Ilomata International Journal of Social Science

OPEN ACCESS

RECEIVED 26 January 2026
ACCEPTED 17 March 2026
PUBLISHED 30 April 2026

CITATION
Fajrinaldi, Rahmadianti YP, (2026) Banking Chatbots in Indonesia as AI-Mediated Communication: A CMC and TAM Analysis. Ilomata International Journal of Social Science. 7 (2), 803-809.
doi: 10.61194/ijss.v7i2.2138

TYPE Original Research
PUBLISHED 30 April 2026
DOI 10.61194/ijss.v7i2.2138
VOL 7 Issue 2 April 2026

Banking Chatbots in Indonesia as AI-Mediated Communication: A CMC and TAM Analysis

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Abstract

This study aims to explore how banking AI chatbots mediate communication between banks and customers, and to examine user perceptions regarding the ease of use and usefulness of such technology. Employing a qualitative approach, the research analyzes the experiences of three informants who have interacted with AI chatbot services from Bank Mandiri (MITA), BRI (SABRINA), and BNI (CINTA). The study utilizes the framework of Computer-Mediated Communication (CMC) to assess digital interaction characteristics and adopts the Technology Acceptance Model (TAM) to examine factors of technology acceptance. Findings indicate that banking AI chatbots are perceived as useful and easy to use, especially for routine informational queries. However, they are seen as limited in handling complaints or complex problems. While chatbots provide time flexibility and easy access, the low level of social presence leads to a less empathetic communication experience. Despite these limitations, AI chatbots are accepted as efficient digital communication tools for everyday banking needs. The study highlights the need to enhance chatbot interaction quality to become more human-centered and emotionally responsive.

KEYWORDS

ai chatbot for banking, technology acceptance model, computer-mediated communication.

Introduction

The rise of mobile technology and artificial intelligence (AI) has significantly influenced communication patterns in society, including in Indonesia ("Penerapan Teknologi Artificial Intelligence Di Indonesia," 2024). This can be observed from the number of internet users in the country, which reached approximately 212.9 million people in early 2023 (around 77% of the population) (Kemp, 2023). Most of the population accesses the internet through smartphones, and research shows that nearly 98.2% of Indonesian millennials use mobile technology for various online activities (Mulyono & Sfenrianto, 2022). The increasing use of smartphones and mobile access has accelerated the presence of AI-based services in daily life, including chatbots for banking customer services that function as intermediaries as well as channels of interaction between banks and customers. The use of AI banking chatbots is considered an effective solution because they can respond to customer inquiries in real time at any moment (or 24/7), thereby offering convenient service access without the limitations of time and location (Mulyono & Sfenrianto, 2022).

In Indonesia, there are 12 banks that have implemented AI banking chatbots to assist customers with various issues. Some of these include Mandiri Intelligent Assistant (MITA) from Bank Mandiri, Smart BRI New Assistant (SABRINA) from Bank BRI, and Chat with Your INTelligent Advisor (CINTA) from Bank BNI (Novialita & Afandy, 2023). These three AI banking chatbots are designed to facilitate customer interactions and are integrated into mobile banking applications or popular platforms such as WhatsApp, Facebook Messenger (FBM), LINE, and Telegram (Mulyono & Sfenrianto, 2022). For example, MITA can be accessed through Bank Mandiri's official WhatsApp account (Bank Mandiri, n.d.); SABRINA is integrated into the BRImo application as Bank BRI's mobile banking platform (Indonesia News Center, 2024) and CINTA is available on several platforms such as X, LINE, and FBM (BNI, 2018).

The chatbots developed by the aforementioned state-owned banks (BUMN) are AI systems that fall under the category of Natural Language Processing (NLP) (Novialita & Afandy, 2023), enabling computers and mobile devices to understand and communicate using human language (Stryker & Holdsworth, 2024). Banking AI chatbots can even be given specific personalities through the language style they employ, making interactions feel more natural and familiar (Mulyono & Sfenrianto, 2022). The use of AI in communication has introduced a new experience in which customers can interact with a machine as if conversing with a human through their mobile devices. In addition to the technologically adept characteristics of Indonesian society, the COVID-19 pandemic in previous years also accelerated the adoption of digital services, as customers were compelled to shift to online channels to minimize direct contact (Info et al., 2024). Consequently, AI banking chatbots have become a safe and reliable communication option since the onset of the pandemic.

It can be said that AI banking chatbots fulfill the function of an online customer service channel that is available at all times. Banks utilize AI chatbots to answer frequently asked questions (FAQ), provide guidance, and assist in navigating digital services (Venkatesh & Davis, 2000). However, communication mediated by AI chatbots still presents certain challenges because, unlike face-to-face or human-to-human interactions, interactions through AI chatbots rely entirely on text and the machine's language-processing capabilities (Pritchett et al., 2012). As a result, there are no non-verbal cues, such as vocal intonation or facial expressions, that could help clarify the meaning of a message (Apriliana et al., 2024). This distinctive characteristic of AI chatbots aligns with the concept of Computer-Mediated Communication (CMC), which highlights the absence of non-verbal cues in computer-based communication and the resulting heavy reliance on textual content and word choice (Baskota & Poudel, 2024). In the context of AI chatbots, this limitation can sometimes create a gap in understanding, where the chatbot does not always grasp the intent behind a customer's question or, conversely, where the chatbot's automated responses may be perceived as less empathetic compared to those of human agents (Safitri et al., n.d.).

The phenomenon described above raises several questions, such as: (1) how AI banking chatbots mediate communication between banks and their customers; (2) how customers perceive the ease of use and usefulness of AI chatbots in banking interactions; and (3) how customers experience and interpret their interactions with banks through AI chatbots when viewed from a CMC perspective (Utami, 2026). To address these questions while also assessing the factors influencing customer satisfaction, this study employs the Technology Acceptance Model (TAM) using a qualitative approach (Pang et al., 2025). The study is also conducted to explain the role of AI banking chatbots as a communication medium between state-owned banks (BUMN) and their customers, to understand customer perceptions of the ease of use and usefulness of AI banking chatbots within the TAM framework, and to examine the dynamics of computer-mediated communication between customers and banks through AI chatbots from a CMC perspective.

Methods

This study employs a qualitative approach due to its suitability for the exploratory nature of the research objectives, which focus on developing an in-depth understanding of the phenomenon. A qualitative approach enables researchers to grasp the meaning underlying the interactions and experiences of the research subjects, rather than merely measuring variables quantitatively (Yusuf, 2014). In this context, the phenomenon examined is customer communication with banks through AI chatbots, which involves aspects of perception, subjective experience, and complex communication dynamics (Safitri et al., n.d.). A qualitative design is considered appropriate because the issues to be addressed require narrative depth and contextual understanding, elements that are difficult to uncover through structured surveys but can be explored effectively through qualitative conversations and observations.

Qualitative research is essentially a process of exploring and understanding the meaning that individuals or groups attribute to a social or human problem (Creswell, 2014). This process typically involves the collection of narrative data (words) in natural settings, followed by an analysis that emphasizes identifying meaningful themes or patterns within the data (Fereday & Muir-Cochrane, 2006). This study was conducted in real-life situations of AI banking chatbot usage, involving bank customers who had genuinely interacted with MITA, SABRINA, or CINTA, ensuring that the data obtained reflected natural conditions as they occur in the field. The researcher acted as the primary instrument, directly engaged in data collection and interpretation a defining characteristic of qualitative research (Moleong, 2018).

The descriptive–qualitative approach used in this study aims to portray the phenomenon comprehensively and in depth (Wuna & Fadillah, 2025). This means that, rather than testing hypotheses or measuring relationships between specific variables, the study focuses on illustrating how communication through chatbots occurs and interpreting the findings based on the theoretical framework that has been established. This approach enables the researcher to capture the nuances, meanings, and complexities of the interactions that take place, particularly within specific socio-cultural contexts (Creswell, 2014). Accordingly, it is expected that the nuances and complexities of interactions between banks and customers through AI chatbots can be thoroughly identified (Sproull & Kiesler, 1986).

The primary data collection technique in this study was in-depth interviews with three selected informants. Interviews were chosen because they allow for extensive and detailed exploration of information directly from the customers' perspectives as participants (Journal & Learning, 2002). Through semi-structured interviews, the researcher was able to inquire about customers' personal experiences, opinions, and feelings when using the MITA, SABRINA, or CINTA chatbots, as well as explore aspects that might not emerge through closed-ended questionnaires. The informants in this study consisted of customers from one of the state-owned banks (Mandiri, BRI, or BNI) who had previously used the respective bank's chatbot service. This criterion ensured that the informants possessed adequate experience and sufficient recollection of their interactions with the chatbot. Informants were selected through purposive sampling, in which the researcher chose individuals deemed most capable of providing rich information relevant to the focus of the study.

The qualitative data collected (interview transcripts and field notes) were analyzed using thematic analysis. Thematic analysis was selected because it is suitable for processing a substantial amount of interview data with the aim of identifying patterns or key themes that emerge from participants' narratives (Braun & Clarke, 2008). Furthermore, this study employs two primary theoretical frameworks as the basis of analysis: Computer-Mediated Communication (CMC) and the Technology Acceptance Model (TAM). These frameworks assist the researcher in interpreting the empirical findings, whereby CMC is used to understand the characteristics of communication occurring through the chatbot medium, while

TAM explains aspects related to customers' acceptance of the chatbot technology.

CMC refers to all forms of human-to-human communication that take place through the mediation of computers or digital technologies (Thurlow et al., 2004). Examples include communication via email, online forums, social media, and instant messaging or chat platforms. In the context of this study, communication between bank customers and banks through AI chatbots clearly constitutes a form of CMC, as customers and banks do not interact directly through face-to-face or voice communication. Instead, interaction occurs through digital text media operated by an AI system. CMC studies focus on the social effects of communication through such technologies and how the characteristics of the medium influence the interaction process (Walther, 1996). Several key concepts and theories within the field of CMC are relevant for understanding interactions through AI chatbots, including the following:

First, the concept of Cues-Filtered-Out represents one of the fundamental characteristics of CMC, particularly in text-based communication, in which many non-verbal cues typically present in face-to-face interactions are reduced or absent (Apriliana et al., 2024). In conversations via AI chatbots, customers cannot see the facial expressions of a service agent (as the agent is a non-embodied AI), cannot hear vocal intonation that may convey empathy, and do not observe body movements or eye contact. As a result, communication relies entirely on typed text and possibly a few symbols or emoticons. The implication is that miscommunication or ambiguity may arise when textual messages are unclear, as the interlocutors (both customers and the AI) must interpret meaning without additional contextual cues. Walther (1996) notes that in CMC, individuals tend to compensate for the absence of cues by relying more intensely on textual elements and may even engage in overattribution, giving excessive meaning to small indicators such as emoticons or punctuation marks. In this study, this concept helps explain, for example, why chatbots may struggle to interpret customer intentions when customers use colloquial language or incomplete sentences (Samuel & Adil, 2023).

Second, Social Presence and the sense of personal connection. In CMC, Social Presence Theory (Short et al., 1976) measures the extent to which a medium can convey a "social presence" or a feeling of interpersonal closeness similar to face-to-face interaction . Text-based chat, such as AI chatbots, is generally considered to have low social presence because text-limited interactions tend to feel impersonal. However, efforts can be made to enhance social presence, such as designing AI chatbots with distinct personalities (e.g., assigning human-like names, using friendly greetings, emojis, and other elements) (Tu, 2002). With these CMC concepts as a foundation, this study analyzes customer communication experiences with AI chatbots from a more theoretical perspective. Overall, the combination of the TAM and CMC frameworks in this study reflects an integrative approach to examining mobile communication and AI. TAM helps focus on person-to-technology interaction, namely how the characteristics of chatbot technology are accepted by users (Venkatesh & Davis, 2000). Meanwhile, CMC helps explain technology-mediated person-to-person interaction, specifically how communication between customers and the banking entity occurs through an AI medium (Walther, 1996). The two frameworks complement each other: TAM explains why customers are willing or unwilling to use AI chatbots, for instance due to ease of use or trust in the technology, whereas CMC explains how communication unfolds when chatbots are used, such as what is lost or what emerges within computer-mediated interaction.

Meanwhile, the Technology Acceptance Model (TAM) was first introduced by Fred Davis (1989) as a model to predict and explain user acceptance of new information technologies. The core of TAM lies in two key constructs, Perceived Usefulness and Perceived Ease of Use, which are proposed as the primary determinants of users' attitudes and intentions to adopt a technology. Perceived usefulness is defined as the degree to which an individual believes that using a technology will enhance their performance or provide benefits in their activities, whereas perceived ease of use refers to the degree to which an individual believes that the technology will be free of effort or easy to use (Davis, 1989). TAM assumes that if users find a technology useful and easy to use, they are more likely to form positive attitudes and intentions to use the technology in actual practice (Venkatesh & Davis, 2000).

In addition to these two core constructs, Davis (1989) explains that perceived ease of use may also influence perceived usefulness, meaning that the easier a system is to use, the more likely users are to perceive it as beneficial because it does not require substantial effort. Attitude toward using the technology, although originally positioned in TAM as a mediator leading to behavioral intention, is often simplified in subsequent studies by focusing directly on intention as the predictor of actual use (Venkatesh & Davis, 2000) In essence, TAM reduces the complexity of psychological factors into several key variables to efficiently predict technology acceptance and has proven to be one of the most widely applied models in technology adoption research (Davis, 1989).

The relevance of TAM in this study is clear, considering that AI banking chatbots are a relatively new service technology innovation for customers. Referring to TAM, the researcher examines how customers' perceptions of the usefulness and ease of use of AI chatbots influence their acceptance. For instance, do customers perceive the chatbot as useful because it can provide quick answers without requiring them to visit the bank or call the call center, representing the usefulness construct? Furthermore, is the chatbot interface perceived as easy to navigate, with conversations easy to initiate, instructions clear, the language understandable, and so on, representing the ease of use construct? Qualitative findings such as customer remarks stating "it is more practical to chat on WhatsApp than to call customer service" can be interpreted as indicators of perceived usefulness, while complaints such as "I am confused because the chat requires a specific format" reflect low perceived ease of use. In other words, TAM provides a conceptual language for categorizing customer responses related to the technical aspects and benefits of AI chatbots.

Thus, the methodological approach used in this study is designed comprehensively to uncover the deeper meaning of interactions between customers and AI banking chatbots in Indonesia. Through a qualitative approach and thematic analysis strategies, the researcher seeks to capture subjective experiences, perceptions, and communication dynamics that involve not only technical aspects but also the social and emotional nuances of technology-mediated interaction. The TAM and CMC theoretical frameworks also enable a deeper understanding of how and why AI chatbot technology is used, as well as how such communication is carried out and perceived by its users. The integration of these theories and methods makes the study academically relevant and contextually aligned with the development of digital technologies in public service sectors such as banking. With this foundation, the analysis of field findings will be directed toward answering the research objectives in a focused, in-depth, and meaningful manner.

Result and Discussion

The use of AI chatbots falls within the application of CMC and fulfills several characteristics, including (1) interactions that do not occur face to face, (2) the absence of non-verbal

cues, and (3) increased public participation or engagement (Yousaf & Che, 2014). Based on the interviews conducted, Informant 1, Informant 2, and Informant 3 all stated that they chose to use AI banking chatbots because these services allow them to access information anytime and anywhere without having to visit a bank branch first. This helps save both time and effort for the informants, as expressed by Informant 3:

"If I may say, it is very helpful because nowadays we really need everything to be quick. Everything should be fast. Especially when we need, what is it, information that must be obtained immediately. We can simply ask the banking chatbots. Especially for matters that are general in nature."

In addition, customers do not need to queue or wait for a long time to receive services from customer service staff at branch offices, nor do they need to spend phone credit when contacting the call center. Therefore, similar to the view expressed by Informant 3, Informant 1 also felt that the presence of AI banking chatbots provides convenience for customers. Informant 1 stated: "At that time, I needed to visit a branch. I was out of town and did not know where the branch was located, so I asked through the chatbot and it provided the answer. Since then, it became a habit for me to ask for various kinds of information through the chatbot."

In contrast to contacting the call center or visiting a branch directly, which requires interacting with human staff during specific working hours, all three informants stated that the availability of AI banking chatbots allows them to obtain the necessary information more quickly. This is because they can ask questions at any time when needed. Informant 2 even mentioned having used MITA and SABRINA more than ten times in recent periods, as these AI chatbots were perceived to provide the information required. Informant 2 explained,

"I used both of them to meet the needs I had at that time related to their banking services, and in my opinion, both chatbots were able to provide the appropriate information."

Furthermore, the minimal direct communication involved becomes one of the reasons why the informants prefer to ask questions or obtain information through AI banking chatbots. This is because some individuals feel less comfortable engaging in direct interpersonal communication. This can be seen in the response provided by Informant 2,

"Sometimes I really do not feel like talking or socializing with people. Sometimes I feel like I need to greet them in a certain way or adjust my facial expressions and so on. With the chatbot, the advantage is that whenever and wherever I am, I can simply ask it questions."

Based on the responses from the informants, it can be concluded that the presence of AI banking chatbots serves as a practical and efficient communication solution within the context of Computer-Mediated Communication (CMC). All three informants perceived that AI banking chatbots provide rapid access to information without being limited by time or location. This indicates a shift in communication preferences from face-to-face interaction to technology-based digital interaction. The minimal barriers in terms of time, effort, and procedures also contribute to AI banking chatbots being increasingly accepted as a primary service channel by the public (Yousaf & Che, 2014). Therefore, AI banking chatbots not only meet the characteristics of CMC but also function as a relevant tool in addressing the communication needs of modern society.

However, despite the chatbot's ability to provide the information requested by the informants, AI banking chatbots still have several limitations. Since AI banking chatbots are systems operated by machines, they do not possess empathy or the ability to provide an appropriate response when addressing customer-reported issues. All three informants expressed similar views regarding the AI banking chatbots they had used. According to the informants, AI banking chatbots are still unable to receive customer complaints and provide satisfactory responses to those complaints. Based on the statement from Informant 3, even though AI banking chatbots are available, customers still need to contact the call center or visit a branch directly when they need to submit a complaint. Informant 3 stated,

The drawback is that when we have a complaint, the chatbot is not capable of handling that. We still need to contact a bank officer if we want to file a complaint."

When discussing the use of AI banking chatbots through the lens of TAM, it can be stated that the informants generally found the chatbots easy to use in their daily activities. One prominent factor is the integration of AI banking chatbot services with instant messaging applications that are frequently used in everyday life. Informant 1 mentioned that the MITA banking chatbot can be accessed through WhatsApp, making it easy for the informant to access the AI-based service (Fereday & Muir-Cochrane, 2006).

"It is very easy to use, because we use WhatsApp every day."

Interactions through familiar platforms make the use of AI banking chatbots feel intuitive without requiring users to learn a new application. The informants also stated that they did not encounter significant difficulties when operating or accessing the AI banking chatbots. In addition, the chatbot responses were considered sufficiently fast and stable as long as the internet connection was adequate. Informant 1 explained that when technical issues occurred, they were generally caused by external factors such as network disruptions or unstable signal quality, rather than by the complexity of the chatbot system itself. Overall, this ease of access and response speed enhances user comfort when communicating with the bank through AI banking chatbots.

In addition to technical ease, the informants also recognized the simplicity of interacting with AI banking chatbots compared to traditional channels such as call centers or visiting a branch office. The informants felt assisted because they did not have to go through complicated procedures such as repeated verification or long queues as often experienced when calling the call center. Informant 2 even stated that they disliked the verification process required by the bank for inquiries that only concern general information.

"I really do not like being verified, so I actually dislike calling 14000, which is the call center number of one of the banks."

This reflects that from the user's perspective, AI banking chatbots offer a more concise and efficient experience and do not require excessive effort to access the service. By simply typing a question through WhatsApp to the intended bank, users can immediately receive a response without a lengthy process.

Despite the advantages offered by AI banking chatbots, the informants still encountered difficulties when communicating with them, although they had their own ways of resolving these issues. For example, when the chatbot did not immediately understand the question or message submitted by Informant 1, the informant adjusted the question by rephrasing it or using different keywords until the AI chatbot system was able to understand the intended meaning. This flexibility indicates that interaction with AI banking chatbots is perceived as simple and not burdensome for users, which suggests that the perceived ease of use of this technology is relatively high among customers.

The next finding of this study relates to perceived usefulness. The results indicate that customers experience tangible benefits from the presence of AI banking chatbots in supporting their financial information needs. AI banking chatbots were perceived as responsive, informative, and

capable of providing quick and accurate answers to questions regarding banking products or services according to customer needs. Informant 1 explained that they initially tried the AI banking chatbot out of curiosity, and eventually discovered the convenience offered when accessing the chatbot.

"After I tried it, I found it more practical than having to browse the website. Especially compared to calling the call center, it feels much more practical."

A similar view was expressed by Informant 2, who described the bank's AI chatbot as a highly informative service in providing the banking information needed by customers.

"Very informative, complete, clear."

With the assistance of AI banking chatbots, customers can access various types of information, ranging from credit card promotions, the nearest ATM or branch locations, to the requirements for opening an account. These different needs can be accessed easily through brief conversations on the WhatsApp platform. This aligns with the information provided by Informant 3, who frequently uses the AI banking chatbot to check the latest promotions from the bank or to obtain detailed information about a particular banking product without having to visit the official website, which may be less practical to access while traveling. In addition, Informant 3 does not need to contact the bank's official call center. The information provided by the AI banking chatbot is considered accurate and up to date, allowing customers' needs for quick answers to be fulfilled immediately (Fereday & Muir-Cochrane, 2006).

The study also found that the repeated use of AI banking chatbots by the informants indicates a high level of perceived usefulness. Several informants stated that they had used AI banking chatbots more than a dozen times for various informational needs. The chatbot services were perceived as helpful in assisting them in making decisions or determining subsequent actions related to the banking products they wished to learn about. For example, when needing cash in an unfamiliar area or city, customers could simply ask the AI banking chatbot for the nearest ATM location, and the chatbot would immediately provide the complete address of the closest ATM. This is consistent with the statement from Informant 1:

"Just ask, and it tells you the branch address, which is very useful."

This was conveyed by Informant 1 regarding their experience searching for a branch office while being in an unfamiliar city they had just visited.

Another example of the usefulness of AI banking chatbots for customers can be seen when a customer inquires about restaurant partner discount promotions through the chatbot and receives a real-time response about ongoing offers, ensuring that the customer does not miss the promotional opportunity. These situations reinforce the perceived usefulness of AI banking chatbots for customers. Users experience time efficiency and easy access to information provided by the chatbot, which directly enhances their digital banking experience (Venkatesh & Davis, 2000). AI banking chatbot services are able to replace manual searches through websites or phone calls to the call center for matters that are not highly urgent, allowing customers to handle simple needs more quickly and conveniently ("Chatbot Services During the COVID-19 Pandemic," 2022).

However, the informants also recognized the limitations of AI banking chatbots. Although very helpful for general information, AI banking chatbots are not a solution for every type of problem (Chohan et al., 2020). Several customers noted that for complex or urgent cases, such as filing a transaction complaint or issues requiring immediate handling, AI banking chatbots are still not reliable.

"It is indeed not the best option when I am about to file a complaint..." This was expressed by Informant 2, who preferred to be connected to a human customer service representative in such situations. AI banking chatbots have service limitations, and if a question falls outside the scope of their database, they cannot provide an answer and will direct customers to other channels, as stated by Informant 3:

"But if it still cannot be answered, the last resort is either calling the service line or going to the branch office."

The informants generally understood these limitations, so they primarily used AI banking chatbots for functions aligned with the chatbot's capabilities, such as obtaining information about banking products, banking services, current promotions, and locating nearby ATMs or branch offices based on the customer's location at that moment. Descriptively, it can be concluded that the perceived usefulness of AI banking chatbots is high in providing information and handling simple services, but decreases in scenarios that require human intervention or more complex problem solving, such as when customers need to file a complaint. Despite these limitations, the benefits perceived in everyday contexts are sufficient for customers to accept and adopt AI banking chatbots as a functional part of the digital banking services they use and find valuable.

Conclusion

Based on the analysis of the three informants, it can be concluded that AI banking chatbots function effectively as communication mediators between banks and customers in the context of digital information services. AI chatbots enable flexible banking interactions that are easily accessible anytime and anywhere, allowing customers to obtain quick responses without being constrained by operational hours or physical locations. This addresses the first research question regarding how AI banking chatbots mediate communication. The chatbot serves as an intermediary that bridges customers' information needs with banking services through a text-based medium. The characteristics of Computer-Mediated Communication (CMC) are strongly evident in this context, in which the absence of face-to-face interaction does not hinder communication flow; instead, customers experience convenience because they can communicate with the bank virtually according to their own comfort.

From the perspective of the Technology Acceptance Model (TAM), the findings of this study confirm that the two main factors, (1) ease of use and (2) usefulness, have a strong influence on customer acceptance of AI banking chatbot technology. All informants perceived that AI banking chatbots were very easy to use, as reflected in the high perceived ease of use, including (1) a simple interface, (2) accessibility through popular applications or platforms such as WhatsApp, and (3) the absence of any need for special effort or technical skills. Customers can use the AI banking chatbot just like sending a regular message, and the responses are relatively fast. This level of convenience removes common barriers found in conventional services, such as repeated verification processes or call center waiting times, which leads customers to prefer AI banking chatbots for simple inquiries or transactions. In addition, the informants assessed the usefulness of AI banking chatbots as very high. These services are able to provide the banking information they need accurately and efficiently, ranging from balance information, ATM locations, and the latest promotions, to service instructions, all of which can be accessed within a single brief conversation. This positive experience indicates that AI banking chatbots fulfill perceived usefulness from the users' point of view by supporting their daily banking activities. In line with TAM (Davis, 1989), when a technology is perceived as easy to use and useful, users are more likely to accept it. This is reflected in the behavior of the informants who frequently use the chatbot and have integrated it into their regular banking practices.

However, another important conclusion is that AI banking

chatbots have limitations and cannot fully replace human interaction. In complex or urgent cases—such as submitting complaints, resolving sensitive account issues, or situations requiring judgment and empathy—customers still rely on traditional communication channels, including speaking with a bank officer by phone or visiting a branch. While chatbots are optimal for routine informational inquiries, they are less capable of managing issues that fall outside their programmed database or that require discretionary policy decisions.

From a more advanced Computer-Mediated Communication (CMC) perspective, this finding can be interpreted through the lens of media richness theory (McQuail, 2009). Chatbots function as relatively "lean media," characterized by limited social cues, restricted emotional bandwidth, and lower immediacy of feedback compared to face-to-face or voice-based interactions. According to media richness theory, richer media are more suitable for equivocal, ambiguous, or emotionally sensitive tasks, whereas lean media are effective for standardized and routine communication. Therefore, customers' tendency to switch to human officers in complex situations reflects an intuitive alignment between communication task complexity and media richness. This also resonates with broader CMC discussions regarding reduced social presence and diminished nonverbal cues in digital interactions.

Overall, the study demonstrates that AI banking chatbots are positively received within the context of contemporary digital communication. The integration of CMC and the Technology Acceptance Model (TAM) provides a complementary yet analytically distinct explanation of this phenomenon. TAM explains adoption from a user-centric technological perspective—highlighting perceived usefulness and perceived ease of use as key determinants of acceptance. In contrast, CMC emphasizes the interpersonal and communicative dimensions of the interaction, focusing on how digital media reshape relational dynamics, social presence, and communication effectiveness.

By explicitly contrasting these frameworks, the study shows that while TAM accounts for why customers accept AI chatbots (efficiency, convenience, usability), CMC explains how the communication medium itself structures interaction patterns and sets boundaries on emotional and relational depth. Thus, TAM captures technological evaluation, whereas CMC captures communicative experience. The complementarity between these frameworks enriches the theoretical contribution of the study, demonstrating that technology adoption in digital banking cannot be fully understood without considering both technological perceptions and communication characteristics.

Despite limitations related to emotional engagement and the handling of complex services, AI banking chatbots complement the broader banking service ecosystem. They function as efficient, accessible, and informative communication tools aligned with digital lifestyles. Their increasing adoption signals a gradual transformation in banking communication practices, where customers are willing to embrace technological innovation as long as it delivers clear functional benefits.

Author contributions

The first author conceptualized the research framework, developed the theoretical integration between Computer-Mediated Communication (CMC) and the Technology Acceptance Model (TAM), conducted data collection and analysis, and drafted the initial manuscript.

The second author contributed to the refinement of the theoretical discussion, particularly in strengthening the integration between CMC constructs (media richness and social presence) and TAM perspectives. The second author also critically reviewed the manuscript, improved the analytical depth, and revised the discussion section to enhance theoretical positioning.

All authors participated in interpreting the findings, revising the manuscript critically for important intellectual content, and approving the final version of the manuscript for publication.

Funding

Declare the sources of financial support for this research. Acknowledge that the study received backing from [grant/contract number] provided by [funding agency]. Clearly state that the funding agency had no involvement in the design, execution, analysis, interpretation, or manuscript preparation. This unambiguous disclosure reinforces the independence and credibility of the research, ensuring transparency about the financial backing behind the study.

Acknowledgements

Brief expression of gratitude to individuals, organizations, or institutions that have played a supportive role in the research or publication process but do not meet the criteria for authorship. Includes thanks for financial support, technical guidance, data collection assistance, access to facilities or equipment, mentorship, and other forms of help.

Conflict of interest

Confirms that the authors have declared any potential conflicts that could influence the impartiality of the research. The authors explicitly state that they have no financial or personal relationships with entities that might unduly affect their objectivity. This declaration ensures the integrity of the study by transparently addressing any possible influences on the research outcomes, contributing to the credibility and trustworthiness of the article.

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