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AI-Powered Chatbots and Customer Loyalty of Deposit Money Banks in Rivers State

Agbi, Ejokwu Sampson[1]; Prof. A. C. Ezirim[2] & Prof. O. A. Onuoha[3]

[1]Marketing Department, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt

[2&3]Marketing Department, University of Port Harcourt

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***Corresponding Author:** Agbi, Ejokwu Sampson (sampson.agbi@iaue.edu.ng)

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Abstract **Review Article**

The study focuses on AI-Powered chatbots and customer loyalty of deposit money banks in Rivers State, Nigeria. The aim of study is to investigate the relationship between AI-Powered chatbots and customer loyalty of deposit money banks in Rivers State, Nigeria, is timely and insightful. Despite efforts to enhance customer engagement, satisfaction and retention, loyalty remains low, contributing to bank failures in Rivers State, Nigeria, where customers are shifting to online banking platforms like Opay and PalmPay. A Crosse-sectional descriptive survey research design was adopted, and data were collected from 384 customers of deposit money banks using a structured questionnaire, 362 where properly filled returned while 22were not returned. The data were analyzed using descriptive statistics, Pearson Product Moment Correlation, multiple regression analysis, and moderation analysis with the aid of SPSS version 29. Key discoveries show that each AI-Powered chatbots dramatically increase customer loyalty they are still the number one. Digital infrastructure plays a key role in the AI-loyalty relationship, technology adoption is the moderator. The paper argues that AI-Powered chatbots offer a solid blueprint for driving customer loyalty and competitive advantage. Therefore, the authors propose concrete steps such as purchasing AI-Powered chatbots equipment. They also stress the need for digital security measures, employee training, and holistic digital transformation. This research contributes to marketing literature by establishing the AI-loyalty link in Nigeria's banking context and highlighting technology adoption's moderating role. It provides valuable insights for banks and policymakers seeking to harness AI-Powered chatbots for customer loyalty. Some potential limitations include the study's focus on Rivers State, Nigeria and reliance on customer self-report data. Future research could explore artificial intelligence adoption across regions and incorporate objective metrics. This offers a novel perspective for scholars and practitioners on how digital infrastructure conditions the success of AI-Powered chatbots marketing strategies.

Keywords: AI-Powered, Chatbots, Customer Loyalty, Customer Engagement, Customer Satisfaction and

INTRODUCTION

Background to the Study

Marketing is a very important factor in the success of an organization, as it allows the organization to position itself competitively and meet financial objectives (Cacciolatti& Lee, 2020). Marketing is understood as a social process of product exchange that results in value creation for the other party. For Ezirim et

al. (2024), a marketing strategy is a set of policies and programs which a company constantly, aptly and realistically implements in order to secure its long-term customer, profit, and competitive objectives in a chosen target market. Artificial Intelligence has been a great support in various sectors like marketing finance technology, and entertainment. It appears that AI language will indeed become the next big thing in the very near future. It is quite difficult to refrain from the use of machines since they have become almost ubiquitous.Artificial Intelligence has the potential to mechanize business functions, derive information from past data, and create consumer and market insights through computerized algorithms (Davenport et al. 2020). The importance of the research is in its ability to shed light on how strong artificial intelligence marketing strategies can lead to increased customer loyalty and retention in deposit money banks. Looking at the link between artificial intelligence and customer loyalty, the research intends to add to the increasing field of research on Artificial Intelligence in marketing and offer hands-on suggestions for banks that want to use artificial intelligence marketing programs.

Statement of the Problem

The banking industry in Rivers State, Nigeria is currently facing a major challenge: the sharp and large-scale decline in customer loyalty, even though banks have used many artificial intelligence marketing tools. This issue threatens the very existence of deposit money banks in Rivers State where more and more customers are leaving traditional banking to go to online banking platforms like Opay, Pamlpay, and monipoint. A thorough analysis of the reasons behind this trend shows an alarming that there is hardly any good customer engagement, retention, and satisfaction strategies. This situation has led to the loss of customer loyalty, as well as a series of bank failures. In Rives State Nigeria some of the notable instances of failure are Spring Bank, which was licensed in 2004 and stopped operations in 2010, Bank PHB which had operations in the area was acquired by Keystone Bank in 2011, and also Diamond Bank was acquired by Access Bank in 2018 and so on. The introduction of Artificial Intelligence (AI) is fundamentally changing the marketing environment, providing a potential solution to the problems facing the banking sector. The ability of AI to process huge volumes of customer data, tailor marketing communications, and elevate service quality has made it a key facilitator of customer loyalty. By utilizing Artificial Intelligence (AI), banks can improve cognitive trust, perceived value, satisfaction, and affective trust, which will lead to a loyal customer base (Chen et al. 2023). Despite the potentials of artificial intelligence, there is very little research on the effectiveness of AI-Powered Chatbots particularly in deposit money banks in Rivers State, Nigeria. This knowledge gap has created a vacuum in our understanding of the impact of Artificial Intelligence (AI) on customer loyalty, underscoring the need for a comprehensive investigation into the sudden declined in customer loyalty in the Banking sector in Rivers State,, Nigeria, characterized by customers' shift from the traditional banking to online banking, leading to concerns about bank sustainability and potential failure.

Aim and Objectives of the Study

The aim of the research is to examine the relationship between AI-Powered Chatbots and Deposit Money Banks' Customer Loyalty in Rivers State, Nigeria. The specific objectives of the research are:

i. To examine the extent to which chatbots and customer interactions in deposit money banks in Rivers State, Nigeria, are related.

ii. To examine the extent to which chatbots and customer happiness in deposit money banks in Rivers State, Nigeria, are related.

iii. To examine the extent to which chatbots and deposit money banks' client retention in Rivers State, Nigeria, are related.

iv. To examine the extent to which the adoption of technology affects the relationship between AI-Powered Chatbots and deposit money banks' client loyalty in Rivers State, Nigeria.

Research Questions

To address the objectives of the study, the research questions below were raised:

i. What role does the participation of consumers in deposit money banks in Rivers State Nigeria via chatbots play?

ii. To what extent are chatbots responsible for the satisfaction of customers of deposit money banks in Rivers State, Nigeria?

iii. What extent of connection is there between chatbots and the capacity of deposit money banks to retain their customers in Rivers State, Nigeria?

iv. To what extent does technology adoption mediate the relationship between AI-Powered Chatbots and customer loyalty in deposit money institutions in Rivers State, Nigeria?

Research Hypotheses

The study was preguided by some null hypotheses as the following:

H01: The use of chatbots and customer interaction in deposit money banks in Rivers State Nigeria are not significantly related.

H02: The use of chatbots and client happiness in the deposit money banks of Rivers State Nigeria are not significantly related.

H03: The use of chatbots and client loyalty in deposit money banks of Rivers State Nigeria are not significantly related.

H04: The relationship between AI-Powered Chatbots and client loyalty in deposit money banks of Rivers State Nigeria is not largely influenced by technology adoption.

Significance of the Study

The study on AI-Powered Chatbots and customer loyalty of deposit money banks in Rivers State, Nigeria, will be significant to the stakeholders:

Banks managers: The study will give assistance in the implementation of AI marketing techniques by the managers of banks in Rivers State, Nigeria. These technologies will offer the bank the opportunity to grow their business by maintaining customer loyalty and retention through the use of AI.

Customers: AI marketing programs can enable the delivery of tailored services, which in turn, will improve the customers' overall experience and satisfaction.

Policymakers: The suggested measures can help design policies that regulate the use of AI in banking. Researchers: Results from this research will be instrumental in expanding the understanding of how AI marketing impacts customer loyalty, as well as serving as the basis of further inquiry.

Scope of the Study

The following heading consisted scope of the study:

Content scope: The study focuses artificial intelligence marketing initiatives and their impact on customer loyalty in deposit money banks in Rivers State, Nigeria.

Geographic scope: The six states within South-South, Nigeria constitute the geographic scope.

Unit of analysis scope: The study involves macro level of analyses because customers' of deposit Money Banks respondents constitute the unit of analysis.

Concept of Customer Loyalty

Loyalty basically means that one is quite willing to keep buying or backing one"s favorite services or products for a long time (Mntande et al. 2023). In the view of Al-mustafa et al. (2023), banking customer loyalty has been more aggressive business environment, with organizations fighting for the share of the market for a number of reasons including the digital-first experience that the banks give to their customers. Customer contacting points with their favorite banks have to be well managed so as to increase customer loyalty in the banking industry and improve the overall banking experience for the traditional banks or credit unions. Therefore, banks should devote

themselves to digital transformation, which means both technological progress and enhanced customer experience. According to Febriandika et al. (2020), brand loyalty can be nurtured by enhancing customer experience and one of the factors of customer experience is service quality. A customer loyal to a brand is one who since making a first purchase is continually purchasing without being forced and further is even encouraging others to buy and use the products (Indriani&Ramli, 2024). Mukerjee, (2018), states that marketing researchers deem consumer loyalty as a recurrent well-liked construct because it plays a critical role in generating sustainable profit for the company. Kadir and Ramli, (2024), argue that customer loyalty is a main element that leads to a company's success. Besides, their notion of loyalty in this study refers to not only frequent customer visits but also positive word-of-mouth and recommendations, customer loyalty means dedicated support of a brand even when a competitor's product is so highly marketed that the customer may be tempted to try it without the threat of loss of one's original identity (Agbi, 2025).

Customer Engagement

The way digital technology is used has brought about a major transformation in the way consumers and brands interact. Modern consumer interaction, or customer engagement as it is commonly referred to, is turning into an elusive, fashionable concept that is hard to pin down especially in this digital era. Consequently, research on consumer engagement in the digital era is very relevant. Although research has been done on consumer interaction in the present time, there is still a void of research that needs to be filled particularly considering the present digital generation (Bapat, 2023).Customer engagement depends on the use of communication channels, feedback systems, and collaboration platforms (Sicilia &Palazon, 2023). A company who keeps track of customers' product usage is able to identify their behavior patterns which may reveal that customers do not get the full value of product features, wrongly use or get difficulties in using certain parts of the interface, or are close to the disengagement stage (Kumar & Shah, 2024). Aralubna, (2024) outlined that measuring loyalty is not a simple matter of one indicator only; it requires a combination of retention rates, loyalty program metrics, Net Promoter Scores (NPS), satisfaction surveys, interaction analysis, and behavioral data. Customer engagement is the capability of the company to be in contact with its customers at different touch points or channels, enabling customers to give feedback upon request in order to have a better usage of the company's product or service and also to make suggestions for improvement (Agbi, 2025).

Customer Satisfaction

Different authors have a slightly different understanding of customer satisfaction. For example, Abedi and Jahed, (2020), say customer satisfaction is a feeling of customers who perceive that their needs have been met. From their point of view, the purchase and use of a product and/or service trigger the emotional state of the customer. They also consider a customer’s satisfaction level as a reflection of his/her trust. Gunawan and Ramli, (2023), explain customer satisfaction as the factor of emotions that influence the customer's experience and lead to the customer's purchase. Customers' perceptions, on the other hand, may well determine their purchasing intentions. Saputra et al. (2024), writes that customer satisfaction represents a full assessment of a brand's performance based on past contacts (good ones and bad ones). Customer loyalty literature often considers contentment separately. The driver Services offered to customers play an important role in customer satisfaction, loyalty, and illness (Agbi, 2025).

Customer Retention

Bernazzani (2022) explains that customer retention is a company's capability to continuously convert existing customers into regular buyers as well as keep them away from the competitors. It reflects the impact of a company's product and quality of service in satisfying the existing customers. Concretely, customer retention by identifying at-risk customers can be done by predictive models. By looking at a customer historical data, a business

can use it to develop a predictive model which will be able to portray customers' behavior patterns or other indicators that signal a customer might churn. With help of these models, companies can productively detect at-risk customers and then take appropriate measures in order to keep them. After finding the at-risk customers, companies are able to carry out the re-engagement strategies to keep the customers. Ritonga and Digdowiseiso (2023) argue that customers who feel happy with a product are likely to continue using the product and not look for or use the alternatives.Such strategies may be customized offerings, specific communication messages, or loyalty schemes that motivate customers to stay (Okatta et al. 2024). Customer retention strategies customer retention strategies are the ways that you build long-term customer relationships, minimize customer churn, and increase the value of customer lifetime (Kumar& Shah, 2024). It should be also noted that customer retention relates to the first exposure a customer gets to a company and then sustains through the whole duration of their relationship. Customer retention means that a company is able to keep its customers throughout a longer period. It is one of the important areas for organizations to keep their existing customers who are often cheaper to maintain than acquiring new customers increasing revenue, gaining a competitive advantage and word of mouth (Agbi, 2025).

AI-Powered Marketing

Artificial Intelligence is the branch of science which deals with the replication or simulation of real human behavior to render human like eliciting human complex capabilities of reasoning, learning and self correction in modern computer systems (Kumar & Gupta, 2023). Angelen and Siddik (2023) pointed out that AI is deeply integrated in the marketing activities of various forms and processes. Here is a list of some of the AI applications in marketing: Data analysis and insights: AI can automatically analyze data and give insights. Algorithms are able to find patterns in different data of customers, latest market trends and social media interactions in order to reveal patterns, correlations and actionable insights. This allows marketers to use data for decision-making and consistently refining marketing strategies. According to Patel et al. (2023), they saw artificial intelligence mainly as a helper for planning marketing in a way that centers the customer. The study points out how AI could lead to higher buyer engagement and happiness by generating content that is individually targeted and suggesting personalized products and services, which in turn results in successful marketing. One should not overlook ethical issues when it comes to the use of artificial intelligence in marketing practices. Artificial Intelligence marketing may be a solution for Nigerian businesses to enhance marketing capabilities and eventually reach overall business goals. One of the ways artificial intelligence can enable businesses in Nigeria to satisfy customers is by introducing chatbots. Chatbots are computer-generated customer service agents who offer help to customers all the time. They are capable of addressing customer queries, troubleshooting problems, and giving recommendations tailored to an individual customer, at a pace that no human could match. Predictive analytics refers to the use of Artificial Intelligence algorithms to analyze customer data and to forecast customer behavior (Greengard, 2023). Artificial intelligence is the umbrella term for several technologies and approaches that enable machines and systems to perform tasks that would normally require human intelligence, for example understanding reasoning, finding solutions, interpreting human language and seeing trends. Artificial intelligence can be used to predict machine failures based on historical data and to alert users to past actions, among other potential. Besides, absorbing data is really vital to AI, as it will collect massive data based on certain criteria (Lim et al. 2023). AI as a new technology is seen to mimic the human in the way it is programmed to work. It is an automated system which performs human job or reacts human-like in a work place or an organization. Chen and Zhang, (2024), mentioned that AI is really excellent in handling huge amounts of data and its ability to create audience segments by combining their conduct age location, purchase patterns makes the messages more relevant and raises the level of

engagement. Brands can use these discoveries to design messages that deeply reach the consumers in a personalized way and thereby increase the engagement as well as the conversion rate. Artificial Intelligence (AI) has changed the marketing field, among other ways, it brings opportunities to businesses in content creation, predictive analytics, and creating chatbot experiences (Agbi, 2025).

Artificial Intelligence Chatbots

AI marketing is a great tool for businesses to get more effective marketing campaign results. Besides customer data analysis and behavior prediction, artificial intelligence also helps the business to contact the right customers with the right message at the right time. That could result in raise of conversion rates and expansion of revenue figures as well. (Picreel, 2023) In recent years, the artificial intelligence chatbots scene has undergone significant transformations due to the introduction of new innovations and evolving patterns. Among the changes, one feature of deep natural language understanding has completely changed how a chatbot interacts with humans. Present-day chatbots are not only able to understanding the context, but they are also capable of managing complex conversations, and giving accurate answers. Sentiment analysis enables chatbots to identify the emotions of the customer, and based on that information, they modify their replies, which results in an enhanced user experience. Moreover, advances in voice recognition technology have given rise to voice-activated chatbots that are operable on various devices and platforms (Nwobodo et al. 2024). Angelen and Siddik, (2023), point out that robots have now become a common feature in different sectors including the banking industry where they are slowly replacing humans. This tech revolution is already obvious if you look at chatbots in retail banking and robot-advisors in investment banking. These two show where the technology Digital Transformation by AI is heading in the banking sector where the interaction with customers is becoming more human like. Nwaimo et al. (2024), believed that AI chatbots are a central component of many business customer service and marketing strategies, especially for banks that want to improve both their efficiency and customer engagement. AI chatbots are among the technologies that can help banks solve the challenges they face in marketing. Banks can use AI chatbots to not only automate answers to frequently asked questions but also provide round-the-clock support and tailor interactions according to customer information which can ultimately improve the overall customer experience. Besides, AI chatbots are quite cost-effective which explains why banks want to invest more in these systems in order to get higher returns (Adewumi et al. 2024).AI chatbots are simply a type of automated machine that can have conversational exchanges with customers in the real-world (Agbi, 2025).

Figure 2.1: AI chatbots.
Source: Meta AI photo, (2025), Agbi, (2025).

Technology Adoption Condition

Hamed et al. (2024) have explained that technology adoption process refers to the stages that individuals, organizations, and societies pass through in adopting and using new technologies in their daily lives or operations. Knowledge of this process is essential in determining the success of technology adoption and in planning ways to make the integration of innovations easier. This method can be split into five separate phases.

Knowledge: The first stage is when people recognize the existence of the new technology and are able to foresee the benefits that it can bring. This recognition can be made through different channels such as mass media, informal communication chains, and ordinary conversations.

Currently, prospective technology adopters require knowledge about the product, its functionalities, and differences from the existing solutions. Persuasion: On acquiring technology knowledge, the potential technology adopters move to the persuasion stage.

At this stage, the individuals weigh the pros and cons of using the new technology. They also assess if the technology can be effective to them, can bring about work efficiency, or can solve the problems that they have. In this stage, influences from outside such as marketing efforts, recommendations from peers, and opinions of experts are significant in changing or forming attitudes.

Decision: The decision stage is mainly about deciding if the technology is worth the initiative and whether it should be implemented or not. The potential users weigh the positive and negative aspects that they have perceived in the technology against the cost and effort of implementation. Besides that, the compatibility of the new technology with existing systems, budget constraints, and level of complexity are among the major aspects that should be considered in this phase.

Implementation: Selecting and agreeing to the use of technology naturally leads to the question of how it will be implemented practically. This step is all about getting the hardware, software, and other resources that are needed to carry out the technology implementation. Also, if necessary, capabilities training and education should be conducted to provide users with the correct knowledge and skill set to operate the technology effectively.

Confirmation: Confirmation is the stage when the technology adoption process is concluded. At this stage, the adopters question the actual results of using the new technology. They are

interested in knowing whether the expected advantages have been achieved and what new difficulties, if any, have been encountered. If things turn out well at this point, the users may become more involved and even advocate the use of the technology to others, whereas if things turn out bad, the users may leave the technology or even start looking for other solutions. Technology Acceptance Model (TAM). TAM is a very popular theory that explains how people accept and use new technology. It can also be used to explain how the use of artificial intelligence (AI) technology, when combined with marketing strategies, can have an impact on the performance of online stores. The main idea of TAM is that there are two main reasons why people adopt and use technology, like AI in marketing: 1. Perceived usefulness is a measure of how much a person believes using a certain technology can improve his or her work performance or make the activity more efficient. To illustrate, that is the degree to which a user will feel that using a particular technology would be free of effort e.g. chatbots, predictive analytics, and tailored content are seen as helpful AI-powered marketing solutions provided they assist e-commerce platforms in marketing, customer engagement, and overall performance. Artificial intelligence technology must be user-friendly, seamlessly integrated with existing marketing processes, and require a minimum of technical know-how or training so as to positively impact marketing performance (Davis, 1989). Yang et al. (2023) highlight that only businesses equipped with the capabilities enabled by digital technology can consider themselves as the actual users of this primary application of digital technology. Agbi, 2025 defines technology adoption as a Bank's ability to come to terms with the use of a certain technology that is characterized by the anticipation of usefulness, the decision to use, and the ease of use as perceived.

Artificial Intelligence Marketing and Customer Loyalty

Series of studies has be carryout on Artificial Intelligence Marketing Strategy and Customer Loyalty in general, only a handful of them have focused on artificial intelligence (content creation, Predictive analytic, chatbots) and customer loyalty (customer engagement, customer satisfaction and customer retention) Chen et al. (2023) one of the latest studies in this domain, explored the role of AI chatbots in customer retention by looking at how the quality of AI services influences customer loyalty. Shin and a team, 2023 suggest that chatbots with emotional intelligence and empathy capabilities increase client trust and loyalty. Chatbots enabled by Artificial Intelligence can increase response efficiency and client loyalty in the face of high volumes of questions Cross-selling and up selling opportunities are increased by artificial intelligence powered recommendation systems, which has a positive impact on client loyalty. Rathore et al. (2023) found that the influence of employing AI tools, particularly when handling customer feedback, is very significant with respect to customer loyalty. One way to use social listening and AI-based social media analytics tools is not only to monitor the brand perception of an organization in the market but also to interact with customers. Such interactions are really good for the brand's loyalty. Besides this, AI-based tools can also be very helpful in efficiently dealing with customer feedback in large numbers. This kind of quick response leads to higher customer retention rates. Use of artificial intelligence with predictive analytics helps to keep the inventory level of fast moving items at a constant level so as to improve the overall experience of the customer (Badhon et al. 2024). One major way that artificial intelligence contributes to customer loyalty is through personalized marketing. With the help of artificial intelligence algorithms, companies are able to examine huge amounts of customer data to find out the personal preferences, behaviors, and buying habits of their customers. That way, companies will be able to run specialized marketing campaigns that will quite literally connect with customers on a personal level. For example, artificial intelligence is able to suggest products based on the customer's past purchases or the logs of their browsing activity. -This help keep the customers content and also develop their loyalty by making them feel that they are

understood and that their presence is appreciated. Predictive analytics is a potent artificial intelligence tool that plays an important role in customer loyalty. Using historical data AI is capable of predicting customers' future behaviours and trends. In this way, businesses will know in advance customer's needs and hence they will be able to resolve potential problems proactively. For instance, AI can discover customers about to desert the brand and that will give a chance to the company to intervene with some measures before losing them, such as an offer of a special promotion or a personalized incentive. Moreover, predictive analytics facilitates effective stock management to ensure that best-selling articles remain in the shop. Overall improving the customer experience Artificial Intelligence driven chatbots have totally transformed customer service and heavily influenced customer loyalty. Chatbots are capable of dealing with lots of different questions, supplying immediate and correct answers and remain available round-the-clock. All these instant helps increase customer's contentment and implicit brand loyalty. Modern chatbots on the other hand comprehend natural language and get better through interacting. They are also skillfully able to pass on complex problems to human operators for the best level of support. Hence by improving the effectiveness and the promptness of service delivery, chatbots get involved in nurturing the relationship of a customer with a brand for the time to come. AI based customer segmentation is also raising the topic of customer loyalty and is very important. Through such analysis of customer information, AI categorizes customers into various groups based on various factors like demographic information, behaviors, etc. Thus, customer segmentation using such techniques can help a business market various kinds of customers effectively. To exemplify this, AI can identify loyal customers and offer them exclusive discounts or offers, which not only make them feel special but also keep them loyal to the business. Moreover, AI can analyze various kinds of customers and therefore reveal their specific needs and problems, which will consequently allow the business to formulate specific kinds of marketing plans. Ai's positive impact on customer loyalty is via the elements of cognitive trust, perceived value, and satisfaction. Automation when used in a customer-centric manner can have a major influence on building customer loyalty (Agbi, 2025).

AI Chatbots and Customer Engagement

There are many advantages to using artificial intelligence chatbots and customer engagement together, claims Adam et al. (2021). However, the chief advantage is that they can speed up the process and improve the quality of customer interaction. For instance, chatbots running on AI can at the same time manage a large number of requests in a quick and reliable way, thus human agents get time to concentrate on more complicated problems. As a result, not only the quality of the service gets better but also the time it took to answer someone gets reduced. For example, banking chatbots can be used for simple account-related tasks while human tellers or bankers can handle the more complicated issues. Incorporating AI chatbots in customer engagement is now one of the main strategies in digital marketing as it provides customers with service and instant interaction around the clock. Besides that, AI-based tools for content creation are expected to bring a content marketing revolution through increased productivity and higher quality (Chaudhuri & Stokes, 2023). The integration of artificial intelligence chatbots and customer engagement may revolutionize customer engagement by providing personalized, prompt, and effective assistance to customers (Agbi, 2025). H01: There is no significant association between chatbots and customer engagement of deposit money banks in Rivers State, Nigeria.

Customer Satisfaction and Chatbots

AI chatbots could be a great way to improve customer satisfaction by offering 24-hour availability, lessening the waiting time, and even coming up with solutions to customers' problems after understanding them. Rathore et al. (2023) claim that customer satisfaction can be improved through the use of AI tools targeting customer feedback management. Chatbots, while interacting with customers,

collect valuable client data that can be analyzed to understand customer choices, issues, and behavior . Such data help in the development of products, services, and marketing strategies leading to higher customer loyalty. According to Shin et al. (2023), chatbots that are capable of emotional intelligence and empathy could improve customer satisfaction. Artificial intelligence (AI) chatbots are capable of significantly enhancing customer service efficiency and gaining high levels of customer satisfaction, even when a massive amount of inquiry is involved. To begin with, chatbots have the capability of managing multiple questions at the same time without any delays or interruptions. Moreover, they offer instant and precise answers to the clients, hence guaranteeing that the clients' requirements are met in an efficient manner. Besides that, chatbots remain to be accessible all the time (24 hours) and 7 days a week without any downtime. This is to say that clients will be able to receive support anytime they want without any limitations of time. This kind of prompt support improves customer satisfaction. Besides, Artificial Intelligence chatbots also comprehend natural language and after each interaction, they get better in their performance. They are able to hand over the complicated problems to human agents without any interruption, so that the problem is handled by the right level of support. Artificial Intelligence (AI) chatbots play a major role in enhancing customer service efficiency and responsiveness; therefore they are instrumental in establishing long-lasting customer relationships. AI turned customer segmentation into a very important topic which influences customer satisfaction (Nitin et al. 2024). Besides performance improvement and cost reduction, AI chatbot and customer satisfaction relationship bring about a number of other advantages. To start with, they improve the productivity and quality of customer interactions. Chatbots, for instances, are able to manage a lot of inquiries fast and accurately, allowing the human operators to concentrate on the more difficult problems. AI chatbots and Customer satisfaction have become a part of main tools to increase customer engagement, and in fact, research has revealed their effectiveness. One paper reported that AI driven chatbots could be a great tool to enhance customer engagement and business expansion by offering tailored experiences and instant answers to customer requests (Agbi, 2025).

H08: There is no significant relationship between chatbots and customer satisfaction of deposit money banks in Rives State, Nigeria.

Chatbots and Customer Retention

Artificial intelligence chatbots have changed customer retention and lots of studies have revealed their role in this change. Artificial intelligence chatbots help in improving customer retention. This is because chatbots offer quick and efficient service that reduces waiting times for customers. This increases customer satisfaction levels (Chen et al. 2023). By understanding customers' emotions and grievances, organizations can address their problems while earning customer loyalty at the same time (Rathore et al. 2023). Customer retention methods within the service sector have always aimed at providing an incident-free customer experience, and this target has been made easier on a continuous basis by the emergence of technologies that have simplified this aim. Technologies such as Artificial Intelligence hence, in this light, it is essential to have a clear understanding of Artificial Intelligence, how does it operate? How has it been integrated in the service industry, especially for customer retention transformation? (Ifekanandu et al, 2023). Artificial intelligence chatbot drives potential customers to get instant answers. The study's findings indicate that the subject of direct response marketing strategies is a significant one, with many respondents emphasizing it over sales transactions. Sales transactions indeed represent a component of customer retention. Artificial intelligence chatbots& customer retention might be the route for businesses to get to understand customers' behaviour and preferences, thus allowing them to design organizational campaigns' targets and raise customer retention (Agbi, 2025).

H_{03}: There is no significant relationship between chatbots and customer retention of deposit money banks in Rivers State, Nigeria

Moderating influence of Technological Adoption on the relationship between AI-Powered.

Marketing and Customer Loyalty

The way technology adoption, social media and consumer engagement jointly affect the behavior of consumers is a quite significant interaction. Businesses that are using AI may even change the shopping environment online of social media platforms to provide each customer with a personalized experience on social media. Such companies, after predicting customer behavior through the use of artificial intelligence, may take advantage of the impact of online marketing strategies, and use social media platforms to encourage their customers to make more analytical decisions with the help of artificial intelligence technology. For example, Artificial Intelligence collects and analyzes the data about products or services and then uses this information to provide a new shopping experience that will connect the customer with the business. Artificial intelligence also offers remedies for a range of social media-related issues. For example, sales employees can get stressed out when they try to analyze the huge amount of information that is generated through social media platforms. Those companies that are using artificial intelligence may be able to solve such problems through various artificial intelligence-based solutions such as automated information mining systems and predictive marketing analytics (Sajjad et al. 2023).

H_{04}: Technology adoption does not significantly moderate the relationship between artificial intelligence marketing strategies and customer loyalty of deposit money banks in South-South, Nigeria.

Theoretical Review

The study anchored on theories: Technology of Acceptance Model (TAM)

Technology Acceptance Model (TAM)

Based on the research done by Davis and Bagozzi (1989), the Technology Acceptance Model is actually an information systems theory that basically describes how users eventually accept and use a particular technology. Using the system is simply the ultimate stage when users actually start using the technology. On the other hand, behavioral intention is a precursor factor that persuades users to embrace the technology. The behavioral intention is itself shaped by the attitude, which is the general liking or disliking of the technology. Technology Acceptance Model proposes two fundamental issues: the acceptance and the use of new technology (Moriuchi, 2023). The theory postulates that upon giving users the opportunity of new technology, the decision-making process of when and how they will use it can be swayed by several factors. Most importantly: Perceived usefulness In the context of Technology Acceptance Model (TAM), perceived usefulness means the perception that using a certain system will improve the users job performance and that the users behavioral intention to adopt the new technology is positively influenced (Davis, 1989). Perceived usefulness was found by a number of research works in the field of artificial intelligence to be a crucial factor influencing users' willingness to use new technologies. Perceived ease of use, which is a second component of technology acceptance model, refers to a person's perception of how easy it is for him to use a system or technology without much effort (Davis, 1989). The simplicity of the TAN and its ability to explain the attributes have greatly impacted users' attitudes towards technology acceptance (Al-Momani, & Al-Momani, 2019)

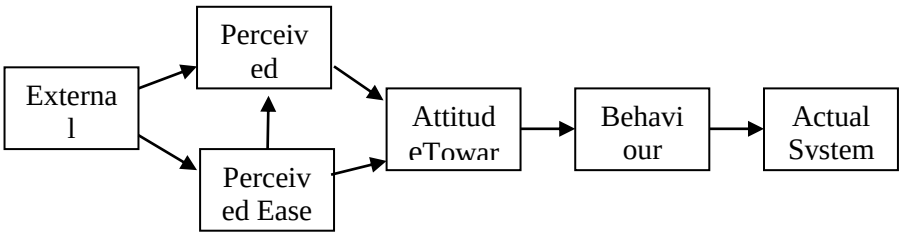

Figure: 2.2. Technology Acceptance Model
Sources: (venkatesh, &Bala, 2020; Davis, & Richard, 1989).

Empirical Review

According to Arman et al. (2023) a rapidly changing marketing landscape is being shaped by the introduction of AI which will lead to human knowledge being replaced by machines to enhance service delivery in the service sector. Using a questionnaire, 104 respondents made up the sample from Pakistani hotels and restaurants to find out how artificial intelligence impacts customer loyalty through digital marketing channels and whether chatbots can be a mediator. To test the hypotheses, confirmatory factor analysis, reliability and validity check, and mediation analysis were carried out. Results indicate that the implementation of AI contributes positively to customer loyalty. Furthermore, the use of chatbots was shown as a mediator of the relationship between AI and consumer loyalty. Indeed, they are showing that deploying human agents supported by AI in chatbots is one of the top ways to attract customers by providing personalized and up-to-date assistance, efficiently solving customers' problems and inquiries, and giving a smooth user experience. These points are quite in line with the hotel industry, which is always striving for ways in which chatbots and other AI technologies can be used to increase client loyalty. One possible way for businesses to raise customers' involvement, satisfaction, and fidelity is by incorporating AI-chatbots into their digital marketing strategies. In fact, the authors of this paper show a new way of thinking in the area by looking at how chatbots mediate the relationship between AI and customer loyalty in the setting of sophisticated digital marketing strategies.Thepaper is a useful reference for both academics and industry players who rely on AI-based technologies for building customer loyalty.

Ioseb, (2024) find that both artificial intelligence and social media have very significant impacts on relationship marketing. On the one hand, artificial intelligence can be used for personalized customer engagement and for providing automatic responses. On the other hand, social media have become very important communication channels for small and medium enterprises that want to establish more personal interactions with their customers. Besides, the marketing landscape and customer experiences have been radically transformed by digital technologies. Consequently, small and medium enterprises have experienced hardship in the adoption of contemporary ways and the creation of novel ideas to serve customers successfully. The paper focused on how artificial intelligence and social media can be used to strengthen and revamp relationship marketing, thus leading to an increase in customer satisfaction. By using AI through social media, SMEs can offer customized and tailored customer experiences, increase customer happiness, and build long-term relationships that are the foundation of SMEs' growth. The author employed a hybrid approach, combining a survey and interviews in parallel. The respondents were mainly recruited through snowball and convenience sampling. In total, n = 158 for the survey and n = 8 for the interviews. These participants took part in the research process voluntarily and offered valuable insights into the research problem. The results indicate that Artificial intelligence and social media present an excellent opportunity for SMEs not only to change but also revamp their relationship marketing strategies and thereby gain competitiveness.

Balikpapan, (2025), investigates how artificial Intelligence (AI) has had a significant impact on the marketing industry or digital marketing by

bringing about personalized marketing, generating automation to customer interactions, and optimization of marketing strategies. AI-powered marketing tools, such as chatbots, predictive analytics, personalized recommendation systems, and automated content production have made drastic changes to the way businesses react to their customers. This paper is a Systematic Literature Review (SLR) that attempts to explore the role of AI in digital marketing and its application, benefits, and challenges. Based on the data from Scopus, Web of Science and Google Scholar, this review highlights the main AI-based marketing techniques and their influence on customer involvement, conversion rates, and the effectiveness of marketing as a whole. The results show that AI helps marketing work better by giving marketers the tools to personalize the experience instantly, get their message to the right customers, and make content creation more efficient. Companies use AI to sift through huge amounts of consumer data, which lets them make very accurate forecasts about consumer behavior and tastes. On the other hand, using AI in marketing has its downsides like: data privacy issues, ethical dilemmas, algorithmic bias, and big costs of setting AI up. Besides that, how much a consumer trusts AI-driven marketing would be a factor in their acceptance as well as the level of their engagement. This research paper gives early knowledge to both the audience of Adobe and the public about how AI reshapes the scene of marketing. It also points out the importance of not just relying on the technical side of AI in marketing but looking at the ethical aspects and what the consumers want. If you ask me, it is time for new research to find out how to work with ethical AI, build consumer trust giving that extends AI decision-making capabilities. At the end of the day, the ability of marketing to use AI transparently and effectively is the key factor that businesses must aim for.

Agbi, (2025), this invistigate how an AI-powered chatbot can be a tool for customer loyalty and competitive advantage of the banks of deposit money located in Rivers State, Nigeria. The purpose of this research is to determine how marketing through AI-Powered chatbots is related to the customer loyalty of deposit money banks in Rivers State, Nigeria. The issue of low customer loyalty resulting in bank failures in the region, especially in Rivers State Nigeria, where customers are moving to online banking platforms such as Opay and PalmPay, despite the desire to improve customer engagement, retention and satisfaction, is what prompted this study. A Cross-sectional descriptive survey research design was used to collect the data from 384 customers of the deposit money banks by means of a structured questionnaire, out of which 362 were properly filled and returned while 22 were not returned. The data were subjected to analysis employing descriptive statistics, Pearson Product Moment Correlation, multiple regression analysis, and moderation analysis through the employment of SPSS. Major findings indicate that all AI-Powered chatbots marketing considerably enhance customer loyalty with one leading the pack. Technology adoption moderates the AI-loyalty nexus, thereby underlining the significance of digital infrastructure. The research culminates that the marketing of AI-Powered chatbots furnishes a strong basis for the development of customer loyalty and maintaining a competitive edge. Researchers present practical suggestions, among which is the acquisition of AI-powered chatbots systems. They emphasize the importance of digital security measures, employee training, and holistic digital transformation. The study makes a contribution to marketing literature by demonstrating the AI-loyalty link in the banking sector of Nigeria and by pointing out the technology adoption as a moderator. It offers useful information for banks and regulators who want to use AI for customer satisfaction and loyalty. Limiting factors of this work partly include the targeting of only Rivers State, Nigeria and the types of data collected, mainly through customer self-reporting. Going forward, a study of artificial intelligence adoption in different regions with objective metrics along with customer self-report data will probably be a better combination. This creates a different angle for both scholars and practitioners as it shows that digital infrastructure plays a determining role in the successfulness of the marketing strategies of AI-Powered Chatbots.

Gap Identification

The following heading consisted the gap identification:

Content scope: Artificial intelligence marketing initiatives, few studies have investigated the impact of artificial intelligence marketing initiatives on customer loyalty.

Geographical base: Few studies have investigated the impact of artificial intelligence marketing initiatives on customer loyalty in deposit money banks in South-South, Nigeria. **Database:** Deposit money banks, most studies focus on other industries or sectors, leaving a gap in understanding artificial intelligence impact on deposit money banks in the region.

Moderating variables: Research is needed on the moderating influence of technology adoption, customer demographics, and bank-specific factors on their relationship between AI-Powered marketing initiatives and customer loyalty.

Longitudinal studies: More longitudinal research is needed to capture artificial intelligence evolving impact on customer loyalty in deposit money banks in South-South, Nigeria.

Methodology

This research used a cross-sectional survey as the research design. The study's target population was 27 customers of deposit money banks in Rivers State, Nigeria. Since the population of the study was unknown, it was considered an infinite population. The sample size of 384 customer respondents was decided using Krejcie and Morgan's 1970 sample size determination formula. The data for this study was collected from both primary and secondary sources. The primary data was gathered through the questionnaires to the respondents (Customers) of the deposit money banks in Rivers State while the secondary data was collected from published materials articles journals and other relevant materials. The tool for gathering data for the research was a structured questionnaire. The questionnaire was developed to collect data on the study variables such as AI-powered Marketing Activities (AI-chatbots) and measures of Customer Loyalty (Customer engagement, Customer Satisfaction, and Customer Retention). This part comprised 12 items out of which items 1-3 aimed at collecting information on AI Chatbots, items 4-6 information on Customer engagement; items 7-9 information on Customer Satisfaction; and items 10-12 information on Customer Retention. The questionnaire items constructs were developed on a 5 liker scale, which included strongly agreed Agree Disagree, Strongly disagree and Neutral. Content and face were adopted for the validation of the instrument. The test-retest method was the reliability testing of the instrument which resulted in a reliability coefficient of 0.88 that is greater than the benchmark. The study used data collected which was analyzed using descriptive and inferential statistical techniques to answer the research questions. Simple percentages were used to analyze the demographic characteristics of the respondents. The data analyses were carried out using: descriptive statistics, Pearson Product Moment Correlation, multiple regression analyses, and moderation analyses. Pearson Product Moment correlation was the statistical technique that was used to test the significance of the relationships between the independent and dependent variables, multiple regressions was the technique that was used to statistically test the significance of the relationships between variables and while moderation analyses was the technique that was used to test the nature of the moderating influence of technology adoption on the relationship between the independent and dependent variables. The analyses were performed with the support of Statistical Package Social Science version 29 (SPSS).

RESULTS AND DISCUSSION

This chapter reports on the analysis of the data collected for the research presented in this dissertation. The analysis was carried out according to the aims of the research and the hypotheses using suitable statistical tools. The chapter is arranged as follows: the administration of the questionnaire, demographic characteristics of respondents, univariate analyses of study variables, and inferential analysis that includes bivariate and

multivariate analyses. Pearson Product Moment Correlation Coefficient and multiple regression analysis were employed to test the hypotheses at a 0.05 level of significance.

Results and Analyses

Questionnaire Administration A total of 384 questionnaires were handed out among customers of selected deposit money banks within the location of the study. Nevertheless, not all the administered copies were returned or found usable.

Table 4.1: Questionnaire Administration

Description	Frequency
Questionnaires administered	384
Questionnaires returned	362
Questionnaires not returned	22
Total usable copies	**362**

Source: field survey data (Agbi, 2025)

Table 4. 1indicates the distribution of 384 questionnaires. The number of correctly filled and returned ones was 362, and 22 were never returned. The above is an approximate 94.

3 percent response rate that most people consider is good enough for statistical analysis and generalization of findings.

Demographic Characteristics of Respondents

The demographic portrait of respondents is revealed in this section through their gender age educational qualification, and length of relationship with the bank. The data are conveyed through frequency counts and percentages.

Table 4.2: Gender Distributionof Respondents

Gender	Frequency	Percentage (%)
Male	192	53.0
Female	170	47.0
Total	**362**	**100**

Source: field survey data (Agbi, 2025)

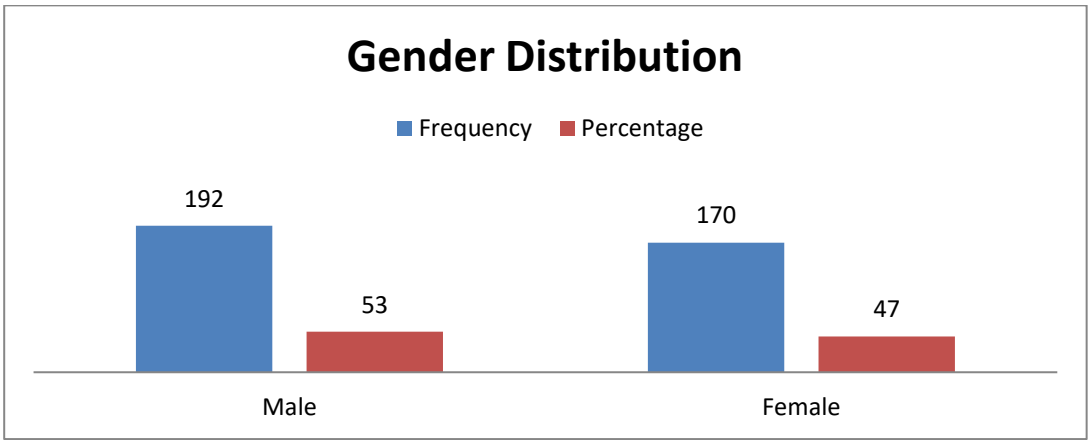

Figure 4.1: Gender distribution

The gender distribution of the respondents is depicted in table 4.2 and figure 4.1 that 53.0 percent are males while 47.0 percent are females. This shows that there is a more or less equal division between the two genders, and therefore responses could have been gathered from both male and female bank customers.

Table 4.3: Age distribution of respondents

Age Group	Frequency	Percentage (%)
Below 25 years	88	24.3
25–34 years	142	39.2
35–44 years	90	24.9
45 years and above	42	11.6
Total	**362**	**100**

Source: field survey data (Agbi, 2025)

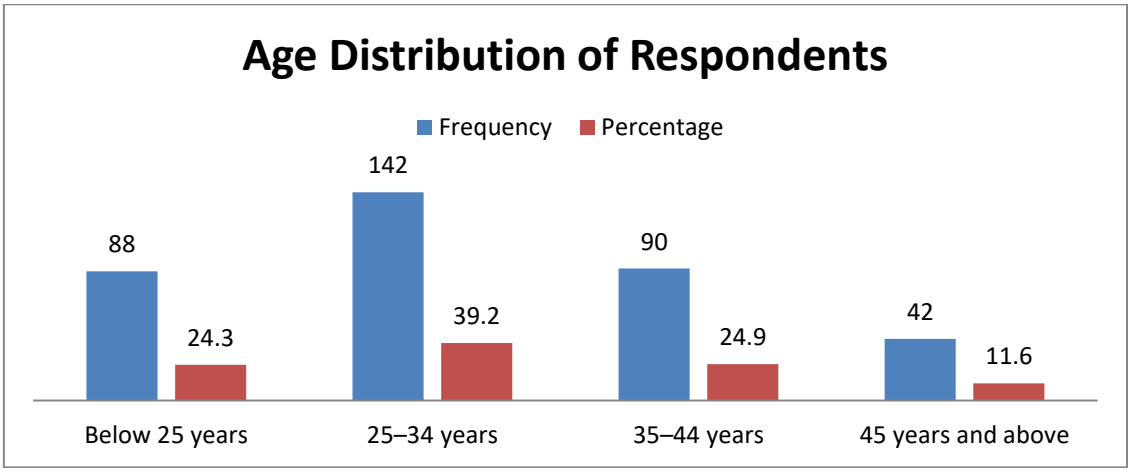

Figure 4.2: Age Distribution of Respondents

Table 4.3 and figure 4.2 shows that the majority of respondents fall within the 25–34 years age group, indicating that most participants are economically active bank customers with regular interaction with banking services.

Table 4.4: Educational Qualification of Respondents

Qualification	Frequency	Percentage (%)
SSCE	56	15.5
ND/NCE	84	23.2
HND/B.Sc.	156	43.1
Postgraduate	66	18.2
Total	**362**	**100**

Source: field survey data (Agbi, 2025)

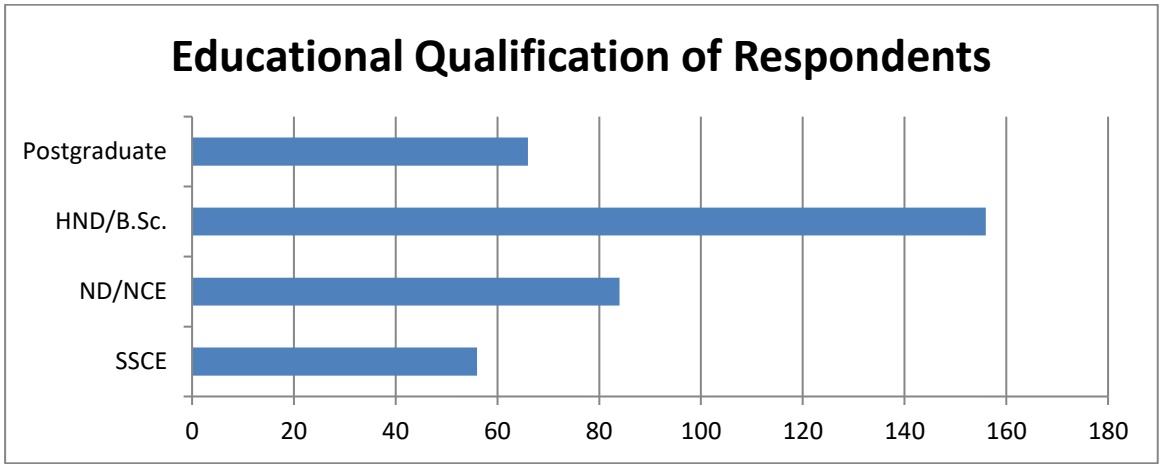

Figure 4.3: Educational Qualification of Respondents Table 4. 4 and figure 4. 3 showed that most of the respondents are holders of HND or B.

Sc. This suggests that the respondents' level of education is adequate to be able to comprehend and assess banking technologies and services.

Table 4.

Duration	Frequency	Percentage (%)
Less than 1 year	48	13.3
1–3 years	96	26.5
4–6 years	128	35.4
Above 6 years	90	24.8
Total	**362**	**100**

Source: field survey data (Agbi, 2025).

According to Table 4.5, the majority of the respondents have been keeping their banking relationships for a period of more than four years. This means that the respondents are quite familiar with their banks and have the knowledge to give their views on the variables used in the study. 4.1.3 Univariate Analyses of Study Variables This part of the chapter is

dealing with univariate analyses of study variables through mean and standard deviation. The analyses are about the extent to which the respondents agree with the statements that measure artificial intelligence marketing initiatives, customer loyalty dimensions, and technology adoption.

Hypotheses one H01: Artificial Intelligence Chatbots have no significant effect on Customer Engagement of deposit money banks

Table 4.19: PPMC Result between Artificial Intelligence Chatbots and Customer Engagement

	AI Chatbots	Customer Engagement
AI Chatbots	Correlation Coefficient	1.000
	Sig. (2-tailed)	.
	N	362
Customer Engagement	Correlation Coefficient	.664**
	Sig. (2-tailed)	.000
	N	362

Source: SPSS version 29 Output Data (Agbi, 2025).

The results in Table 4.19 show that the Pearson correlation coefficient is r = 0.664 and the significance value of p = 0.000. In other words, there is a fairly strong positive correlation between AI chatbots and customer engagement. Thus, the null hypothesis is rejected and the alternate hypotheses are accepted as the p value is less than 0.05.The result shows that artificial intelligence based chatbots are one of the most important tools that significantly increase customer engagement in deposit money banks. Chatbots offer customers the ability to have interactions in real time, are able to give instant replies, and are always available, and these factors stimulate the customers to have more frequent interactions with the banking platforms.

Hypotheses two

H_{02}: There is no significant relationship between Artificial Intelligence Chatbots and Customer Satisfaction of deposit money banks.

Table 4.20: PPMC Result between Artificial IntelligenceChatbots and Customer Satisfaction

	AI Chatbots	Customer Satisfaction
AI Chatbots	Correlation Coefficient	1.000
	Sig. (2-tailed)	.
	N	362
Customer Satisfaction	Correlation Coefficient	.691**
	Sig. (2-tailed)	.000
	N	362

Source: SPSS version 29 Output Data (Agbi, 2025).

The Pearson correlation coefficient in Table 4.20 is r = 0.691 and p = 0.000. It shows a strong positive relationship between artificial intelligence chatbots and customer satisfaction. The null hypothesis is rejected and the alternate hypothesis is accepted. This finding indicates that artificial intelligence chatbots play a major role in enhancing customer satisfaction in deposit money banks. Customers appreciate the immediacy, ease, and correctness of the solutions that artificial intelligence chatbots offer.

Hypotheses three

H03: There is no significant relationship between Artificial Intelligence Chatbots and Customer Retention of deposit money banks.

Table 4.21: PPMC Result between Artificial Intelligence Chatbots and Customer Retention

		AI Chatbots	Customer Retention
AI Chatbots	Correlation Coefficient	1.000	
	Sig. (2-tailed)	.	
	N	362	
Customer Retention	Correlation Coefficient	.652**	
	Sig. (2-tailed)	.000	
	N	362	

Source: SPSS version 29 Output Data (Agbi, 2025).

Table 4.21 above shows the correlation coefficient value r = 0.652 with a significance value p = 0.000. It means that there is a moderate to strong positive linear relationship between artificial intelligence chatbots and customer retention. Since the value is less than 0.05, the null hypothesis is rejected and the alternate hypothesis is accepted. This result suggests that artificial intelligence chatbots have a major impact on customer retention in deposit money banks. Offering customers support at all times, resolving issues promptly, and giving personalized interactions by chatbots are among the factors that make customers to be loyal to their banks.

Multivariate Analyses: Multiple Regression and Moderation Analyses

Multiple regression analysis was used to assess the joint effect of Artificial Intelligence initiatives on the different aspects of customer loyalty, whereas moderation analysis was carried out to ascertain the moderating role of Technology Adoption Condition in the relationship between Artificial intelligence Initiatives and Customer Loyalty. Multiple Regression Analyses of Artificial Intelligence Initiatives and Customer Loyalty

Model SpecificationCustomer

Loyalty = β_0 + β_1(Content Creation AI) + β_2(Predictive Analytics AI) + β_3(Chatbots AI) + ε

Table 4.22: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	.842	.709	.706	.412

Source: SPSS version 29 Output Data (Agbi, 2025).

The R value of 0.842 indicates a strong positive relationship between the independent variables and customer loyalty. The R Square value of 0.709 shows that approximately 70.9 percent of the variation in customer loyalty is explained by content creation artificial intelligence, predictive analytics artificial intelligence, and chatbots artificial intelligence.

Table 4.23: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	214.372	3	71.457	420.836	.000
Residual	87.866	358	.245		
Total	302.238	361			

SPSS version 29 Output Data (Agbi, 2025) reported that the regression model was found to be statistically significant as the F-statistic result was F = 420.836 and the value of p was less than 0.05. Jointly, the independent variables predict the customer loyalty of deposit money banks**.**

Table 4.24: Regression Coefficients

	Unstandardized B	Std. Error	Standardized Beta	T	Sig.
Constant	.521	.118		4.416	.000
Content Creation AI	.286	.041	.318	6.976	.000
Predictive Analytics AI	.374	.038	.421	9.842	.000
Chatbots AI	.219	.044	.243	4.977	.000

Source: SPSS version 29 Output Data (Agbi, 2025).

Each of the artificial intelligence initiatives have positive and statistically-significant impacts on loyalty of customers. Artificial intelligence Predictive analytics artificial intelligence appeared as the most powerful predictor, then content creation artificial intelligence and chatbots artificial intelligence. This means that all of the artificial intelligence initiatives have a positive effect on customer loyalty, yet predictive analytics has the most impact. The results of the research point out the necessity of employing sophisticated analytics to gain insight into customer behavior, upgrading service delivery, as well as making

enhanced and informed strategic decisions. Altogether, artificial intelligence initiatives act as key enablers of customer loyalty in deposit money banks.

Moderation Analyses of Technology Adoption

The moderation analysis explored if Technology Adoption enhances the link between Artificial Intelligence initiatives and customer loyalty.

Model Specification

Customer Loyalty = $\beta_0 + \beta_1$(AI Initiatives) + β_2(Technology Adoption) + β_3(AI × Technology Adoption) + ε

Table 4.25: Model Summary (Moderation Model)

Model	R	R Square	Adjusted R Square	Std. Error
2	.876	.768	.765	.378

Source: SPSSVersion 29 Output Data (Agbi, 2025).

Introducing Technology Adoption raised the R Square from 0.709 to 0.768. It means Technology Adoption enhances the ability of the model to explain the changes in the dependent variable by 5.9 percent.

Table 4.26: ANOVA (Moderation Model)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	232.204	5	46.441	324.967	.000
Residual	70.034	356	.197		
Total	302.238	361			

Source:SPSSVersion 29 Output Data (Agbi, 2025).

The F-value (F = 324.967, $p < 0.05$) confirms that the moderation model is statistically significant.

Table 4.27: Moderation Coefficients

Variables	B	Std. Error	Beta	T	Sig.
Constant	.498	.109		4.569	.000
AI Initiatives	.431	.045	.489	9.578	.000
Technology Adoption	.322	.039	.351	8.256	.000
AI × Technology Adoption	.174	.031	.268	5.613	.000

Source:SPSSVersion 29 Output Data (Agbi, 2025).

The cross term of the interaction (AI Technology Adoption) is not only positive but also statistically significant (= 0.268, $p < 0.05$), which means that Technology Adoption is a significant moderator of the relationship between AI initiatives and customer loyalty. In other words, the greater the level of technology adoption changes the effect of AI initiatives on customer loyalty for the better. In fact, the moderation analyses show that technology adoption does indeed significantly forward the influence of AI initiatives on customer loyalty. The presence of a positive and statistically significant interaction term further confirms that the effect of AI on customer loyalty is more pronounced in banks that have a good level of technology adoption. Hence, the findings suggest that the creation of digital infrastructure, reliable systems and platforms that is user-friendly for customers can greatly enable and enhance the effects of AI initiatives.

Discussion of Findings

In this section, the findings of the study will be presented in relation to the research hypotheses and literature reviewed. Specifically, this section will be guided by the three dimensions of artificial intelligence marketing initiatives that this research investigated and their relationships with customer loyalty dimensions. These three areas are content creation AI, predictive analytics AI, and chatbots AI. Artificial intelligence chatbots and customer loyalty The study also found that AI chatbots were strongly linked to increasing customer engagement, customer satisfaction, and customer retention. Nevertheless, the degree of these relationships was somewhat inferior to that of artificial intelligence predictive analytics and artificial intelligence content creation. This outcome aligns with the service automation view put forward by Huang and Rust, (2018), which argues that artificial intelligence chatbots not only make the service more efficient but also deliver immediate responses and are always available. Likewise, el tal. (2020) demonstrated that the promptness of a chatbot and its ability to resolve problems are the two main factors driving the enhancement of customer satisfaction in digital banking venues. In addition, the positive correlation with customer retention agrees with Araujo's (2018) study that loyal customers are typically those who experience convenient and consistent service interactions. Therefore, chatbots empowered by artificial intelligence uplift banking services' accessibility and response rate, drastically improving customers' engagement, their satisfaction level, and their inclination to keeping long-term relationships.

Moderating Role of Technology Adoption Condition

The moderation analysis unveiled that technology adoption adequately advances the connection between artificial intelligence marketing initiatives and customer loyalty. The fact that the interaction term is positive and statistically significant signifies that banks embracing higher levels of technology adoption experience more significant loyalty benefits from artificial intelligence initiatives. This discovery corroborates the technology acceptance and resource based perspectives that highlight that technological infrastructure, system usability, and security are essential promoters of digital innovation success. Venkatesh et al. (2020) found that perceiving technology as easy to use and having trust in it increase customer willingness to use advanced digital services. Bharadiya, (2022), maintained that a higher level of digital capability intensifies the value obtained from technological investments.

Summary of Findings

The objective of this study is to examine the effect of artificial intelligence (AI) marketing initiatives on customer loyalty among deposit money banks in the South-South region of Nigeria. In this context of meaning, content creation AI, predictive analytics AI, and chatbots AI were considered to be the major forms of AI marketing initiatives under consideration, while customer loyalty is measured in terms of customer engagement,

customer satisfaction, and customer retention. Also, technology adoption was considered as a moderator variable. A cross-sectional descriptive survey research design was used, and the data were obtained from 362 deposit money banks customers through a structured questionnaire. Data were then analyzed using descriptive statistics, Pearson correlation, multiple regressions, and moderation analysis with the support of SPSS 29. The results showed that among the different types of AI marketing initiatives, all were indeed positively and significantly related to the different aspects of customer loyalty. However, predictive analytics AI was the highest among the others in terms of predicting customer loyalty followed by content creation AI and chatbots AI. Furthermore, adopting technology was shown to have a significant effect on the link between AI initiatives and customer loyalty.

Conclusions

This research work revealed that a well-integrated use of content generation AI, AI based predictive analytics, and chatbot AI can effectively deliver to the deposit money banks a strong framework for improving customer loyalty and maintaining competitive edge in the digitized banking industry. Nevertheless, a partial conclusion came from the breakdowns:

i. First, content creation artificial intelligence is crucial in improving customer engagement and satisfaction through credible, relevant, and personalized content, which improves customer understanding and emotional connection with banks. This improves long-term customer retention.

ii. Actually, predictive analytics artificial intelligence is a part of artificial intelligence that could really make a difference in increasing customer loyalty. Using predictive analytics artificial intelligence, companies can enhance customer interactions, customer happiness, and even customer loyalty through insightful data, tailored offerings, and smart customer handling.

iii. But still a bit behind predictive analytics artificial intelligence, AI chatbots can also help foster customer loyalty very effectively by being available 24/7, responding very fast, and delivering service in a very simple way to the customer. Although their impact is minor, their role is vital in enabling customers to interact in real-time and access service support.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Financial institutions may continuously upgrade chatbot systems to improve responsiveness, accuracy, and problem resolution capabilities.

2. Bank management may strengthen digital infrastructure to support seamless artificial intelligence implementation.

3. Training programs may be provided to employees to effectively manage and support artificial intelligence driven marketing initiatives.

4. Regulatory bodies may provide supportive policies that encourage responsible artificial intelligence adoption in the banking sector.

Contributions to Knowledge

i. This study contributes to marketing and information systems literature by empirically establishing the relationship between AI-Power chatbotsmarketing initiatives and customer loyalty within the Nigerian banking context.

ii. It extends existing knowledge by integrating artificial intelligence chatbots into a unified model of customer loyalty.

iii. Additionally, the study contributes by demonstrating the moderating role of technology adoption conditions, providing empirical evidence that technological readiness amplifies the effectiveness of artificial intelligence initiatives.

iv. This offers a novel perspective for scholars and practitioners on how digital infrastructure conditions the success of artificial intelligence driven marketing initiatives.

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