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Conversational artificial intelligence (AI) and bank operational efficiency

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Abstract
Purpose: The main objective of the research was to analyse the effects of conversational artificial intelligence (AI) on bank operational efficiency. The emergency of conversational artificial intelligence (AI) has revolutionised the way business interacts with its customers.
Research methodology: The study employed a mixed- method approach where interviews and questionnaires were used to collect qualitative and quantitative data. A sample of 92 bank employees was drawn from ten Zimbabwean banks.
Results: Conversational AI has a positive impact on banking operational efficiency. Specifically, conversational AI improves customer services by providing faster and more accurate responses to customer inquiries, reduces operational costs by automating routine tasks and improve workflow efficiency.
Conclusion: Conversational AI significantly improves banking operational efficiency by automating routine tasks, enhancing customer service, and reducing costs. It streamlines processes and delivers accurate, real-time responses, reinforcing the value of its integration in banking operations. Broader research across regions and sectors is suggested to validate these findings further.
Limitations: The study concentrated on the banking industry of one particular country.
Contribution: The study makes a significant contribution in understanding the advantages of adopting conversational artificial intelligence in banking operations.

Keywords: *Artificial intelligence, Conversational artificial intelligence, financial technology, Chatbot, Operational efficiency*

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1. Introduction

The banking industry has been undergoing a digital transformation in recent years, with the adoption of new technologies aimed at improving customer experience, increasing efficiency, and reducing costs. One of the most widely adopted technology in this regard is conversational artificial intelligence (AI). Conversational AI refers to computer programs that can engage in text or voice-based conversations with humans, typically using natural language processing techniques to understand the user's intent and generate appropriate responses. This includes chatbots, voice assistants, and other natural language processing technologies. Worldwide the banking sector have adopted conversational AI in their operations, starting in 2016 and growing yearly. As conversational AI becomes more widely used and understood, services are added to existing bank capabilities and conversational capabilities. In 2017, the Bank of America launched AI-powered virtual assistant which helped with queries, provide personal financial support. The bank reported AI-powered assistant an efficiency way of banking system. In India, HDFC bank launched its virtual assistant Eva during the year 2018, the bank stated that AI-

chatbots help customers with range of banking task, booking fixed deposits and queries. Additionally, Buddybank in Singapore debuted in 2018 and uses Live Person's in-up messaging to communicate with consumers through an iPhone app-based bank that offers a 24-hour concierge service to help with customer requests. World-wide conversational AI is said to be an innovative technology in banks. (Gumbo, Mashizha, Simon, & Phiri, 2023).

In Zimbabwe banks have been adopting Conversational AI in their systems. During the year 2018, Steward bank was the first bank to adopt conversational AI-chatbots (Batsi) which assisted customers with queries on Facebook, the Square Mobile App and online banking. CBZ bank also adopted conversational AI on their social media platform. These platforms enabled users to access banking services through chatbots and customers have access to banking for things like bill payment and money transfers. As a result, convenience has grown because there is no physical interaction with the bank. Since consumers may receive individualized financial advice and recommendations from the conversational AI, which can aid them in making better financial decisions, Stanbic Bank has also incorporated conversational AI, which has led to improved customer services. Furthermore, FBC Bank, NMB Bank, First Capital and Stanbic Bank adopted conversational AI. This study aims to explore the effects of conversational AI on banking and providing insights into how banks can best leverage these technologies to achieve their strategic objectives while ensuring the well-being of their stakeholders as well as assessing the effects of conversational Artificial Intelligence (AI) on Zimbabwean banking operational efficiency. The study specific objectives are to evaluate the relationship between financial performance and conversational AI in banking, to determine the benefits of conversational AI from traditional banking, to determine how conversational AI banking affects customer satisfaction and to recommend strategies for the effective implementation of conversational AI banking on loan application (Ncube & Mushayavanhu, 2025; Nyagadza et al., 2022; Shambira, 2020).

2. Literature Review

This sections explains empirical and theoretical literature related to adoption of conversational Al and bank operational efficiency. According to the task-technology fit theory, technology is more likely to be employed and have a beneficial effect on individual performance if its capabilities match the tasks that the user must accomplish. The notion of task technology hypothesizes a connection between technology and the work it is intended to serve. Task-technology fit theory describes how technology functionality, task needs, and individual abilities interact at a given moment in time to complete tasks (Parthiban & Adil, 2023).

The Theory of Diffusion has also been applied in recent studies to understand the adoption and diffusion of conversational AI technologies. Conducted a study on the adoption of AI chatbots in the banking industry using the Theory of Diffusion. The study aimed to identify the factors that influence the use of chatbots by bank customers. The authors surveyed a sample of 400 bank customers in Pakistan and used structural equation modelling to analyse the data. They found that the Theory of Diffusion was a useful framework for understanding AI chatbot adoption in the banking industry. The results of the study showed that perceived relative advantage, compatibility, and observability were significant predictors of AI chatbot adoption among bank customers. Perceived complexity, on the other hand, was not a significant predictor of adoption. Perceived relative advantage referred to the degree to which customers perceived AI chatbots as more advantageous than traditional banking channels such as visiting a branch or calling a customer service representative. The study also found that age and education level were significant predictors of AI-chatbot adoption, with younger and more educated customers being more likely to adopt chatbots (Khan, Ahmad, Jabeur, & Mahdi, 2021).

2.1 The relationship between financial performance and conversational AI banking

Generally, conversation AI improves financial performance of institutions by automating repetitive tasks, lowering errors and lowering operating costs. Conversation AI improve financial performance of banks significantly by reducing bank operating expenses. According to (Shiyyab, Alzoubi, Obidat, & Alshurafat, 2023) that the adoption of AI in banking have been used to automate processes such as loan origination, credit scoring, and customers segmentation. Henceforth reducing costs by automating

customer service, detecting fraud, optimizing pricing, and increasing revenue. According to Zhang and (Shiyyab et al., 2023) conducted a research on the impact of AI chatbots on financial performance in the insurance industry and established that the adoption of conversational AI was positively associated with customer satisfaction and financial performance, as measured by return on investment. In the same vein (Mollaei, Firoozabadi, Hafshejani, & Rabiei, 2024), established that the adoption of conversational AI by Iranian banks, enhanced bank efficiency while also assisting in risk management, fraud detection, and investment research.

2.2 Speed and convenience of conversational AI in banking

The speed and convenience of conversational AI are often cited as major benefits for the adoption of this innovation in the banking industry. According to (Huang & Rust, 2018) found that the adoption of conversational AI in banking resulted in speed and convenience of services. The study surveyed customers of a large retail bank in the United States and found that customers who used conversational AI had higher levels of satisfaction and loyalty as the services are being served instantly. According to (Huang & Rust, 2018) suggested that the speed and convenience of conversational AI played a role in improving customer experience and engagement. Conversational AI Chatbots could provide faster and more convenient customer service, which could reduce waiting times and improve response times for customer inquiries. The authors also suggested that AI chatbots could be used to provide more personalized customer service, which could further improve customer satisfaction and loyalty. In the same vein, Acker and Murthy (2020) conducted a study on the adoption of chatbots in the financial services industry in South Korea and found that the speed and convenience of conversational AI were key factors driving their adoption as customers appreciated the ability of Conversational AI to provide personalized recommendations and assistance, which improved their overall experience with the financial services firm.

2.3. Cost cutting in the adoption of conversational AI

According to (Gumbo et al., 2023), conducted an empirical review of the adoption of conversational AI in banking, with a focus on the potential cost-cutting benefits. The authors examined the literature on AI chatbots in banking and identified several ways in which Conversational AI could reduce costs for banks. The authors found that conversational AI could reduce costs by automating routine tasks and inquiries, which could reduce the workload of employees and improve the efficiency of the bank. The authors also found that conversational AI could improve the accuracy and consistency of customer service, which could reduce the costs of errors and rework. AI Chatbots could provide standardized responses to common inquiries, which could reduce the likelihood of errors and improve the efficiency of customer service. According to (Gupta & Sharma, 2019), also argues that conversational AI reduce costs by automating routine tasks and inquiries, which could reduce the workload of employees and improve their productivity. Similarly, (BV & Kulkarni, 2024) stated that AI chatbots could handle routine customer inquiries and transactions, which could reduce the need for human labour and improve the efficiency of customer service. The author also found that conversational AI could improve the accuracy and consistency of customer service, which could reduce the costs of errors and rework.

2.4 Availability and Accessibility on the adoption of Conversational AI in banking

Several empirical studies have investigated the accessibility and availability benefits of conversational AI in banking. Conducted a survey on the adoption of conversational AI in the banking industry and found that Conversational AI improve the accessibility of banking services. The study found that Conversational AI could provide 24/7 customer service, which improve the accessibility and convenience of banking services for customers. According to (Zheng, Han, Huang, Wu, & Wu, 2025), stated that the adoption of voice assistants in the banking industry had the potential to improve the availability of banking services. The study found that voice assistants could provide faster and more convenient customer service, which could reduce waiting times and improve response times for customer inquiries.

2.5 The effects of Conversational AI banking on loan applications

conducted a study on the adoption of conversational AI in the banking industry and found that conversational AI had a positive impact on loan applications. The study found that Conversational AI

could provide personalized assistance to customers, which improved the accuracy and completeness of loan applications. The study also found that Conversational AI could reduce the time and effort required to complete loan applications, which improved the efficiency of the loan application process. The study used a field experiment to collect data from a major Chinese bank. The experiment involved randomly assigning customers to either the Conversational AI group or the control group. Customers in the conversational AI group received additional support from chatbots during the loan application process, while customers in the control group completed the loan application process without Conversational AI support. The study found that customers in the Conversational AI group were more likely to complete loan applications and more likely to have their loan applications approved compared to customers in the control group. The study also found that customers in the conversational group were more satisfied with the loan application process compared to customers in the control group (Chen, Chen, & Tian, 2022; Tandon, Dhir, Islam, Talwar, & Mäntymäki, 2021).

2.6 Effects of Conversational AI on customer satisfaction

Conducted an empirical study on the relationship between conversational AI in banking and customer satisfaction. Specifically, the study focused on the adoption of AI chatbots in the banking industry and the impact of AI chatbots on customer satisfaction. The study used a survey to collect data from 485 customers of a major Chinese bank. The study found that conversational AI had a positive impact on customer satisfaction. Customers who used Conversational AI had higher levels of satisfaction. The study also found that customers were satisfied with the convenience and responsiveness of conversational AI systems, which improved their overall satisfaction with the bank (Zainol, Shamsudin, Hassan, & Mohd Noor, 2023).

3. Research Methodology

A mixed methods research approach in which both qualitative and quantitative data collection was adopted. An explanatory sequential research design was employed and quantitative data was collected first followed by interviews. The research population of employees in the ten selected banks that have already adopted conversational artificial intelligence was unknown, hence purposive and quota sampling was used to select 92 research participants from departments as shown in table 1 below.

Table 1. Research participants

Departments	Percentage %	Targeted Respondents
Finance department	33	30
Internal Audit	33	30
Customer relationship	34	32
Total	**100**	**92**

Primary data was collected through questionnaires and interviews. Accordint to, (Ragab & Arisha, 2018) defines a questionnaire as a research tool that consists of a set of structured and or unstructured research questions created for survey or statistical study purposes. A structured questionnaire with closed ended questions were distributed first, closed ended questionnaire were used since the concept was of nature. Explanations and questionnaires were used to prevent responses from being influenced during data collection. Interviews were conducted to triangulate and confirm validity of data collected from questionnaires.

4. Results and discussions

4.1 Analysis of Responses

Defined the response rate as the ratio of the number of individuals who answered the questionnaire to the number of individuals in the sample. In the current study, questionnaires were distributed among employees of selected banks in Gweru Central Business District, with 92 questionnaires being sent out in total. Of these, 90 questionnaires were returned and completed in full by the respondents. The resulting response rate was calculated as 97%, which is deemed sufficient to draw effective and accurate conclusions.

4.2 Demographic characteristics of Respondents

Table 2. Demographics

Demographic variable	Characteristics	Frequency	Valid percent %
Gender	Male	52	57.8
	Female	48	42.2
Age	18-20	2	2.2
	21-30	25	27.8
	31-40	27	30
	41-50	25	27.8
	Above 50	11	12.2
Level of Education	O level	4	4.4
	A level	4	4.4
	Certificate	7	7.8
	Diploma	14	15.6
	Honours Degree	30	33.3
	Masters	13	14.4
	PhD	9	10
	Others	8	8.9

Primary source data (2023)

The majority of the respondents were (57.8) males, reflecting that the banking sector have more male employees than females. The majority of the respondents (30%) belonged to the age range of 31- 40, hence the employees are in their middle age. The study's findings showed that the banking sector had individuals with a diverse range of educational qualifications. The majority of the respondents had an honours degree 33.3%, 15.6% had a diploma, 14.4% had a master's degree. This showed that banking industry consisted of educated people.

4.3. Relationship between Financial Performance and conversational AI banking

The study aimed to evaluate the relationship between conversational AI and bank financial performance. The table 3 shows the descriptive statistics on the relationship between financial performance and conversational AI.

Table 3. Descriptive Statistics on the relationship between conversational AI and financial performance

	N	Min	Max	Mean	Std. Deviation
Adoption of conversational AI has effects on increasing profits	90	1	5	4.36	.798
Conversation AI reduces manual costs overheads	90	3	5	4.30	.661
Conversational AI attracts more customers	90	1	5	4.28	.874
Valid N (listwise)	90				

Primary source data (2023)

The descriptive statistics used in the study involved calculating the mean, which indicates the degree of agreement or disagreement among the respondents regarding the statements presented. The values obtained from the mean ranged from 1 to 1.80, indicating strong disagreement, 1.81 to 2.6 indicating disagreement, 2.61 to 3.4 indicating neutrality, 3.41 to 4.2 indicating agreement, and 4.21 to 5 indicating strong agreement. Additionally, the standard deviation was used, and a value above 1 indicated a wide range of answers, which implies a degree of disagreement among the respondents. The study analysed

how conversational AI affects financial performance using these components of mean and standard deviation.

4.3.1 Adoption of Conversational AI effects on profitability

According to the descriptive table 3, the majority strongly agreed that the adoption of conversational AI has the effects on increasing profits. This was described by the mean of 4.36 and standard deviation of 0.798. These results are in line with a study by Adam, Wessel, and Benlian (2021) which found that conversational AI has positive impact on bank's profits as a result of improvements in customer satisfaction and engagement leading to more customers thereby increasing sales and revenue.

4.3.2 Conversational AI on reducing manual costs overheads

Table 3 shows that the majority of the respondents strongly agreed that conversational AI reduces manual cost overheads as indicated by a mean value of 4.3, which indicates strong agreement with this statement. This finding is consistent with a study conducted by Góralski (1992) on the impact of conversational artificial intelligence on the Indian banking industry. The study found that conversational AI helped in reducing costs by enabling customers to perform their own activities, speeding up response times, handling data with accuracy, keeping humans informed of the latest changes, and many other benefits. Also stated that the implementation of conversational AI for customer services resulted in 40% reduction in customer service costs thereby have positive effect on the financial performance of the bank.

4.3.3 Conversational AI attracts more customers

The majority of the respondents strongly agreed that conversational AI attract more customers as the mean was 4.28 and standard deviation on the descriptive statistics table 4.4. The results are line with the findings by Adam et al. (2021) who stated that 63% of the respondent customers would prefer AI assistant over human when they want to resolve their issues and this attracts more customers. Conversational AI improve customer satisfaction, engagement and loyalty, hence attracting more customers. Also, according to Vipin Chopra, AGM, State Bank of India, Artificial Intelligence is helping the banking industry by reducing the big queues in the branches thereby attracting customers.
The results are also presented on Fig 4.1 below which shows the respondents percentage on the relationship between conversational AI banking and financial performance.

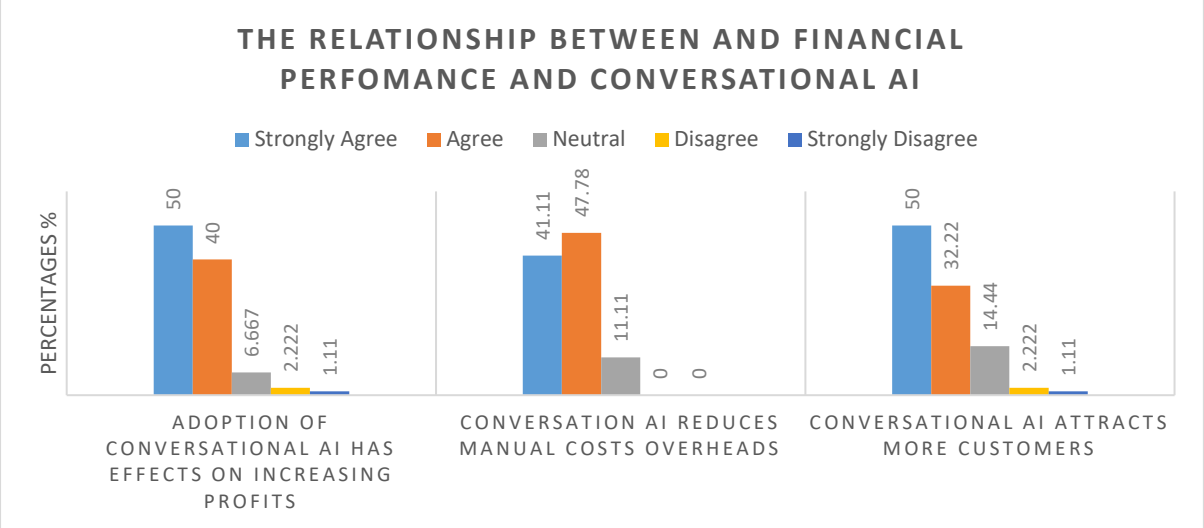

Figure 1. The relationship between financial performance and conversational AI banking

The greatest percentages of respondents (50%) strongly agreed that the adoption of conversational has effects on increasing profits thereby resulting in affecting financial performance. The majority of the respondents (47.78%) agreed that conversational AI reduces manual costs overheads and this results in reducing operating expenses of the bank hence an increase in financial performance. Additionally, 50%

of the majority strongly agreed that conversational AI attracts more customers thereby increasing revenues. These findings therefore indicates that there is a positive impact between conversational AI and financial performance. This results are in line with Gumbo et al. (2023) who stated that conversational AI affect the performance of the bank by improving efficiency thereby increasing bank revenues.

4.3.3.1 Comparison of Conversational AI banking and traditional banking

The goal of the study was to determine the difference between conversational AI banking and traditional banking. Figure 4.2 below shows the responses and results on the gaps in traditional banking in comparison with conversational AI in banking.

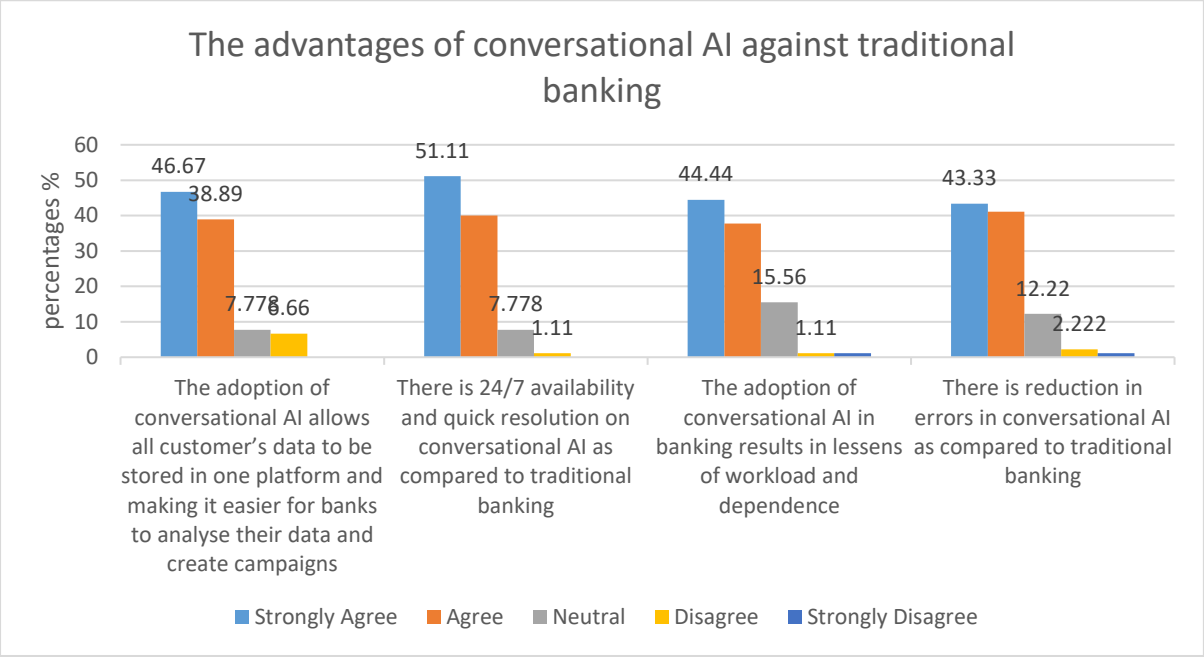

Figure 2. Advantages of conversational against traditional banking

4.3.3.2 The adoption of Conversational AI

The majority of the respondents (46.67%) agreed that the adoption of conversational AI allows all customer's data to be stored in one platform and making it easier for banks to analyse their data and create campaigns. This is supported findings that conversational AI help banks to collect and store customer data in single platform, making it easier to analyse and create targeted campaigns. According to Zheng et al. (2025) also stated that conversational AI allows banks to keep data record which will be used in future for making decisions.

4.3.3.3 There is 24/7 availability and quick resolution on conversational AI as compared to traditional banking

The majority (51.11%) strongly agreed that there is 24/7 availability and quick resolution on conversational AI as compared to traditional banking According to a study by Juniper Research (2021), conversational AI solutions are available 24/7, providing customers with quick, automated responses. This is also in line with a study done by Rane, Szügyi, Saxena, Ofner, and Stober (2020) who stated that the use of conversational AI is thought to be very convenient and allows clients to receive answers faster without having to wait or be put on hold. This is also confirmed by a survey in the year 2018 by HSBS Bank in Hong-Kong which implemented a conversational AI to automate its trade finance operations. The system was able to reduce processing time for trade documents from five to 10 days to just 24 hours, this reduced amount of paperwork involved in the process and improved the overall efficiency of the bank's operations.

4.3.3.4 The adoption of Conversational AI in banking reduces workload and dependence

The majority (44.44%) strongly agreed that the adoption of conversational AI in banking results in lessening of workload and dependence. This is supported by Adam et al. (2021), as the study found that conversational AI reduces work overload and improves efficiency as well as reducing the possibility of errors in manual tasks. Also found out that conversational AI helps banks improve customer service, reduce costs, and free up staff to focus on more complex tasks. The report cites examples of how banks such as Bank of America and Capital One in United Kingdom are using conversational AI to reduce customer service and reduce the workload on their staff.

4.3.3.5 There is reduction in errors in conversational AI as compared to traditional banking

There is reduction in errors in conversational AI as compared to traditional banking indicated by a majority (43.33%) strongly agreeing to this notion. Also found that conversational AI reduce errors such as input errors, processing errors and communication errors. However, the study indicated that it is important to note that conversational AI can also introduce new types of errors if not properly designed and implemented. According to Adam et al. (2021) further found out that AI powered systems reduce errors by using algorithms to analyse customer data and predict credit risk. These models can provide more accurate results than traditional assessments.

4.3.4 How Conversational AI affects customer satisfaction

The aim of the study was also to explore the relationship between conversational AI banking and customer satisfaction. Figure 4.3 below shows the responses on the relationship between conversational AI in banking and customer satisfaction.

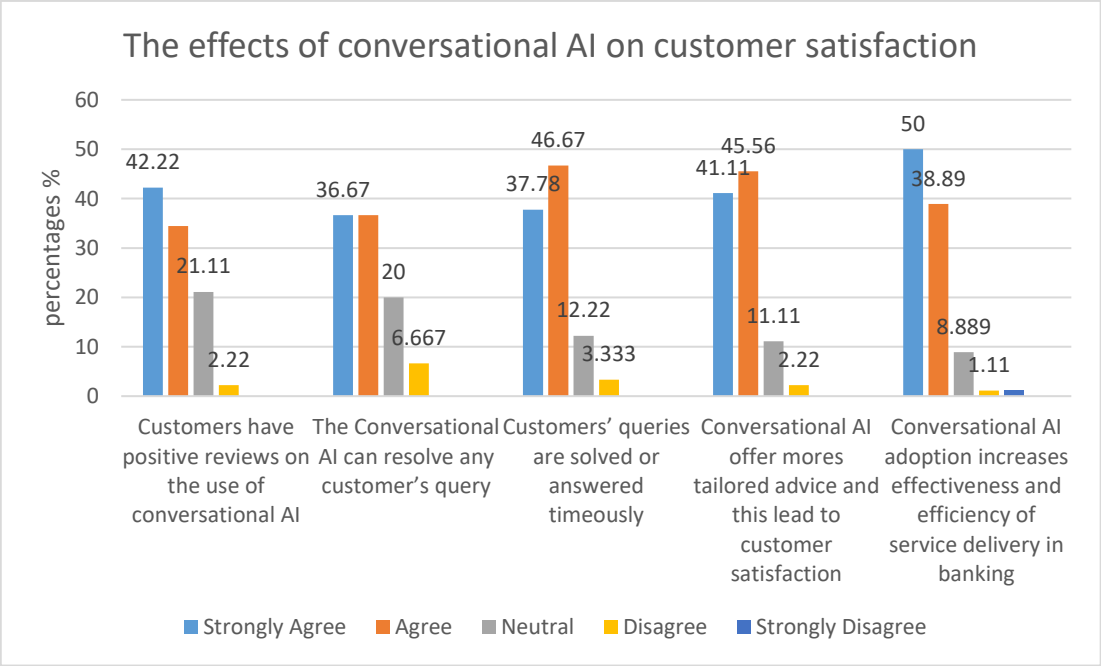

Figure 3. To determine how conversational AI banking affects customer satisfaction

4.3.4.1 Customers have positive reviews on the use of conversational AI

As shown in Fig 4.3, 42.22% strongly agreed that customers have positive reviews on the use of conversational AI. According to Oh and In (2023), indicates that a US-based bank implemented a conversational AI platform to help customers with common queries. The bank reported a 20% increase in customer satisfaction within six months of implementing the platform. This also shows that customers view conversational AI positively.

4.3.4.2 The Conversational AI can resolve customer's queries

The majority (36.67%) agreed that Conversational AI banking can solve any customer's queries. This was proved by the Bank of America which launched its virtual assistant Erica in 2018 that helps customers with various banking needs. These results also confirm the findings of HKMA (2019) that consumer preferences are shifting to personalised digital services that are able to combine all their product and servicing needs. These results are further in line with Jadil, Rana, and Dwivedi (2022), study which carried out research on the introduction of a virtual assistant into customer service in the Swedish banking industry. The study concluded that the AI Chatbots provided an automated conversation around the problem using the answers to make sure that the root cause of the problem has been identified correctly and the solution fits the customer.

4.3.4.3 Customers' queries are solved or answered timeously

The largest percentage of 46.67% agreed that customers' queries are solved or answered timeously and this results to customer satisfaction. These results are in line with the study undertaken by Brandtzaeg and Følstad (2018) that conversational AI improve customer experience by providing quick responses. Additionally, these results are also in line with a study undertaken by Przegalinska, Ciechanowski, Stroz, Gloor, and Mazurek (2019), on what Makes Users trust conversational AI for Customer Service. The study concluded that the main advantage of Conversational AI for customer service is much quicker and convenient services.

4.3.4.4 Conversational AI offer more tailored advice and this lead to customer satisfaction

The majority (45.56%) also agreed that conversational AI offers more tailored advice and services. This is supported by the report by Adam et al. (2021) that conversational AI in banking help banks to offer tailored advice and services and this resulted in customer satisfaction. According to Lu, Cai, and Gursoy (2019) also indicates that conversational AI provides personalised services in banking such as personalised financial advice and customised product recommendations. These results are also in line with Hallikainen, Luongo, Dhir, and Laukkanen (2022), who found that conversational AI engage with customers giving customers tailor- made services which results in customer satisfaction.

4.3.4.5 Conversational AI adoption increases effectiveness and efficiency of service delivery in banking

The majority (50%) strongly agreed that Conversational AI adoption increases effectiveness and efficiency of service delivery in banking. A study conducted by Przegalinska et al. (2019), found out that conversational AI enabled banks to offer their customers faster and more efficient service delivery, resulting in increased customer satisfaction. According to Lu et al. (2019), conversational AI banking help to reduce operational costs for banks, while increasing the revenue streams through improved customer engagement and cross selling opportunities thereby increases effectiveness and efficiency of service delivery in banking.

4.3.5 The effects of conversational AI banking on loan application processes

The aim of the study was also to determine the effects of conversational AI on loan processes. Table 4.7 below shows the descriptive statistics on the effects of conversational AI on loan applications.

Table 4. Descriptive Statistics: Effects of conversational AI on loan provisions

	N	Min	Max	Mean	Std. Deviation
There is instant response during loan application	90	2	5	4.11	.742
Adoption of conversational AI saves both the borrower's time and lender's time	90	2	5	4.26	.646
Conversational AI decreases paperwork during the process of loan processing	90	2	5	4.28	.671
Valid N (listwise)					

Primary data (2023)

The mean indicates the extent of agreement and disagreement on the statements presented. Values ranging from 1-1.80 shows strongly disagree, 1.81-2.6 shows disagree, 2.61-3.4 shows neutral, 3.41-4.2 shows agree and 4.21-5 shows strongly agree. The standard deviation which is above 1 indicates a wide range of answers indicating disagreement.

4.3.5.1 There are instant responses during loan application

The majority agreed that there are instant responses during loan application as the mean is 4.11 and standard deviation of 0.817. These findings concur with Passarelli, Bongiorno, Cucino, and Cariola (2023) who pointed out that conversational AI provides instant answers relating to loan applications. Usage of conversational AI banking has significantly sped up and improved the efficiency of loan applications. The study further states that there is quicker turnaround on conversational AI in banking, which can help consumers fill out loan applications and respond to any queries they may have.

4.3.5.2 Adoption of conversational AI saves both the borrower's time and lender's time

The majority strongly agreed (mean 4.26) that adoption of conversational AI saves both the borrower's time and lender's time and reducing errors. Study pointed out that conversational AI help customers to fill out loan which save customer's time and the bank. Conversational AI is also seen in helping banks by reducing loan application time (Adam et al., 2021).

4.3.5.3 Conversational AI decreases paperwork during the process of loan application

Additionally, the majority agreed that conversational AI decreases paperwork during the process of loan processing. This is in line with Lu et al. (2019), who states that conversational AI reduces paper work and improve the efficiency of loan processing, which can lead to greater customer satisfaction. This is because the documents required to apply for loans are send electronically which reduces the paperwork process.

4.4 Analysis of qualitative data

4.4.1 Advantages of adopting conversational AI in banking?

4.4.1.1 Theme 1: Speed and convenience of services

The majority of the respondents stated that the adoption of conversational AI resulted on speed and convenience of services. Customer relationship officer of Bank A stated that "*Conversational AI provides instant responses to customer queries as customers do not have to wait for human agent to become available*". The majority of the respondents also stated that conversational AI provides fast problem solutions as conversational AI provides personalised solutions based on user needs and preferences. However, the respondents also mentioned that conversational AI banking lacks human touch. Some customers prefer services being offered physically. These finding are in line with Oh and In (2023) who mentioned that some customers prefer services being offered by humans physically.

4.4.1.2 Theme 2: Customer Engagement

The respondents stated that the post- adoption of conversational AI resulted in better customer engagement as the customers receive personalised services and tailored services. This can help banks to satisfy their customers. Manager of one Bank stated that, *"The 24/7 availability allow customers to access informational or services whenever they need them without having to wait for business, this improve convenience and accessibility of the customer experience leading to higher customer engagement"*. This is also in line with a study by (Armstrong 2019). which stated that the use of conversational AI is very convenient and allows clients to receive answers fast without having to wait or be put on hold.

However, one bank manager emphasised that "*Conversational AI rely on data and algorithms to make decisions, which can sometimes lead to errors or inaccuracies in transactions. This can result in incorrect account balances. Hence banks has only adopted this innovation in clients care management only*"

4.4.2 How has the adoption of conversational AI impacted the bank's financial performance?

4.4.2.1 Theme 1: Operational Costs

The majority of the respondents stated that conversational AI adoption has resulted in reduction of operational costs. They mentioned the costs of transactional costs are reduced as conversational AI can handle large volume of transactions simultaneously thereby have positive effect on bank's financial performance. The finance department of Bank C mentioned that there is reduction in labour costs as conversational AI can automate many customer service task. This reduces labour costs thereby affecting bank financial performance. However, the majority stated that conversational AI has brought some expenses that includes maintenance costs which affect the financial performance. These results reflects the report by Hallikainen et al. (2022), which noted high cost of conversational AI in maintenance and system monitoring.

4.4.2.2 Operational efficiency

The majority stated that conversational AI enables banks to automate various operational tasks such as opening accounts, processing loans, and managing transactions. This can improve operational efficiency and reduce the time and resources required to perform these task. Conversational AI handles a large volume of requests simultaneously. This can help banks to scale their operations more efficiently. A Bank B customer relationship officer mentioned that conversational AI collect data and analyse data on customer interactions, preferences and behaviour, and this help the bank to identify areas that need to be improved hence efficiency is improved.

5. Conclusion

The study concludes that Conversational Al improves bank performance through (1) addressing customer queries more accurately, (2) reducing manpower responsible for addressing customer queries, (3) attracting more customers to the bank (4) automation of routine tasks, (5) reduction in related overhead costs, and (6) offering efficient 24/7 customer support. These benefits improve customer experience, engagement and satisfaction and ultimately contribute to improved financial performance for the financial institution. However, information from interview revealed that banks are only adopting the innovation for client care management since they are still skeptical to adopt the service in financial transactions.

5.1 Recommendations

The study recommends that financial institutes should heavily invest in conversational artificial intelligence programs such as chatbots or virtual assistants as the world is slowly moving away from traditional brick and mortar branches to virtual branches. As the use of plastic money is on the rise worldwide, there is need for banks to embrace conversational AI inorder to reach a wide range of clients at a more interactive level. In this regard, banks with detailed conversational AI can increase their market share.

5.2 Areas For Further Studies

Other studies can examine the effect of conversational AI on fraud prevention in banks or determine the influence of conversational AI use on fraud prevention in banks. Future studies can as well analyse data on the technology's precision and efficacy in identifying and preventing fraud, as well as assessing the cost savings connected to fraud prevention.

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