauthorized data transmission, privacy implications, and potential unforeseen consequences stemming from AI implementation. While initial skepticism exists, it tends to diminish over time. AI's impact on customer service is evident through tools like robo-advisors, which streamline tasks, enhance product selection, and elevate customer satisfaction. Moreover, AI's strategic potential is recognized for simplifying internal audits and supporting decision-making processes. At the same time, challenges related to AI adoption persist, encompassing implementation complexities, organizational culture shifts, and concerns regarding customer data privacy. The COVID-19 pandemic has acted as a catalyst, expediting AI adoption, particularly in the increased use of AI-driven services like chatbots and E-KYC. To ensure future readiness and sustained investments in AI is crucial for banking operations. The evolving privacy-personalization paradox poses a critical concern in the evolving banking landscape (Fares et al., 2022).

AI and “Big Data Analysis” are vital for banking as they have profound impact on customer experiences. Banks face a lot of challenges during the process of digital transformation, often stemming from a misplaced focus on workflows and systems, rather than prioritizing customer-centric strategies. AI and BDA have emerged as transformative technologies that empower banks to embrace a more customer-centric approach, leveraging data-driven insights. The shift towards personalization stands out as a crucial strategy for both retaining existing customers and attracting new ones. This underscores the importance of Indonesian banks, and others worldwide, embracing AI and BDA technologies to enhance their products, services, and overall operations (Indriasari et al., 2019). In the financial sector, a delicate equilibrium exists between fostering AI innovation and enforcing regulatory control to safeguard consumers and financial stability. Although international principles for AI governance are emerging, they have not yet been translated into concrete regulations. Financial regulators, aiming to stay competitive in the global AI landscape, are cautiously permitting experimental AI technology with limited controls. This approach carries inherent risks to consumers and financial stability and there is thus a high need for a proactive regulatory strategy that harmonises international principles with jurisdiction-specific rules. Such an approach should strike a balance between nurturing AI innovation and addressing potential harms. Overly stringent regulations can stifle innovation, while a lack of regulation can expose the financial sector to substantial risks. The key lies in crafting consistent and universally applicable regulatory frameworks that take into account the interests of all stakeholders. These frameworks should prioritize transparency,

accountability, data protection, and privacy while simultaneously promoting advancements in AI within financial services and ensuring regulatory compliance (Truby et al., 2020).

The changing landscape of retirement, healthcare, and environmental issues has led households to reconsider their financial situations. The personal finance industry is adapting to meet these evolving needs, with AI technology recognized as a potential catalyst for transformation. While there is consensus on AI's potential, its appropriateness remains debated. Investment lags behind loans, insurance, and payments in digitalization-driven productivity. Although financial technology has expedited loans and insurance distribution, addressing long-term challenges like retirement and healthcare expenses requires substantial progress. AI tools, while promising, may take time to make a broad impact due to their specialized nature and development cycles. Their primary role is to enhance investment instrument production and distribution efficiency (Ribes, 2023).

3. OBJECTIVE

1) To segment the customers based on their perceived benefits from AI Driven Banking Services
2) To compare the various customer segments based on their perceived benefits from AI Driven Banking.

4. METHODOLOGY

In this study, a structured set of items was prepared to capture the perception of customers about the AI Driven Banking Services. K-means cluster analysis was employed to categorize the respondents (250) based on their perceptions. The resulting cluster information for each case in the analysis determined the specific cluster assignment. This information, as outlined in the SPSS help manual, was instrumental in specifying the number of clusters for the final segmentation. Through this method, the allocation of cases to their respective clusters was determined, providing insights into both the number of cases within each cluster and the membership details for each cluster. Cluster 1=96 (38.4%) consumers, cluster 2= 95 (38.0%) and cluster 3=59 (23.6%) consumers.

5. DATA ANALYSIS AND INTERPRETATION:

Table 1 is the outcome of the cluster analysis results. Three prominent clusters have been found in this study, which have been named based on the mean values shown in the Table 2.

Table 1 Number of Customers in Each Cluster

SL No.	Cluster Name	Number of Respondents	% age of Respondents
1	Service Quality Oriented Customers	82	32.8
2	Financially Rationale Customers	69	27.6
3	Cautious Customers	99	39.6
	Total	**250**	**100**

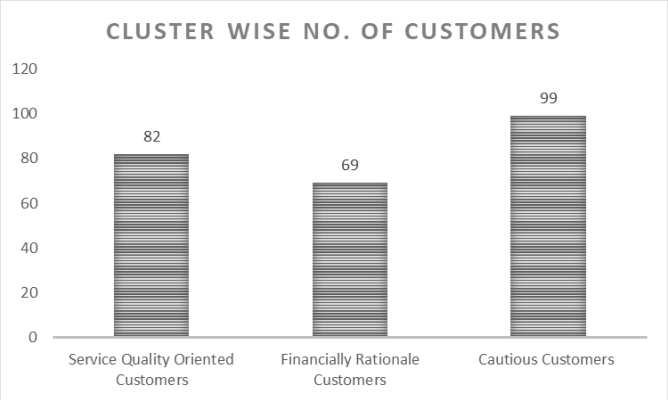


Figure 1 Cluster Wise Customers

Table 2 shows the details of the various segmentations (clusters) of the customers. The constitution of these segments has been discussed as below:

Segment 1: Service Quality Oriented Customers: In this largest segment (38.4% of the respondents) the consumers have more favourable opinion towards Service Quality. The means score of the statements such as: AI-driven chatbots and virtual assistants offer immediate assistance to customers in real-time, Address inquiries and guide customers through various banking processes, understand natural language and offer personalized assistance and AI-powered chatbots and virtual assistants creates more user-friendly experience was found to be in favour of the consumers falling under this segment.

Table 2 Comparison of Different Customer Segments w.r.t. the Perceived Benefits of AI Driven Banking Service

S. No.	Statements	Cluster Number of Case			F-Value	Sig
I	**Service Quality Oriented Customers**	**1**	**2**	**3**		
1	AI-driven chatbots and virtual assistants offer immediate assistance to customers in real-time	**2.91**	2.44	1.81	27.048	.000
2	Address inquiries and guide customers through various banking processes	**3.12**	2.34	1.90	44.575	.000
3	Understand natural language and offer personalized assistance	**2.79**	2.24	1.98	21.982	.000
4	AI-powered chatbots and virtual assistants creates more user-friendly experience	**3.52**	3.06	2.97	7.117	.001
II	**Financially Rationale Customers**					
5	AI algorithms assess creditworthiness more accurately	2.43	2.41	**3.46**	33.189	.000
6	Consider a broader set of variables, beyond traditional credit scores	3.17	2.84	**3.86**	24.030	.000
7	Evaluate alternative data sources to weigh the creditworthiness	2.25	2.27	**3.37**	34.951	.000
8	Offer personalized lending solutions and interest rates based on an individual's financial situation and history	2.53	2.30	**3.54**	35.092	.000
III	**Cautious Customers**					
9	AI helps in enhancing security measures by detecting unusual patterns and potentially fraudulent activities	2.57	**4.34**	3.24	133.183	.000
10	Identify anomalies and trigger alerts or authentication processes	2.45	**4.22**	3.07	145.036	.000
11	Flagg potentially suspicious transactions for further investigation	2.59	**4.35**	3.24	133.803	.000
12	Protects customers from financial loss and builds trust by safeguarding their interests	2.48	**4.22**	3.07	138.056	.000

Segment 2: Financially Rationale Customers: In this smallest segment (23.6% of the respondents) the respondents of this segment are Financially Rationale Customers. The means score of the statements such as: AI algorithms assess creditworthiness more accurately, consider a broader set of variables, beyond traditional credit scores, evaluate alternative data sources to weigh the creditworthiness and offer personalized lending solutions and interest rates based on an individual's financial situation and history was found to be in favour of the consumers falling under this segment.

Segment 3: Cautious Customers: In this second largest segment (38% of the respondents) the consumers are Cautious Customers. The means score of the statements such as: AI helps in enhancing security measures by detecting unusual patterns and potentially fraudulent activities, identify anomalies and trigger alerts or authentication processes, Flagg potentially suspicious transactions for further investigation and Protects customers from financial loss and builds trust by safeguarding their interests was found to be significantly in favour of the consumers falling under this segment.

Figure 2 (a), Figure 2(b) and Figure 2(c) shows the comparative mean values for all three segments.

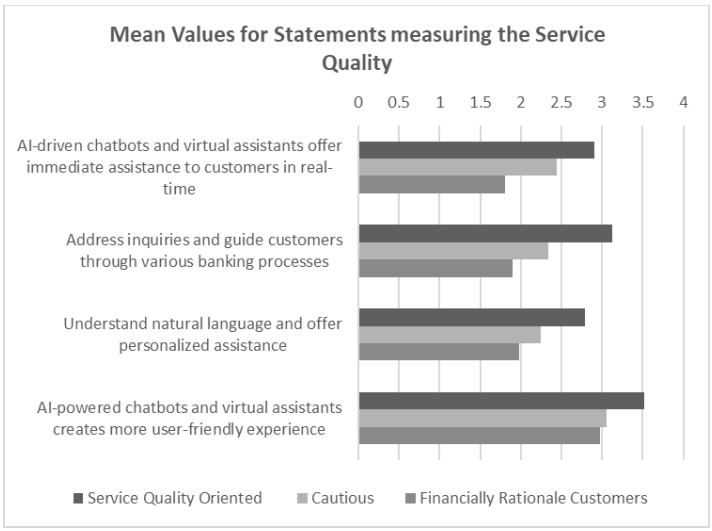


Figure 2 (a) Mean Value for the Statement Measuring the Service Quality

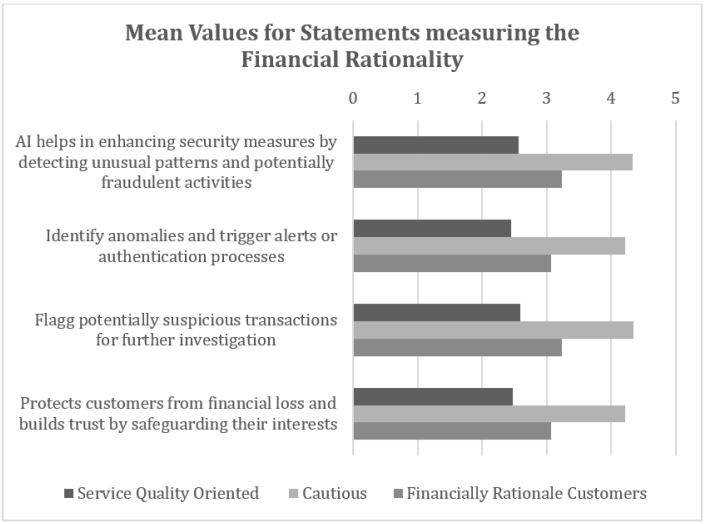
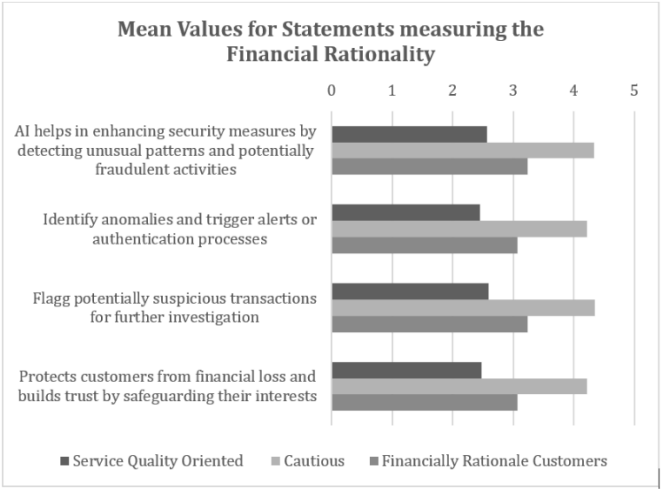


Figure 2 (b) Mean Value for the Statement Measuring the Financial Rationality



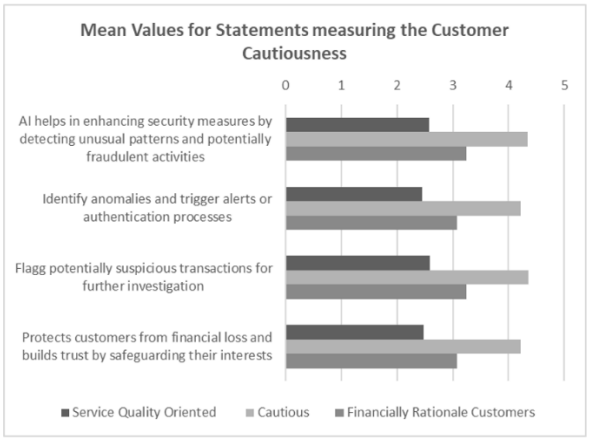


Figure 2 (c) Mean Value for the Statement Measuring the Customer Cautiousness

6. TEST AND VALIDITY OF CLUSTERS

Table 3 shows multiple comparison among all the three cluster of respondents in which it is found that there is significant difference among all the three cluster i.e. 1, 2, 3 for the statements like AI-driven chatbots and virtual assistants offer immediate assistance to customers in real-time, Address inquiries and guide customers through various banking processes, consider a broader set of variables, beyond traditional credit scores, AI helps in enhancing security measures by detecting unusual patterns and potentially fraudulent activities, Identify anomalies and trigger alerts or authentication processes, Flagg potentially suspicious transactions for further investigation and Protects customers from financial loss and builds trust by safeguarding their interests.

Table 3 Multiple Comparisons

Dependent Variable	Clusters		"Mean Difference" (I-J)	Std. Error	Sig.
AI-driven chatbots and virtual assistants offer immediate assistance to customers in real-time	1	2	.468*	.130	.001
		3	1.092*	.149	.000
	3	2	-.624*	.148	.000
Address inquiries and guide customers through various banking processes	1	2	.772*	.118	.000
		3	1.217*	.135	.000
	3	2	-.445*	.135	.003
Understand natural language and offer personalized assistance.	1	2	.550*	.114	.000
		3	.806*	.130	.000
	3	2	-.257	.130	.121
AI-powered chatbots and virtual assistants creates more user-friendly experience.	1	2	.453*	.146	.006
		3	.550*	.167	.003
	3	2	-.096	.167	.832
AI algorithms assess creditworthiness more accurately.	1	2	.025	.124	.977
		3	-1.026*	.142	.000
	3	2	1.051*	.142	.000
Consider a broader set of variables, beyond traditional credit scores	1	2	.325*	.129	.034
		3	-.696*	.148	.000

	3	2	1.021*	.148	.000
Evaluate alternative data sources to weigh the creditworthiness	1	2	-.018	.129	.989
		3	-1.120*	.148	.000
	3	2	1.102*	.148	.000
Offer personalized lending solutions and interest rates based on an individual's financial situation and history	1	2	.224	.134	.216
		3	-1.016*	.153	.000
	3	2	1.240*	.153	.000
AI helps in enhancing security measures by detecting unusual patterns and potentially fraudulent activities	1	2	-1.775*	.110	.000
		3	-.669*	.126	.000
	3	2	-1.106*	.125	.000
Identify anomalies and trigger alerts or authentication processes	1	2	-1.766*	.105	.000
		3	-.615*	.120	.000
	3	2	-1.151*	.120	.000
Flagg potentially suspicious transactions for further investigation	1	2	-1.765*	.109	.000
		3	-.648*	.125	.000
	3	2	-1.117*	.124	.000
Protects customers from financial loss and builds trust by safeguarding their interests	1	2	-1.735*	.106	.000
		3	-.584*	.121	.000
	3	2	-1.151*	.121	.000

For the statements Understand natural language and offer personalized assistance and AI-powered chatbots and virtual assistants creates more user-friendly experience significant difference is there between the cluster 1-2 and 1-3 but no difference is found between 3 and 2. For AI algorithms assess creditworthiness more accurately difference id found between 1-3 and 3-2 but no difference between 1-2.

7. CONCLUSION

The integration of AI in retail banking marks a fundamental change in how the industry engages with customers. In the past, banks depended on rigid, one-size-fits-all solutions that struggled to meet the varied needs and preferences of their clientele. The emergence of AI technologies has empowered banks to analyze extensive customer data in real-time, enabling the extraction of valuable insights. It elevates customer experiences by enabling continuous, round-the-clock interactions, spanning beyond retail banking to encompass investment and financial management. This showcases the versatile applications of AI, drawing in more customers and promoting growth in the banking industry, particularly through the optimization of back and middle-office functions. AI applications, such as credit scoring, fraud detection, and automation, efficiently streamline tasks, diminishing manual workloads for customers and employees alike. Mobile banking, chatbots, and augmented reality significantly enhance customer interactions, providing increased convenience and engagement. The banking sector's unwavering dedication to embracing advanced technology not only ensures robust security measures but also aligns with customer expectations in the digital era. The growing preference for internet and mobile banking among customers is attributed to their effectiveness and convenience. The incorporation of AI optimizes processes, strengthening the bond between customers and the banking sector, resulting in mutual benefits for both parties.

The study was conducted to know the role of AI Driven Banking Services in Personalizing Customer Experience in Retail Banking and found different role of AI in banking sector such as AI helps in enhancing security measures by

detecting unusual patterns and potentially fraudulent activities, consider a broader set of variables, beyond traditional credit scores and AI-powered chatbots and virtual assistants creates more user-friendly experience etc. In brief, AI Driven Banking Services is capable of personalizing customer experience in retail banking among different cluster of respondents.

CONFLICT OF INTERESTS

None.

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REFERENCES

Ashta, A., & Herrmann, H. (2021). Artificial intelligence and fintech: An overview of opportunities and risks for banking, investments, and microfinance. Strategic Change, 30(3), 211–222.

Deepthi. B, Gupta, P., Rai, P., & Arora, H. (2022). Assessing the Dynamics of AI Driven Technologies in Indian Banking and Financial Sector. Vision: The Journal of Business Perspective, 1–15.

Donepudi, P. K. (2017). Machine Learning and Artificial Intelligence in Banking. Engineering International, 5(2), 83–86.

El-Gohary, H., Thayaseelan, A., Babatunde, S., & El-Gohary, S. (2021). An Exploratory Study on the Effect of Artificial Intelligence-Enabled Technology on Customer Experiences in the Banking Sector. Journal of Technological Advancements, 1(1), 1–17.

Fares, O. H., Butt, I., & Lee, S. H. M. (2022). Utilization of artificial intelligence in the banking sector: a systematic literature review. Journal of Financial Services Marketing, 1–10.

Farishy, R. (2023). The Use of Artificial Intelligence in Banking Industry. International Journal of Social Service and Research, 3(7), 1724–1731.

Hameed, S., & Nigam, A. (2023). Exploring India's Generation Z perspective on AI enabled internet banking services. Foresight, 25(2), 287–302.

Indriasari, E., Gaol, F. L., & Matsuo, T. (2019). Digital Banking Transformation: Application of Artificial Intelligence and Big Data Analytics for Leveraging Customer Experience in the Indonesia Banking Sector. 2019 8th International Congress on Advanced Applied Informatics (IIAI-AAI).

K, M., & Panakaje, N. (2023). Bank for Tomorrow: Role of an Artificial Intelligence (AI) in Banking Sector. Emergence and Research in Interdisciplinary Management and Information Technology, 61–80.

Kaur, Dr. N., Sahdev, S. L., Sharma, Dr. M., & Siddiqui, L. (2020). Banking 4.0: —The Influence of Artificial Intelligence on the Banking Industry & How AI is Changing the Face of Modern Day Banks. International Journal of Management (IJM), 11(6), 577–585.

Königstorfer, F., & Thalmann, S. (2020). Applications of Artificial Intelligence in commercial banks – A research agenda for behavioral finance. Journal of Behavioral and Experimental Finance, 27, 1–32.

Lin, R.-R., & Lee, J.-C. (2023). The supports provided by artificial intelligence to continuous usage intention of mobile banking: evidence from China. Aslib Journal of Information Management, 2050–3806.

Manjaly, J., Varghese, R. M., & Varughese, P. (2021). Artificial Intelligence in the Banking Sector – A Critical Analysis. Shanlax International Journal of Management, 8(S1-Feb), 210–216.

Manser Payne, E., Peltier, J. W., & Barger, V. A. (2018). Mobile banking and AI-enabled mobile banking. Journal of Research in Interactive Marketing, 12(3), 328–346.

Noreen, U., Shafique, A., Ahmed, Z., & Ashfaq, M. (2023). Banking 4.0: Artificial Intelligence (AI) in Banking Industry & Consumer's Perspective. Sustainability, 15(4), 1–16.

Ribes, E. A. (2023). Transforming personal finance thanks to artificial intelligence: myth or reality? Financial Economics Letters, 2(1), 11–21.

Ris, K., Stankovic, Z., & Avramovic, Z. (2020). Implications of Implementation of Artificial Intelligence in the Banking Business with Correlation to the Human Factor. Journal of Computer and Communications, 08(11), 130–144.

Ryzhkova, M., Soboleva, E., Sazonova, A., & Chikov, M. (2020). Consumers' Perception of Artificial Intelligence in Banking Sector. SHS Web of Conferences, 80, 1–9.

Satheesh , M. K., & Nagaraj, S. (2021). Applications of Artificial Intelligence on Customer Experience and Service Quality of the Banking Sector. International Management Review , 17(1), 9–17.

Shambira, L. (2020). Exploring the Adoption of Artificial Intelligence in the Zimbabwe Banking Sector. European Journal of Social Sciences Studies, 5(6), 110–124.

Sheth, J. N., Jain, V., Roy, G., & Chakraborty, A. (2022). AI-driven banking services: the next frontier for a personalised experience in the emerging market. International Journal of Bank Marketing, 40(6), 1248–1271.

Shetty, S. K., Spulbar, C., Birau, R., & Filip, R. D. (2022). Impact of Artificial Intelligence in Banking Sector with Reference to Private Banks in India. Physics AUC, 32, 59–75.

Truby, J., Brown, R., & Dahdal, A. (2020). Banking on AI: mandating a proactive approach to AI regulation in the financial sector. Law and Financial Markets Review, 14(2), 110–120.

Tulcanaza-Prieto, A. B., Cortez-Ordoñez, A., & Lee, C. W. (2023). Influence of Customer Perception Factors on AI-Enabled Customer Experience in the Ecuadorian Banking Environment. Sustainability, 15, 1–20.