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Determinants of Chatbot Underutilization and Continuance Intention in Indonesian Non-Bank Financial Institutions

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Abstract

Background: Chatbots have become a key digital service channel in Indonesia's non-bank financial institutions (NBFIs), yet adoption does not automatically translate into sustained usage. Understanding what drives or hinders continuance intention is critical for institutions seeking to maximize chatbot effectiveness in the competitive financial services landscape.
Objective: This study aims to analyze the factors influencing user continuance intention toward chatbot services at non-bank financial institutions (NBFIs) in Indonesia. Despite the rapid increase in chatbot adoption, the level of utilization remains relatively low (underutilization). It integrates five key variables—perceived privacy, information quality, system quality, trust, and continuance intention—into a unified analytical framework.
Methods: The research employed a quantitative approach with a descriptive and causal design, and data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Data were obtained from 184 respondents who were chatbot users in the multifinance sector.
Results: The findings indicate that both information quality and system quality have a substantial impact on trust, which in turn positively affects the intention to continue using the system. Conversely, perceived privacy did not have a significant effect on either trust or continuance intention. Additionally, trust served as a full mediator in the relationship between system quality and the intention to continue using the system. These results suggest that system quality, information quality, and user trust are essential elements for enhancing the continued use of chatbots.
Conclusion: This study provides theoretical contributions by extending the information systems success model and offers practical implications for financial institutions seeking to improve chatbot service quality.

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INTRODUCTION

In the past decade, technological progress has fundamentally altered customer interactions in the NBFI industry. One of the most widely adopted innovations is the chatbot, an AI-driven automated service designed to facilitate two-way interactions between users and systems without direct human involvement (Følstad & Brandtzæg, 2017). Globally, the adoption rate of chatbots has shown rapid growth. The value of the chatbot market grew from USD 2.47 billion in 2021 to USD 15.57 billion in 2024, with estimates suggesting it will approach USD 20 billion in 2025. Surveys further reveal that up to 88% of consumers worldwide have interacted

with a chatbot in the past year, with more than 69% reporting satisfaction with their most recent interaction. This growth indicates that chatbots have increasingly become a popular and trusted service channel across various industries.

However, when examined from the perspective of active engagement, data indicate that the actual level of utilization remains limited. A Forrester report (2023) revealed that only 16% of users frequently rely on chatbots to obtain assistance from companies. Moreover, when analyzed by typical use cases, none of the categories exceeded a 25% usage rate. For instance, only around 20% of users employed chatbots for upselling purposes, and 19% for generative AI–based assistance, while other categories such as FAQ bots or transactional bots also remained at relatively low levels. These figures highlight a significant gap between the availability of chatbot functionalities and their actual utilization by users.

In Indonesia, particularly within Non-Bank Financial Institutions (NBFIs), chatbots have been implemented for various functions, ranging from providing product information and checking contract status to assisting with financing applications. However, despite increasing adoption, the level of continuance intention remains relatively low. A Forrester report (2023) indicated that although most financial institutions have integrated chatbots, only a small proportion of customers use them on a regular basis. In the context of NBFIs, especially those operating in the automotive and consumer financing sectors, this low level of active engagement is often referred to as underutilization.

This phenomenon reflects a gap between technological potential and user behavior. Previous literature suggests that information quality and system quality are two critical factors influencing user trust in chatbots (DeLone & McLean, 2003; Nguyen et al., 2021). Trust, in turn, can enhance behavioral intention and ultimately foster continuance intention (Ahmad et al., 2025). Perceived privacy represents a critical barrier to chatbot utilization in Indonesian NBFIs. Users often hesitate to engage with chatbot systems due to concerns about data misuse, lack of transparency, and inadequate safeguards for personal information. Yan (2019) emphasize that "privacy and security concerns are the main problems why customers do not participate," a finding that resonates strongly in contexts where financial data sensitivity is high. In digital finance, trust in data protection mechanisms is not merely a technical issue but a behavioral determinant of continuance intention.

Although chatbot adoption in the banking sector has become increasingly widespread, the academic urgency to examine this phenomenon remains high. First, existing literature highlights that chatbots represent one of the key applications of AI-driven service automation with the potential to transform customer interaction patterns within financial institutions (Følstad & Brandtzæg, 2017). However, research on the psychological and behavioral factors influencing users' continuance intention is still limited and often yields mixed findings. Second, most prior studies emphasize technical aspects and short-term user satisfaction, yet few have addressed continuance intention in the context of banking chatbots. Third, there is a potential contradiction in the literature. For instance, some studies identify trust as the dominant factor in determining continuance intention Nguyen (2021), while others emphasize perceived usefulness and satisfaction as primary drivers. These inconsistencies indicate a research gap that warrants further exploration.

This research gap underscores the need for a more holistic approach that simultaneously considers both strategic and behavioral factors to explain the phenomenon of chatbot underutilization, particularly in the context of financing institutions in developing countries. Addressing this gap is crucial, as greater chatbot adoption has the potential to generate higher service efficiency, reduce operational costs, and enhance customer satisfaction across the industry.

Prior research on continuance intention toward chatbots in the NBFI sector yields diverse and often contradictory findings. Nguyen (2021) confirmed that information quality and system quality positively affect trust, which enhances continuance intention, consistent with DeLone (2003) Information Systems Success Model. However, Lee (2020) found no significant effect of system quality on trust in the South Korean banking context, suggesting that discrepancies may stem from differences in respondent characteristics, technological maturity, and user

expectations across countries.

Haimour (2024) also reported that, within the context of Saudi Arabian higher education, trust served as a full mediator between system quality and users' intention to continue using chatbots. In contrast, other studies Seridaran (2024) found that the mediating effect of trust on continuance intention was weak or insignificant. These differences may be influenced by levels of user involvement and usage context (academic information services vs. NBFIs). The relationship between behavioral intention and continuance intention also remains inconclusive. While studies such as Bhattacherjee (2001) and Nguyen (2021) support a strong positive relationship, other research suggests that external factors such as preferences for human interaction, system complexity, or service urgency may weaken this influence.

Another underexplored issue lies in the contextual limitations of prior studies. Most research has been conducted in developed countries or within the banking sector, whereas the context of Non-Bank Financial Institutions (NBFIs) in emerging markets such as Indonesia has received limited empirical attention. Existing local studies Li (2021) have highlighted the role of information quality and system quality in influencing user satisfaction, yet they have not comprehensively tested the interaction of all five variables—information quality, system quality, trust, behavioral intention, and continuance intention—within a single integrated analytical framework.

Perceived privacy concerns represent a critical barrier to chatbot continuance in financial settings, as users frequently weigh the convenience of automated interactions against the potential exposure of sensitive financial and personal data. Perceived vulnerabilities in data handling, ambiguous consent practices, and insufficient transparency regarding data retention and third-party access can erode confidence in chatbot systems and reduce willingness to disclose information or engage repeatedly.

Based on the literature reviewed above, there is sufficient evidence to suggest that this topic remains far from resolved. Numerous findings are inconsistent, contradictory, and not fully aligned with existing theories, particularly concerning the influence of system quality on trust and the mediating role of trust in continuance intention. Therefore, a more comprehensive and integrated study is required to examine the relationships among these five variables, particularly within the context of Non-Bank Financial Institutions (NBFIs) in Indonesia.

This study aims to analyze the factors influencing users' continuance intention toward chatbots in Indonesian Non-Bank Financial Institutions (NBFIs) by integrating perceived privacy, information quality, system quality, trust, and continuance intention into a single analytical framework. Specifically, the study investigates whether perceived privacy, information quality, and system quality have significant positive effects on users' trust in chatbots and on their continuance intention to use chatbot services within Indonesian NBFIs. In addition, the study examines whether trust significantly influences continuance intention and whether trust mediates the relationships between perceived privacy, information quality, and system quality and continuance intention. More specifically, the mediation analysis evaluates whether trust mediates the effect of perceived privacy, system quality, and information quality on continuance intention.

However, these findings are not entirely consistent across all contexts. Belda (2023) reported that system quality did not significantly enhance trust in educational chatbots, in contrast to the findings of Tam (2020), who highlighted system quality as a primary determinant of trust in the e-commerce sector. These differences suggest that the formation of trust is contextual, depending on industry characteristics and user expectations.

H1: Perceived privacy has a positive effect on users' trust in chatbots.
H2: Information quality has a positive effect on users' trust in chatbots.
H3: System quality has a positive effect on users' trust in chatbots.
H4: Perceived privacy has a positive effect on continuance intention.
H5: Information quality has a positive effect on continuance intention.
H6: System quality has a positive effect on continuance intention.
H7: Trust has a positive effect on continuance intention.
H8: Trust mediates the influence of perceived privacy, system quality and information quality on

continuance intention.
H8a: Trust mediates the influence of perceived privacy on continuance intention.
H8b: Trust mediates the influence of system quality on continuance intention.
H8c: Trust mediates the influence of information quality on continuance intention.

METHOD

Research Design

This study employed a quantitative research design with both descriptive and causal approaches to examine the determinants of users' continuance intention toward chatbots in Indonesian non-bank financial institutions (NBFIs), particularly in the multifinance sector. The descriptive approach aimed to provide an overview of respondents' characteristics and chatbot usage behavior, whereas the causal approach investigated the cause-and-effect relationships among the key constructs of the study.

Given the objective of assessing relationships among multiple latent variables, this research adopted a cross-sectional design, in which data were collected at a single point in time (Hair et al., 2019). The unit of analysis was the individual user, specifically customers of multifinance institutions who had interacted with the company's chatbot services at least twice within the last six months.

This design allowed the study to empirically test the proposed theoretical framework that integrated perceived privacy, information quality, system quality, trust, and continuance intention within a single analytical model. Such integration enabled the identification of both direct and mediating effects in users' behavioral intentions toward chatbot utilization.

Population and Sampling

The population of this study comprised active customers of Indonesian multifinance institutions who had used chatbot services as part of their customer service experience.

To ensure representativeness and minimize selection bias, the study applied a simple random sampling technique, whereby each eligible customer had an equal probability of being selected as a respondent. This method was appropriate for generating generalizable findings from a relatively homogeneous population of digital users (Sekaran & Bougie, 2016).

Sampling criteria were established as follows: 1) Respondents were at least 18 years old. 2) Respondents had used the chatbot service at least twice within the last six months. 3) Respondents held an active financing contract with the multifinance company.

The six-month usage window was selected based on established IS continuance research conventions Bhattacherjee (2001), which posit that user evaluations stabilize after repeated interactions over a moderate period. This timeframe ensured that respondents had accumulated sufficient experience to form reliable assessments of the chatbot's performance while remaining within the context of active customer contracts typical of multifinance institutions. The minimum sample size was determined based on the recommendation of Hair (2019), which suggests at least 150 valid responses for Structural Equation Modeling (SEM) analyses involving complex models with multiple latent constructs. This threshold ensured sufficient statistical power to detect significant relationships among variables.

Research Instrument

Data collection was conducted using a structured online questionnaire, developed based on empirically validated scales from the literature. This instrument was designed to measure five core constructs: perceived privacy, information quality, system quality, trust, and continuance intention. Consistent with methodological conventions in prior research Nguyen (2021) and DeLone (2003), all items were rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The following section summarizes the constructs and their bibliographic sources. The constructs and their sources are summarized as follows:

Table 1. Conceptual definition of the constructs

Construct	Definition	Source

Perceived Privacy	Users' perception that their personal and financial data are securely protected during chatbot interactions.	(Patil et al., 2020)
Information Quality	The extent to which information provided by the chatbot is accurate, relevant, complete, and timely.	(DeLone & McLean, 2003; Nguyen et al., 2021)
System Quality	The degree of technical performance, reliability, and ease of use of the chatbot system.	(DeLone & McLean, 2003)
Trust	The user's belief that the chatbot system is reliable, secure, and acts in their best interest.	(Gefen et al., 2003; Nguyen et al., 2021)
Continuance Intention	Users' intention to continue using the chatbot service after their initial experience.	(Bhattacherjee, 2001)

To validate the survey instrument, a pilot study was undertaken with a sample of 20 participants. This preliminary phase served to evaluate the scales' clarity, internal consistency, and overall comprehensibility. Respondent feedback informed subtle yet critical linguistic revisions, which were incorporated to strengthen the instrument's contextual appropriateness and semantic accuracy before its full deployment.

Data Analysis Technique

The empirical analysis was conducted using a dual-software approach comprising IBM SPSS version 26 and SmartPLS 4. Initially, SPSS was employed to conduct preliminary data screening, descriptive statistical analysis, and internal consistency verification via Cronbach's alpha, thereby ensuring the integrity and quality of the dataset.

For the primary hypothesis testing, the study utilized Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4. This methodological choice was based on the suitability of PLS-SEM for predictive and exploratory research involving complex latent constructs and mediation effects. Furthermore, as a nonparametric approach, PLS-SEM did not rely on the assumption of multivariate normality, rendering it particularly robust for the analysis of survey data utilizing Likert scales.

In accordance with established SEM protocols, the analysis was conducted in two separate phases. Initially, the measurement model (outer model) was evaluated to determine construct reliability and validity by analyzing factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE). Subsequently, the structural model (inner model) was assessed to examine the proposed relationships. This process included a bootstrapping procedure with 5,000 resamples to generate t-values and p-values for assessing the statistical significance of the path coefficients. This comprehensive analytical framework, utilizing SPSS for preliminary validation and SmartPLS for thorough model evaluation, facilitated a meticulous assessment of the theoretical model.

Sample Collection

Study was conducted among customers of a multifinance company in Indonesia who had previously interacted with the company's official chatbot service. The research aimed to examine continuance intention in the context of post-adoption behavior toward financial chatbots. To ensure respondent validity, two screening questions were included at the beginning of the survey: (1) "Have you ever used the company's chatbot service?" and (2) "How long have you been using it?".

Only respondents who answered "Yes" to the first question and indicated a chatbot usage period of three months or less were included in the final sample. This approach ensured that all participants possessed actual and recent user experience with the chatbot service.

The data for this study were gathered through an online questionnaire, which was distributed using a WhatsApp blasting technique and remained active for approximately three weeks. A total of 200 responses were received. Following a data-screening process to remove

incomplete or ineligible submissions, 184 valid responses (89% of the total) were deemed suitable for analysis. The final sample consisted largely of confirmed customers (85%) from multifinance institutions.

Demographic analysis of the respondents revealed a concentration in the 26–35 (41%) and 36–45 (33%) age brackets, with a gender distribution of 62% male and 38% female. Educationally, the cohort primarily consisted of bachelor's degree holders (69%), followed by high school graduates (29%). Concerning chatbot engagement, the most frequent interaction pattern was one to three times per month (68%). Income distribution indicated that the majority of respondents (61%) reported monthly earnings below Rp 10,000,000.

Table 2. Demographic information of the respondents

Category	Subcategory	Frequency	Percentage
Age	18-15 years old	30	14%
	26-35 years old	84	41%
	36-45 years old	68	33%
	46-55 years old	23	11%
	>55 years old	2	1%
Gender	Male	129	62%
	Female	78	38%
Usage Frequency	1-3	141	68%
	4-6	33	16%
	>6	33	16%
The highest education level	High school diploma	60	29%
	Bachelor's Degree	143	69%
	Master's Degree	4	2%
	Doctoral Degree	0	0%
Monthly Income	< Rp. 10.000.000	126	61%
	Rp 10.000.001 – Rp. 20.000.00	7	3%
	Rp 20.000.001 – Rp. 30.000.000	64	31%
	>Rp. 30.000.000	10	5%

The demographic structure suggested that the respondents represented a group of young, well-educated, and digitally literate customers who actively engaged with financial technology services. This population was therefore considered suitable for analyzing continuance intention toward chatbot services in Indonesia's multifinance sector.

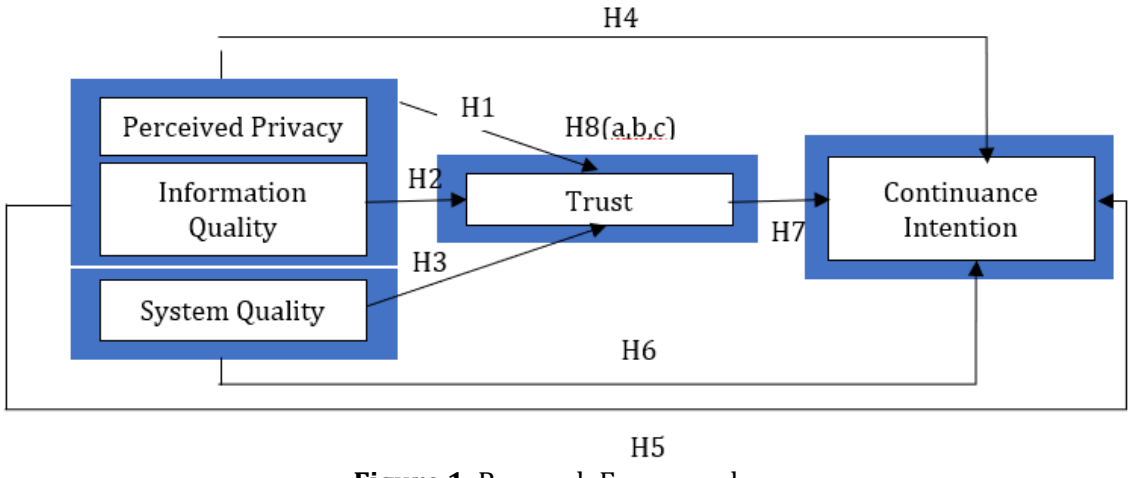

Figure 1. Research Framework

RESULTS AND DISCUSSION

Results

Data Analysis

This chapter outlines the empirical results derived from the quantitative analysis. The proposed research framework was evaluated using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4 software. In accordance with established protocols for variance-based SEM Hair (2019), the analysis was conducted in two primary stages. Initially, the measurement (outer) model was comprehensively evaluated, followed by an analysis of the structural (inner) model and an assessment of the study's hypotheses.

Measurement Model Assessment

To ensure the robustness of the constructs, the measurement model was assessed for reliability and validity. This evaluation involved examining internal consistency reliability, convergent validity, and discriminant validity.

Table 3. Construct Reliability and Validity

Construct	Item	Mean	Loading	AVE	Cronbach's Alpha	Composite Reliability
Continuance Intention (CI)	C1	4.377	0.938	0.897	0.943	0.963
	C2	4.435	0.955			
	C3	4.367	0.949			
Information Quality (IQ)	IQ1	4.585	0.890	0.858	0.959	0.968
	IQ2	4.565	0.926			
	IQ3	4.565	0.923			
	IQ4	4.556	0.942			
	IQ5	4.575	0.949			
Privacy (PR)	PR1	2.981	0.852	0.933	0.933	0.945
	PR2	3.498	0.896			
	PR3	3.314	0.888			
	PR4	3.034	0.898			
	PR5	3.671	0.869			
System Quality (SQ)	SQ1	4.633	0.946	0.868	0.962	0.970
	SQ2	4.560	0.906			
	SQ3	4.565	0.947			
	SQ4	4.589	0.943			
	SQ5	4.556	0.914			
Trust (T)	T1	4.618	0.906	0.876	0.953	0.966
	T2	4.614	0.955			
	T3	4.570	0.934			
	T4	4.599	0.947			

The psychometric characteristics of the measurement model were assessed for both reliability and convergent validity. The findings demonstrate robust item reliability, with all outer loadings exceeding the 0.70 threshold. The constructs showed a high level of internal consistency, as indicated by Cronbach's alpha and composite reliability (rho_c) values ranging from 0.933 to 0.962 and 0.945 to 0.970, respectively. Convergent validity was confirmed, with the average variance extracted (AVE) for all constructs surpassing the 0.50 threshold, ranging from 0.776 (Privacy) to 0.897 (Continuance Intention).

To evaluate discriminant validity, the Fornell–Larcker criterion was employed. This criterion was satisfied, as the square root of the average variance extracted (AVE) for each construct exceeded the correlations between that construct and all other constructs in the model, thereby providing evidence of empirical distinctiveness.

Table 4: Fornell-Larcker Criterion

Constructs	1. CI	2. IQ	3. PP	4. SQ	5. T
1. Continuance Intention (CI)	**0.947**	-	-	-	-
2. Information Quality (IQ)	0.768	**0.926**	-	-	-
3. Perceived Privacy (PP)	0.163	0.168	**0.881**	-	-
4. System Quality (SQ)	0.759	0.874	0.185	**0.931**	-
5. Trust (T)	0.776	0.876	0.160	0.895	**0.936**

Structural Model Assessment

The assessment of the structural model required an evaluation of the proposed relationships through an analysis of the path coefficients and the coefficient of determination (R^2). The model's explanatory power was assessed using R^2 values, which indicate the percentage of variance in endogenous constructs explained by their predictors. In accordance with the criteria established by Hair (2019), R^2 values were categorized as substantial (0.75), moderate (0.50), or weak (0.25).

As shown in Table 6, the model explained 83.9% of the variance in Trust (R^2 = 0.839) and 64.1% of the variance in Continuance Intention (R^2 = 0.641). Both values demonstrate substantial and moderate explanatory power, respectively, confirming that the proposed model effectively captures users' behavioral intentions regarding chatbot continuance.

Table 6. Coefficient of Determination (R^2)

Endogenous Construct	R^2	Interpretation
Trust	0.839	Substantial explanatory power
Continuance Intention	0.641	Moderate explanatory power

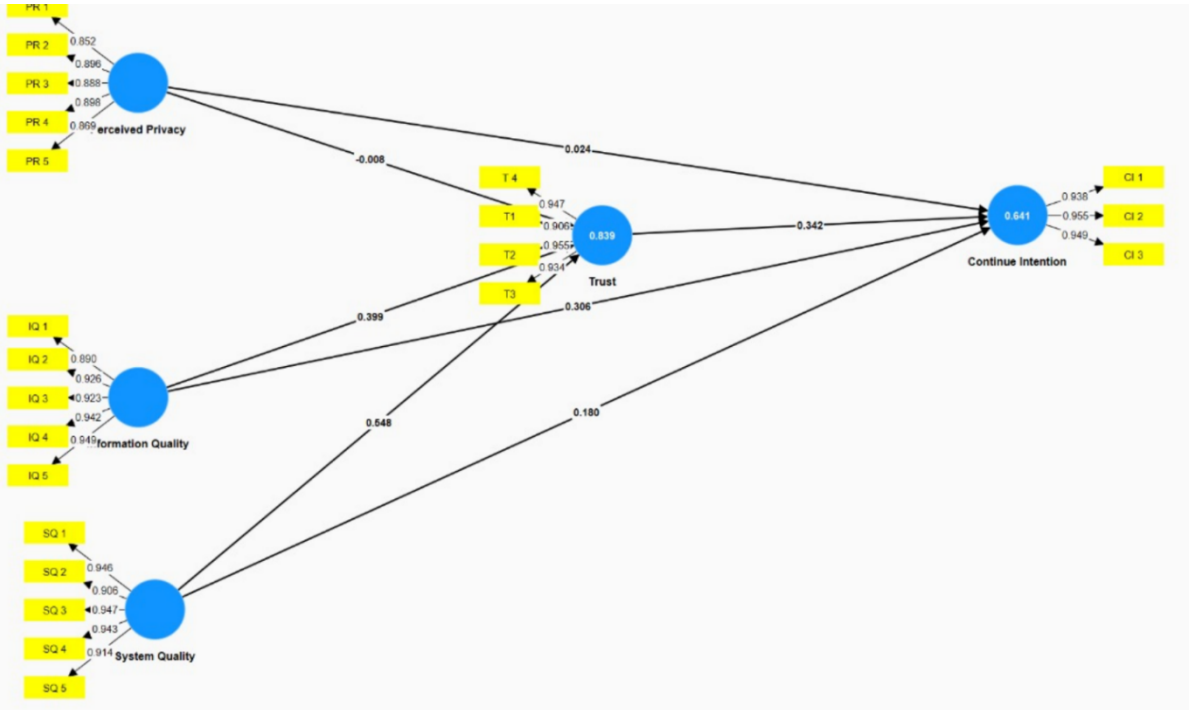

Figure 2. Research Framework: Structural Model of Chatbot Continuance Intention in Indonesian NBFIs

Hypothesis Testing

The hypothesized paths were tested using a 5,000-resample bootstrapping procedure. The results are summarized in Table 3. The analysis of direct effects yielded mixed support for the hypotheses.

Direct Effects

Perceived Privacy: The paths from Perceived Privacy to both Trust (H1; O = -0.008, p = 0.341) and Continuance Intention (H4; O = 0.024, p = 0.269) were found to be non-significant. Therefore, H1 and H4 were not supported. Information Quality (IQ): IQ had a significant positive effect on Trust (H2; O = 0.399, p < 0.001) and a significant direct and positive effect on Continuance Intention (H5; O = 0.306, p = 0.0004). H2 & H5 were supported. System Quality (SQ): SQ had a highly significant positive effect on Trust (H3;O = 0.548, p <0.001). However, the direct path from SQ to Continuance Intention (H6; O = 0.180,p = 0.113) was not significant. H3 was supported, and H6 was not supported.

Trust: The relationship between Trust and Continuance Intention (H7 : O = 0.342, p=0.013) was positive and significant, confirming H7 is supported.

Indirect (Mediation) Effects (H8a, H8b, H8c)

The mediation analysis examined the indirect effects through Trust.

H8a (Privacy --> Trust --> CI): The specific indirect effect of Perceived Privacy on Continuance Intention Via Trusts (H8a; O = -0.003, p = 0.354) was not statically significant. H81 is not supported.

H8b (SQ--> Trust --> C1) : The specific indirect effect of System Quality on Continuance Intention Via Trust (H8b; O = 0.187, p = 0.014) was significant. Given the non-significant direct effect (H6), this finding confirms that Trust fully mediates the relationship between System Quality and Continuance Intention. H8b is supported.

H8c (IQ $ -->Trust --> CI): The specific indirect effect of Information Quality on Continuance Intention via Trust (H8c; $\beta = 0.136, p = 0.053$) was not statistically significant at the conventional p < 0.05 H8c is not supported.

Table 7. Summary of Hypothesis Testing Results

Hypothesis	Path	β	t Statistic	p Value	Result
H1	Privacy → Trust	−0.008	0.409	0.341	Not Supported
H2	Information Quality → Trust	0.399	3.301	0.000	Supported
H3	System Quality → Trust	0.548	4.412	0.000	Supported
H4	Privacy → Continuance Intention	0.024	0.616	0.269	Not Supported
H5	Information Quality → Continuance Intention	0.306	2.670	0.004	Supported
H6	System Quality → Continuance Intention	0.180	1.209	0.113	Not Supported
H7	Trust → Continuance Intention	0.342	2.242	0.013	Supported
H8a	Privacy → Trust → Continuance Intention	−0.003	0.374	0.354	Not Supported
H8b	System Quality → Trust → Continuance Intention	0.187	2.200	0.014	Supported
H8c	Information Quality → Trust → Continuance Intention	0.136	1.613	0.053	Not Supported

Discussion

This research investigated the determinants of users' continuance intention toward chatbots in Indonesian non-bank financial institutions (NBFIs). The findings reveal a model with substantial explanatory power, in which factors related to system performance and information utility are paramount, while privacy concerns did not emerge as significant drivers of trust or

continued use.

First, this study provides a deeper understanding of the factors that shape users' continuance intention toward chatbot services in the NBFI sector in Indonesia. The findings confirm that both Information Quality (IQ) and System Quality (SQ) play key roles in forming trust and continuance intention toward chatbots among users. Based on the data analysis, the findings show that Information Quality (IQ) has a significant effect on Continuance Intention (CI), with a path coefficient value of $\beta = 0.306$ ($p < 0.01$), indicating that the better the quality of information provided by the chatbot, the higher the likelihood that users will continue using the system.

This aligns with Expectation-Confirmation Theory Bhattacherjee (2001), which suggests that users continue to use a system if it provides clear utilitarian value, such as accurate and relevant information. However, the findings also reveal contextual differences that clearly distinguish the Indonesian NBFI sector from other sectors that have been widely studied in the literature. One notable finding is that Perceived Privacy (PP) does not show a significant effect on Trust (T) or Continuance Intention (CI). The analysis results show $\beta = 0.024$ ($p = 0.269$) for the effect of Perceived Privacy on Trust and $\beta = 0.024$ ($p = 0.269$) for the effect of Perceived Privacy on Continuance Intention, both of which are not significant. This finding contradicts Privacy Calculus Theory proposed by Malhotra (2004), which argues that users weigh the benefits of using technology against the risks posed by privacy concerns.

However, in this study, privacy did not play a significant role in shaping trust or continuance intention. One possible explanation for this finding can be understood through the theory of contextual privacy norms. This theory states that users' privacy perceptions regarding technology are influenced by the social and cultural norms prevailing within a particular country or community. In this case, Indonesian users, particularly those using chatbots in the NBFI sector, view privacy as a basic expectation that has already been fulfilled by financial institutions, rather than as an issue requiring further scrutiny.

This aligns with the perspective put forward by Judijanto (2024), who explained that privacy awareness in developing countries such as Indonesia tends to be lower than in developed countries, where regulations on data privacy are generally stricter. Li Rho (2022) also emphasized that privacy in technology use is strongly influenced by cultural and social expectations within a country. In this context, Indonesian society tends to trust that financial institutions have met acceptable data security standards, despite relatively lower awareness of potential privacy risks.

Furthermore, the study also highlights the role of user familiarity with technology in reducing privacy concerns. Gefen (2000) stated that in the context of using new technologies, such as chatbots, trust is often built through direct experience rather than concerns about potential privacy violations. In other words, users who are already familiar with digital NBFI services or chatbots feel more comfortable and confident that their data is secure and are therefore less likely to be concerned about privacy risks. This indicates that while privacy is an important issue, in the Indonesian context, user experience and familiarity with the system play a more significant role in building trust toward chatbots.

Meanwhile, Information Quality (IQ) showed a strong and significant direct effect on Continuance Intention (CI), consistent with Expectation-Confirmation Theory (Bhattacherjee, 2001). This theory argues that users will continue using a system if it provides clear utilitarian value, which, in the case of chatbots, translates into accurate, relevant, and complete information. This finding also aligns with Kurniawan (2021), who stated that information quality is a key factor in user satisfaction with a system, which subsequently influences loyalty and continued usage. Users in this study were more likely to value the practical benefits obtained from chatbots, such as ease of access to relevant information about financial products and services, rather than developing an emotional or affective connection with the chatbot itself. In other words, users were more focused on the accuracy and relevance of the information they received, making them more likely to continue using the chatbot.

System Quality (SQ) plays a role in building Trust (T), but it does not show a direct effect on Continuance Intention (CI). This finding is consistent with trust-based information systems (IS) models proposed by Gefen (2000), which argue that in high-risk environments such as NBFIs, trust serves as the key link between system performance and continued usage. While system

quality, such as speed, reliability, and security, is important in building user trust, high-performing systems do not automatically lead to loyalty or continued usage if trust has not first been established. Therefore, System Quality serves as the foundation for building trust, which in turn drives users' commitment to continue using chatbots. This indicates that in the context of NBFIs, although the technical quality of chatbots is crucial for ensuring positive user experiences, trust in the system remains the primary factor driving long-term chatbot usage.

Finally, Trust (T) proved to be the strongest determinant of Continuance Intention (CI). This finding reflects the importance of affective trust in the NBFI domain. As Gefen (2003) explained, in high-risk sectors such as NBFIs, trust is a critical factor in ensuring long-term user commitment. Given the uncertainty and risk involved in financial decision-making, trust acts as a psychological bridge connecting technical performance and informational value with sustained behavioral commitment. This finding highlights that in the context of NBFI chatbots, users do not rely solely on system quality or information quality; rather, trust in the system becomes the primary determinant of continued usage.

Overall, this study reveals that users' continuance intention toward NBFI chatbots is shaped by a complex interaction among utilitarian value, technical performance, and affective trust formation. The findings suggest that to improve the continued use of chatbots, companies must focus on enhancing the quality of information provided by chatbots and ensuring strong technical system performance, both of which contribute to building trust. Trust becomes a crucial element in ensuring long-term user commitment, even though privacy does not play a significant role in this context.

CONCLUSION

This study provides an understanding of the factors influencing continuance intention toward chatbot services in the non-bank financial institution (NBFI) sector in Indonesia. The key findings indicate that information quality and system quality play crucial roles in building trust and continuance intention. Trust is shown to be a key mediator between system quality and users' continuance intention. Meanwhile, perceived privacy does not have a significant impact in the Indonesian context, given the strong trust in financial institutions.

This research offers practical implications for financial institutions to improve the information quality and system quality of their chatbots to foster user trust. Future research should involve a more diverse market segment, incorporate advanced chatbot technologies such as voice-based or AI-powered chatbots, and explore psychological factors such as technology anxiety, as well as privacy regulations.

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AUTHOR CONTRIBUTION STATEMENT

Ryan Timothy contributed to the conceptualization of the study, research design, data collection, statistical analysis, interpretation of results, manuscript drafting, revision, and final approval of the published version of the manuscript.

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