

The Effect Of Artificial Intelligence On Loyalty Intention In Banking Services In Indonesia

Selly Mardiana Sari^{1*)}, Yolanda Masnita²⁾, Kurniawati³⁾

Program Studi Magister Manajemen,
Fakultas Ekonomi dan Binis, Universitas Trisakti
Jl. Kyai Tapa No.1, Grogol, Jakarta Barat, DKI Jakarta, 11440
selymardianas@gmail.com^{1*)}

*) Correspondence author :

ABSTRACT

This research was carried out with the aim of testing and analyzing the influence of perceived artificial intelligence on perceived Anthropomorphism, Interaction Quality, Confirmation, the impact of Perceived Anthropomorphism on Interaction Quality, Confirmation, the influence of Interaction Quality on Confirmation and Customer Experience, the influence of Confirmation affects Customer Experience and the impact of Customer Experience on Loyalty Intention. The type of research used is quantitative research with research hypothesis testing. The sample collection method used purposive sampling with a sample of 218 respondents. The analysis tool used by SEM is using AMOS 23 software. The findings showed that Perceived Artificial Intelligence was proven to have a positive effect on Perceived Anthropomorphism, Confirmation, and Interaction Quality; perceived Anthropomorphism had a positive effect on Interaction Quality but was not proven to have a positive effect on Confirmation, Interaction Quality was proven to have an impact positive for Confirmation but not proven to have a positive effect on Customer Experience. Confirmation has been proven to affect Customer Experience positively, and Customer Experience has been proven to impact Loyalty Intention positively. The managerial implications in this study show that Artificial Intelligence is an essential variable in increasing customer loyalty in the form of digital banking services through the development of AI sensitive to user needs, namely through convenient service through application features that can improve the banking system's stability.

Keywords: Artificial Intelligence, *Perceived Anthropomorphism*, *Confirmation*, *Interaction Quality*, *Customer Experience*, *Loyalty Intention*.

A. INTRODUCTION

Customer satisfaction is an important foundation in shaping loyalty in the banking industry. Customers who are satisfied with the service received tend to develop greater trust in the bank, ultimately driving loyalty. Good service quality, ease of access, and quick response to customer needs significantly affect satisfaction, increasing customers' desire to continue using services from the same bank [1] and [2]. Artificial intelligence technology in banking can improve customer satisfaction through personalized service and efficient responses to customer needs, ultimately contributing to greater loyalty. The Technology Acceptance Model (TAM) shows that a positive attitude toward new technologies, such as Artificial Intelligence (AI), can increase customer satisfaction and loyalty if the technology is considered relevant

and useful. Thus, a strong relationship between customer satisfaction and loyalty suggests that high satisfaction is a major trigger for loyalty intent among customers [3] and [4].

In the digital era, technology, such as AI, plays a big role in building customer loyalty intentions. AI technology allows companies to provide more personalized, fast, and responsive services. With the convenience provided by AI, such as 24-hour service and service process speed, customers feel that their needs are better met. AI has brought significant changes in various sectors, including banking, improving efficiency and service quality. As a technology capable of mimicking human intelligence, AI speeds up operations and improves customer satisfaction by providing more accurate solutions [5], [6] and [7]. Various empirical studies related to the influence of AI have experienced significant development with the ultimate goal of including continuous intention loyalty intention—word of mouth using mediation or moderation variables. The empirical studies conducted resulted in the finding of a significant favorable influence of AI on the interpretation of things or events related to artificial intelligence from computer programs that occurred. [8], [9] and [10] (Perceived Anthropomorphism). AI in banking services can increase customer confidence in the services offered by banks, where customers feel higher satisfaction with AI than with traditional services.

The results of the empirical study prove a positive influence [8], [9] of Perceived Intelligence on Confirmation. IA makes it easier for customers to use banking services because they feel that the quality of interaction of QInteraction provided by IA is easier, faster, and more accurate than conventional services. The empirical study's results resulted in a significant positive influence on AI interaction quality. Positive customer perception of the existence of AI can increase customer satisfaction in using AI services compared to conventional services, as can be seen from the results of empirical studies. Positive perceptions from customers towards AI can also affect the quality of interaction felt by customers, primarily related to the convenience, speed, and accuracy of the services provided by AI compared to conventional services. The results of the empirical studies prove a positive influence of [8] and [9] Perceived Anthropomorphism on Interaction Quality.

The quality of interaction from the existence of AI positively influences customer satisfaction when utilizing AI compared to conventional services. The results of the empirical study found a positive influence of [9] Interaction Quality on confirmation. The quality of customer interaction also impacts the consumer experience in utilizing AI services compared to conventional services. The results of the empirical study support the positive influence of [11] Interaction Quality on Quality Experience. The satisfaction felt by customers from using AI compared to conventional services has an impact on increasing customer experience, and the results of empirical studies prove that there is a positive influence of [9] Confirmation on Customer Experience. The positive experience customers feel from using AI compared to conventional services will create a desire for customers to continue using banking services that provide AI facilities. This is supported by empirical studies where [12] and [13] Customer Experience positively affects Loyalty Intention. T

This research needs to be conducted by looking at the AI perspective from the positive benefits aspect, namely how AI can increase customer loyalty intention by using the mediating

variables of Perceived Anthropomorphism, interaction quality, confirmation, and customer experience. Based on the background explanation above, the problem formulation proposed in this study is:

1. Does Perceived Artificial Intelligence have a positive effect on Perceived Anthropomorphism?
2. Does Perceived Artificial Intelligence have a positive effect on Interaction Quality?
3. Does Perceived Artificial Intelligence have a positive effect on Confirmation?
4. Does Perceived Anthropomorphism have a positive effect on Interaction Quality?
5. Does Perceived Anthropomorphism have a positive effect on Confirmation?
6. Does Interaction Quality have a positive effect on Confirmation?
7. Does Interaction Quality have a positive effect on Customer Experience?
8. Does Confirmation have a positive effect on Customer Experience?
9. Does Customer Experience have a positive effect on Loyalty Intention?

The purpose of this study, based on the formulation of the problem above is to :

1. Analyze the positive influence of Perceived Artificial Intelligence on Perceived Anthropomorphism.
2. Analyze the positive influence of Perceived Artificial Intelligence on Interaction Quality.
3. Analyze the positive influence of Perceived Artificial Intelligence on Confirmation.
4. Analyze the positive influence of Perceived Anthropomorphism on Interaction Quality
5. Analyze the positive influence of Perceived Anthropomorphism on Confirmation.
6. Analyze the positive influence of Interaction Quality on Confirmation.
7. Analyze the positive influence of Interaction Quality on Customer Experience.
8. Analyze the positive influence of Confirmation on Customer Experience.
9. Analyze the positive influence of Customer Experience on Loyalty Intention

B. LITERATURE

Loyalty Intention

One of the outcomes to be achieved from company-customer interaction is customer loyalty. In looking for customer loyalty, companies try to find the best reasons to keep customers returning. Since customer experience positively impacts loyalty, the results provide several benefits for the company, such as trust, customer loyalty, increased commitment, and positive word-of-mouth promotion. Perception of relevant customer experience can lead to a more significant commitment to the company, reflected in customer loyalty. In a competitive business environment, understanding the factors that affect customer loyalty becomes crucial to the sustainability of an organization. Research shows that customer loyalty influences repeat purchase decisions and creates profitable word-of-mouth promotions. Therefore, researchers and practitioners need to understand the dynamics underlying [1], [2], [3], [4], and [5] loyalty intention to improve more effective marketing strategies..

The Influence of Perceived Artificial Intelligence on Perceived Anthropomorphism

The level of perception of intelligence that a person has towards an entity can affect the extent to which the entity is seen as having human qualities. The perception of intelligence plays a vital role in shaping a person's view of an object's level of anthropomorphism, especially in interactions with technologies such as robots or virtual assistants. The higher the perception of intelligence (Artificial Intelligence), the more likely the individual will perceive the entity as human-like in its traits or behavior (Perceived Anthropomorphism). The results of the empirical study conducted produced findings that there is a positive influence of AI on [1], [2] and [3] Perceived Anthropomorphism. Based on the explanation above, the hypothesis proposed in this study is::

H1: Perceived Artificial Intelligence has a positive effect on Perceived Anthropomorphism

The Effect of Perceived Artificial Intelligence on Confirmation

A person's perception of an entity's level of intelligence, such as an individual or a person's perception of an entity's level of intelligence, such as an individual or technological system, can affect the extent to which they are likely to receive and confirm the information provided by that entity. The higher the perceived artificial intelligence, the more likely a person will trust the accuracy of the information and decisions made by the entity. This shows that perceived artificial intelligence is essential in validating information and confirming the trust or decision. The study's results positively influenced [1] and [2] Perceived Intelligence on Confirmation. Based on the explanation above, the hypothesis proposed in this study is:

H2: Perceived Artificial Intelligence has a positive effect on Confirmation

The Effect of Perceived Artificial Intelligence on Interaction Quality

The perception of the intelligence of an entity, such as a human or a technology-based system, can affect the quality of interaction experienced by individuals. The higher the level of perceived intelligence, the more positive the interaction experience will be, as individuals tend to perceive the entity as more capable of understanding, responding, and adapting to their needs. Perceived intelligence is essential in determining satisfaction and effectiveness in interactions, both in interpersonal contexts and with technology. The results of the research prove that Perceived Intelligence has a positive influence on Interaction Quality [2]. Based on the explanation above, the hypothesis proposed in this study is:

H3: Perceived Artificial Intelligence has a positive effect on Interaction Quality

The Effect of Perceived Anthropomorphism on Interaction Quality

Perceived anthropomorphism explains how humans interpret non-human objects as entities that have human characteristics, creating strong emotional bonds, as seen in the interaction between humans and robots. Research shows that robots with friendly face and voice designs can increase user trust and comfort. The more anthropomorphic an object is, the more likely individuals feel connected and respond positively. Attractive and friendly product designs, such as technology with features that resemble human faces, also increase the level of

anthropomorphism that consumers perceive. Anthropomorphism affects the quality of perceived interactions, where a high level of Perceived Anthropomorphism can make interactions considered more personal and satisfying. The research supports the positive influence of Perceived Anthropomorphism on Interaction Quality, so the hypothesis in this study focuses on this relationship [4] and [2]. Based on the explanation above, the theory proposed in this study is:

H4: Perceived Anthropomorphism has a positive effect on Interaction Quality

The Influence of Perceived Anthropomorphism on Confirmation

The perception that an entity possesses human traits can affect the extent to which an individual is willing to confirm or believe the information provided by the entity. When a person considers an entity more human-like, they tend to trust and validate the information or decisions produced by that entity. Perceived anthropomorphism increases emotional connectedness, which in turn can reinforce the tendency to receive and confirm information more easily. The research results proved the positive influence of [1] and [2] Perceived anthropomorphism on Confirmation. Based on the explanation above, the hypothesis proposed in this study is:

H5: Perceived Anthropomorphism has a positive effect on Confirmation

The Effect of Interaction Quality on Confirmation

Interaction Quality is important for understanding interactions between individuals or organizations, significantly impacting customer satisfaction, loyalty, and organizational performance. Research shows that the higher the quality of the interaction, the more likely customers are to remain loyal and recommend the service. Interaction Quality involves clarity, responsiveness, and communication reliability, which can affect the user interaction experience. Good interaction quality creates a positive customer experience, increases value for the organization, and encourages individuals to confirm and trust the information provided more easily. The research supports the positive influence of Interaction Quality on Confirmation, so the hypothesis in this study focuses on this relationship [5] and [6]. Based on the explanation above, the hypothesis proposed in this study is::

H6 : Interaction Quality has a positive effect on Confirmation

The Effect of Interaction Quality on Customer Experience

The quality of interaction between customers and entities, be it companies, services, or technology, plays a crucial role in shaping the overall customer experience. The better the interaction quality, which includes clarity of communication, convenience, responsiveness, and empathy, the more positive customers perceive the experience. High Interaction Quality can increase customer satisfaction, trust, and loyalty, thereby contributing to a better customer experience with a particular brand or service. The results of the research prove that [2] and [7]

Interaction Quality has a positive influence on customer experience. Based on the explanation above, the hypothesis proposed in this study is:

H7: Interaction Quality has a positive effect on Customer Experience

The Effect of Confirmation on Customer Experience

Confirmation is an evaluation process by individuals to verify and justify the decisions taken. This process is essential in the context of decision-making, as it allows individuals to assess the effectiveness and suitability of actions that have been previously taken. In many situations, individuals seek Confirmation of their decisions to reduce uncertainty and increase confidence in the results obtained [1]. In the psychology literature, it is often defined as a positive reinforcement of an existing decision or belief and explained that [2] Confirmation functions as a cognitive mechanism that helps individuals to corroborate decisions made based on information or previous experience. This process involves searching for supporting and conflicting information, known as confirmation bias [3]. This shows how Confirmation can affect how individuals process information and make better decisions. The confirmation process in which customers validate and trust the information, services, or products they receive can significantly affect the customer experience. When customers feel that their expectations are being met and the information received is accurate, their satisfaction and trust in the brand or service increases. Conversely, the mismatch between expectations and reality can degrade the quality of the customer experience. Therefore, Confirmation is important in shaping customer perception and influencing their satisfaction, loyalty, and overall experience. The results of the research prove that Confirmation has a positive influence [4] on customer experience. Based on the explanation above, the hypothesis proposed in this study is:

H8: Confirmation has a positive effect on Customer Experience

he Effect of Customer Experience on Loyalty Intention

Customer experience refers to the cognitive and affective states resulting from creating meaning in a cultural context[5]. From an individual perspective, customer experience is a psychological, subjective, and multidimensional response that ranges from ordinary experiences to extraordinary experiences. Developments, such as digitalization, e-commerce, mobile app marketing, and social media marketing, affect the dynamics of [6]customer experience [7]. In both fintech and online environments, the digital and social realms are joining forces to offer personalized customer experiences. The company navigates to standardize [8] the customer experience across multiple domains by improving connectivity and integration. A positive customer experience can significantly affect the customer's intention to be loyal to a brand or service. The better the customer experience, including satisfying interactions, product quality, and after-sales service, the more likely they will return to the product or service. A positive experience increases satisfaction and encourages customers to recommend the brand to others, thus reinforcing loyalty intentions. Thus, Customer Experience plays a crucial role in building and maintaining customer loyalty. The research results prove a positive influence of [9] and [10] Customer Experience on Loyalty Intention. Based on the explanation above, the hypothesis proposed in this study is:

H9: Customer Experience has a positive effect on Loyalty Intention

Based on the literature review and empirical studies explained earlier, this research was conducted by relating artificial intelligence to customers' intention to remain loyal to the bank services used (Loyalty intention) by using Perceived Anthropomorphism, Confirmation, interaction quality, and customer experience as mediating variables, as can be seen in the following framework of thought.

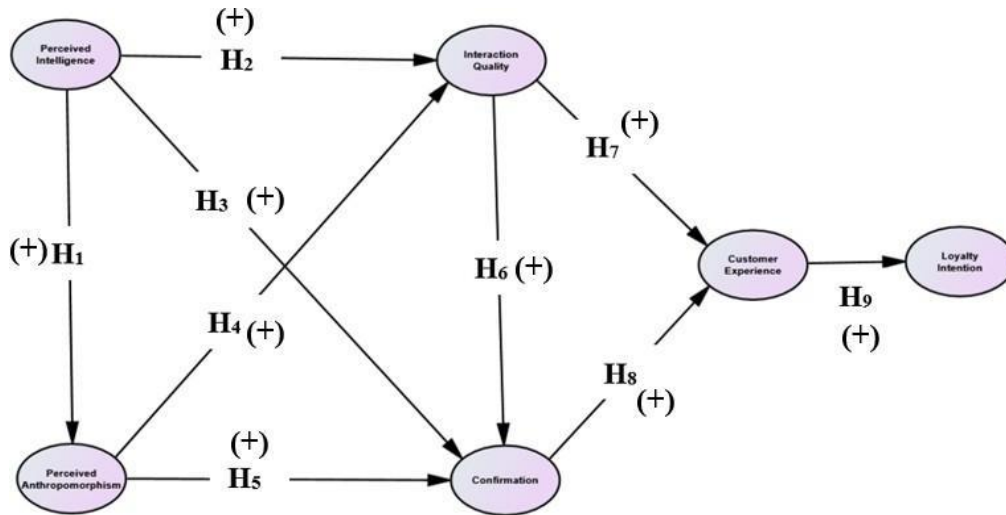


Figure 1 Conceptual Framework of the Research
 Source : Bhatnagr and Rajesh (2024) ; Barbu et al (2021)

C. RESEARCH METHOD

This study uses a quantitative approach with hypothesis testing, namely testing the relationship between independent and dependent variables and measuring the direct effect. Seven variables are studied: artificial intelligence, perceived anthropomorphism, interaction quality, confirmation, customer experience, and loyalty intention.

The unit of analysis used is the bank included in the KBMI 4 group namely banks with a core capital of more than Rp 70 trillion [11]. The sampling method in this study used purposive sampling, namely the sampling sample using several criteria

1. Respondents are customers of one of the following banks (BNI, BRI, Mandiri or BCA)
2. Respondents have been customers of one of the following banks for at least 1 year (BNI, BRI, Mandiri or BCA).

The determination of the number of research samples used the Hair et al (2019) criteria, namely the minimum number of samples used is 10 times the number of indicators used. With the number of indicators for measuring research variables as many as 20 indicators, the minimum number of samples is 10 x 20 indicators = 200 research samples. From the results of data distribution via Google Form, a sample of 218 respondents was obtained, which means that it meets the minimum sample requirement of 200 respondents.

Judging from the variables based on their function, this study uses one independent variable, namely perceived artificial intelligence (measured through three indicators), one

dependent variable, namely loyalty intention (measured by three indicators), and there are four mediating variables: 1) Perceived Anthropomorphism ((, measured by three indicators); 2) Interaction Quality, measured by five indicators; 3) Confirmation (, measured by three indicators); and 4) Customer Experience (, measured by three indicators) The scale used is a Likert scale from 1 to 5 (strongly disagree to agree strongly) [12] and [13].

The analytical tool in this study is the Structural Equation Model (SEM) with the following processing stages:

1. Create a research model based on literature reviews and previous empirical studies as shown in figure 2

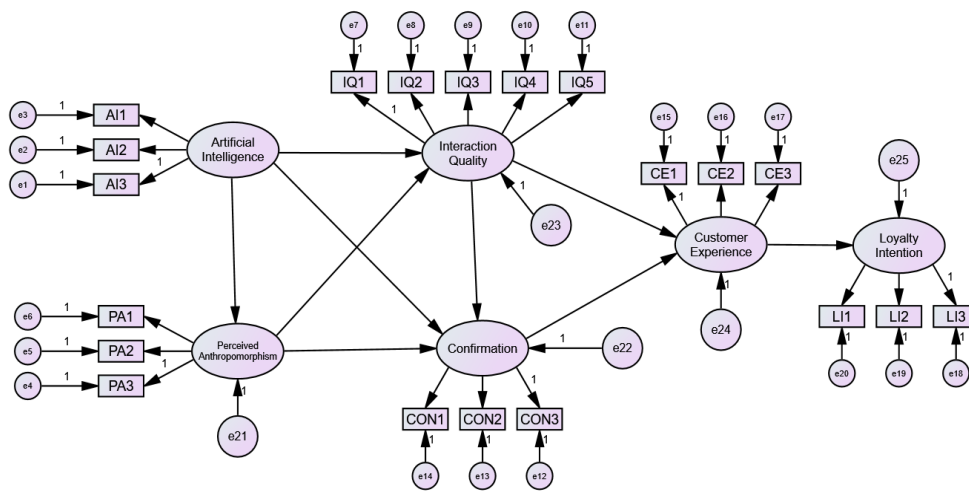


Figure 2 SEM Research Model

2. Testing of Variable Instruments

a. Validity testing

Validity testing is carried out to test whether the indicators used to measure a variable are proven to measure what is to be measured. Validity testing is carried out using factor loading testing where a sample size of 218 produces the criteria for a variable to be said to be valid if it has a factor loading > 0.40

b. Reliability Testing

Reliability testing is carried out to test the consistency of answers from respondents who measure a variable. The analysis tool used to conduct reliability testing is the Cronbach's Alpha Coefficient, where the basis for making a decision on whether an indicator is reliable or not is: If the Cronbach's Alpha Coefficient > 0.60 then all statements in the questionnaire are proven to be consistent or reliable and if the Cronbach's Alpha Coefficient < 0.60 then all statements in the questionnaire are not consistent or reliable.

3. Model Fit Testing

Model fit testing is a test that must be carried out as a prerequisite before testing the research hypothesis using the SEM model. There are 8 model fit criteria that will be used in the study, namely the p-value of chi square, GFI, RMSEA, NFI, IFI, TLI, CFI and CMIN/DF with the determination of the model fit can be seen in the table 1

Table 1. Indikator of Model Fit Testing

Type of Measurement	Measurement	Model Fit Decision
Absolute fit measures	<i>Chi-square</i>	low Chi Square
	<i>p-value Chi-Square</i>	$\geq 0,05$
	GFI	$\geq 0,90$
	RMSEA	$\leq 0,10$
	NFI	$\geq 0,90$
	IFI	$\geq 0,90$
	TLI	$\geq 0,90$
	CFI	$\geq 0,90$
Parsimonious fit measures	CMIN/DF	Antara 1 sampai 5

Source : Hair et al., (2019)

4. Hypothesis Testing Theory

Hypothesis testing theory is used to test the effect of each independent variable on its dependent variable. The hypothesis is carried out in stages

Ho: $b_1 = 0$ The independent variable does not affect the dependent variable

Ho: $b_1 \neq 0$ The independent variable affects the dependent variable

Decision making:

If the p-value of $t \leq \alpha$ then Ho is rejected

If the p-value of $t > \alpha$ then Ho is accepted

For testing the research hypothesis, the error rate used (α) uses 2 types, namely 5% and 10%.

D. RESULT AND DISCUSSION

D.1. Result

The results of the instrument test and descriptive statistics for the research variables can be seen in Table 1. The table shows that for the artificial intelligence variable consisting of 3 measurement indicators, all indicators are proven valid because they produce a loading factor > 0.40 and are proven reliable because they produce Cronbach alpha values of $0.872 > 0.6$. All indicators of the measurement of perceived anthropomorphism variables consisting of 3 indicators were proven valid because they produced a loading factor of > 0.40 and a Cronbach alpha value of $0.854 > 0.6$. The validity test of the interaction quality variable consisting of 5 indicators showed that all measurement indicators were proven valid because they produced a loading factor > 0.40 and proved consistent, as shown by the Cronbach Alpha value of $0.944 > 0.6$. The validity test for the confirmation variable consisting of 3 indicators showed that all

measurement indicators were proven valid because they produced a loading factor > 0.40 and proved consistent, as shown by the Cronbach Alpha value of $0.941 > 0.6$. The validity test for the customer experience variable consisting of 3 measurement indicators showed that all were proven valid because they produced a loading factor of > 0.40 and were consistent, as shown by the Cronbach alpha value of $0.919 > 0.6$. The validity test for the Loyalty Intention variable consisting of 3 measurement indicators showed that all measurement indicators were proven valid because they produced a loading factor > 0.40 and proved consistent, as shown by the Cronbach alpha value of $0.935 > 0.6$.

Table 1 Testing of Validity and Reliability and Descriptive Statistics of Research Variables

Indicators	Validity Testing		Reliability Testing		Average	Standard Deviation
	Factor loading	Conclusion	Alpha Transcript	Simplan		
Artificial Intelligence					3.75	
AI1	0.861	Valid			3.697	1.09
AI2	0.776	Valid	0.872	Reliable	3.931	0.969
AI3	0.873	Valid			3.623	1.049
Perceived Anthropomorphism					4.204	
PA1	0.875	Valid			4.463	0.895
PA2	0.905	Valid	0.854	Reliable	4.293	0.903
PA3	0.726	Valid			3.857	1.057
Interaction Quality					3.897	
IQ1	0.853	Valid			3.889	0.968
IQ2	0.842	Valid			3.995	0.986
IQ3	0.907	Valid	0.944	Reliable	3.899	0.964
IQ4	0.906	Valid			3.894	1.003
IQ5	0.889	Valid			3.807	1.015
Confirmation					3.88	
C1	0.923	Valid			3.867	1.018
C2	0.909	Valid	0.941	Reliable	3.867	0.962
C3	0.916	Valid			3.908	0.96
Customer Experience					3.984	
CE1	0.889	Valid			4.078	0.982
CE2	0.863	Valid	0.919	Reliable	3.922	0.973
CE3	0.911	Valid			3.954	0.929
Loyalty Intention					4.177	
LI1	0.934	Valid			4.156	0.975
LI2	0.929	Valid	0.935	Reliable	4.16	0.982
LI3	0.865	Valid			4.215	0.966

Source : data processed with AMOS 23 and SPSS 25

Descriptive statistics for the artificial intelligence variable produced an average value of 3,750, which showed that the respondents felt they had enough of an advantage from artificial intelligence. The average score for the perceived anthropomorphism variable of 4.204 indicates that you feel a good emotional connection with AI. Respondents felt good about the interaction quality, as shown by the average score for the variable interaction quality 3,897. The average score of 3,880 for the confirmation variable shows that respondents agree that guidelines related to digital banking services using AI (both online and physical) are easy to follow. Descriptive statistics for the customer experience of 3,984 showed respondents who agreed that guidance related to digital banking services using AI. Respondents' perception that they will say positive things about the bank where they are customers to others is shown by the average value of the loyalty intention answer of 4,177.

The results of the fit model test of this study are presented in Table 2, of the eight criteria of the fit model used to test the model's fit. Based on the information in the table, of the eight criteria for testing the Fit model, 6 criteria produce the conclusion of the Fit Model, namely RMSEA, NFI, IFI, TLI, CFI, and CMIN/DF. One criterion produces a marginal fit conclusion, namely GFI, while another produces a poor fit conclusion, namely the Chi-Square p-value. Since most of the fit models are met, the testing of the theory hypothesis can continue.

Table 2 Model Conformance Testing Indicators

Measurement Type	Measurement	Fit Model Results	Prosesse d Products	Decision
Absolute fit measures	<i>Chi-square</i>	low Chi Square	465,711	
	<i>p-value Chi-Square</i>	≥ 0.05	0,000	Poor Fit
	GFI	≥ 0.90	0,812	Marginal Fit
	RMSEA	≤ 0.10	0,093	Model fit
	NFI	≥ 0.90	0,906	Model fit
	IFI	≥ 0.90	0,937	Model fit
	TLI	≥ 0.90	0,925	Model fit
	CFI	≥ 0.90	0,936	Model fit
Parsimonious fit measures	CMIN/DF	Between 1 to 5	2,893	Model fit

Source: Hair et al., (2019)

The results of processing for testing theoretical hypotheses can be seen in Table 3. The information from the table shows that perceived artificial intelligence has a positive effect on perceived AnthropomorphismAnthropomorphism (H1), perceived artificial intelligence has a positive effect on confirmation (H2), perceived artificial intelligence has a positive effect on interaction quality (H3), perceived AnthropomorphismAnthropomorphism has been proven to have a positive effect on perceived anthropomorphism interaction quality (H4), interaction quality has a positive effect on confirmation (H6), confirmation has a positive effect on customer experience (H8), and customer experience has a positive effect on Loyalty Intention (H9). A total of 7 hypotheses are supported because they produce the resulting estimation

coefficient value has a positive sign and the p-value of t statistical $t \leq 0.05$. Perceived Anthropomorphism was not proven to have a positive effect on confirmation (H5), and interaction quality was not proven to have a positive effect on customer experience (H7) because it produced a positive sign estimation coefficient value but had a p-value from t statistical > 0.05 .

Table 3 Testing of Theoretical Hypotheses

	Hypothesis	Estimate	C.R.	P	Conclusion
H1	<i>Perceived Artificial Intelligence Has a Positive Effect on Perceived Anthropomorphism</i>	0,628	9,480	0.000	Supported hypothesis
H2	<i>Perceived Artificial Intelligence Has a Positive Effect on Confirmation</i>	0,261	3,558	0.000	Supported hypothesis
H3	<i>Perceived Artificial Intelligence Has a Positive Effect on Interaction Quality</i>	0,552	7,378	0.000	Supported hypothesis
H4	<i>Perceived Anthropomorphism Has a Positive Effect on Interaction Quality</i>	0,324	3,826	0.000	Hypothesis Supported
H5	<i>Perceived Anthropomorphism Has a Positive Effect on Confirmation</i>	0,101	1,513	0.065	Hypothesis is not Supported
H6	<i>Interaction Quality Has a Positive Effect on Confirmation</i>	0,673	7,987	0.000	Hypothesis Supported
H7	<i>Interaction Quality Has a Positive Effect on Customer Experience</i>	0,216	1,561	0.059	Hypothesis not supported
H8	<i>Confirmation Has a Positive Effect on Customer Experience</i>	0,713	5,356	0.000	Hypothesis Supported
H9	<i>Customer Experience Has a Positive Effect on Loyalty Intention</i>	0,778	13,224	0.000	Hypothesis Supported

Source : data processed with AMOS 23

D.1. Discussion

The findings of hypothesis 1 show that Artificial Intelligence positively affects Perceived Anthropomorphism, which increases personal Interaction in digital banking services [15]. Perceived anthropomorphism, the customer's perception of AI's ability to interact like a human, encourages emotional attachment that can increase loyalty [16]. Previous research indicates that AI facilitates Interaction and forms a strong emotional connection with customers, who see AI as a responsive and empathetic entity [12]. With a strong perception of anthropomorphism, customers feel more comfortable interacting, which impacts satisfaction and intention to use the service continuously [17]. Overall, the application of AI with anthropomorphic characteristics strengthens customers' emotional attachment, trust, and loyalty to AI-based banking services [18]

The findings of hypothesis 2 show that Artificial Intelligence positively affects Confirmation, which refers to the Confirmation of users' perception that digital services meet their expectations [12]. The application of AI in digital banking enhances this Confirmation by meeting customer expectations through a satisfying experience [19]. Research shows that the higher the convenience and benefits felt, the higher the Confirmation of the service, which leads to increased satisfaction [20]. When AI provides an intuitive interaction experience, customers feel their expectations are met, reinforcing loyalty to AI-based services [21]. These findings align with research showing that accessible and responsive AI improves customer satisfaction [20][18]. The achievement of high confirmations contributes to customers' emotional attachment and encourages the continued use of digital banking services [22]. Overall, the presence of AI designed to meet customer needs not only strengthens emotional attachment but also increases satisfaction and loyalty [21]

Hypothesis 3 finds that Artificial Intelligence positively affects Interaction Quality in digital banking services, especially by improving the reliability and responsiveness of communication between AI and customers [12]. Interaction quality refers to customer perceptions regarding AI services' accuracy, speed, and effectiveness, which are crucial for creating a positive user experience [23]. When AI provides accurate and fast answers, customer satisfaction increases, fostering stronger emotional attachment [11]. This research aligns with previous studies showing that customers consider AI-based services more reliable and accurate [3], where AI can be relied on to provide quick and precise responses (Bhatnagar & Rajesh, 2024). AI designed for responsive communication creates a more natural interaction experience, adding to user comfort and satisfaction [8] Empirically, this study confirms that AI in digital banking improves the quality of interactions and facilitates access to information, which contributes to customer satisfaction and loyalty [12]

Hypothesis 4 shows that Perceived Anthropomorphism positively affects Interaction Quality in AI-based banking services, where the perception that the system has human traits improves the quality of Interaction [3]. Customers who experience human characteristics in AI tend to be more trusting and comfortable, resulting in more personal and in-depth interactions [13]. AI designs that mimic human communication through intuitive and empathic responses create a satisfying user experience [14] and reinforce customer trust and emotional engagement [11]. These findings align with a study by [7], which states that anthropomorphic elements in

AI create more meaningful interactions, increasing customer engagement with digital services [9]. The trust and comfort that develops from the perception of anthropomorphism strengthen the customer's relationship with the financial institution, impacting their loyalty. This research confirms that anthropomorphic approaches in AI help improve the quality of Interaction and emotional attachment, encouraging customers to use and trust the system more often ([8]

Hypothesis 5 finds that Perceived Anthropomorphism does not significantly affect Confirmation in digital banking services, although it is theoretically expected to strengthen emotional connections and user trust [15]. Although some studies show that when customers feel AI behaves like humans, they tend to be more engaged, this can also lead to skepticism about the reliability of the information provided [16]. The presence of anthropomorphic elements can reduce the tendency of users to confirm information directly, as there are doubts regarding the objectivity and independence of AI [17]. These findings contrast studies by [7] and [3], which state that anthropomorphism can improve emotional connection and Confirmation. This study reinforces the view that while anthropomorphic AI can create emotional bonds, it does not necessarily support the reception or reception of information, thus negatively impacting confi[1] Perceive confi

Hypothesis 6 found that Interaction Quality positively impacts Confirmation, where interaction quality refers to how well the human and AI system provides an accessible and responsive communication experience [20]. High interaction quality increases user trust, reinforcing the acceptance of information provided by AI-based digital banking systems [26]. Essential components such as responsiveness and clarity of communication create a sense of comfort, thereby strengthening customer trust and facilitating the confirmation process [18]). These findings align with the research of [20], which shows that good interactions increase the likelihood of customers confirming information. This study confirms that comfortable and responsive interactions make customers more confident in the accuracy of information and decisions generated [12] and illustrates the importance of interaction quality in creating a positive user experience that has an impact on long-term customer trust and satisfaction [24]

Hypothesis 7 finds that Interaction Quality does not positively impact the Customer Experience, indicating that while the quality of interactions—including clarity of communication, convenience, responsiveness, and empathy—can be improved, it is not enough to shape the overall customer experience. These results show that high Interaction Quality does not increase customer satisfaction, trust, and loyalty, thus not contributing to a better experience in customer relationships with a particular brand or service. This finding is in contrast to previous research by [12] and [32]

Hypothesis 8 tests whether Confirmation positively impacts Customer Experience, emphasizing that interaction quality plays a vital role in creating a comfortable customer experience and increasing trust in service [33]. Factors such as clarity of communication, responsiveness, and empathy are meant to result in a personalized and satisfying experience, contributing to customer loyalty [26]. Although some studies have shown a positive correlation between quality interactions and customer experience [34], the study found that in the context of AI-based services, interaction quality does not have a significant impact due to emotional and contextual elements that are often difficult for AI-based systems to capture [35]. The results

of this study contradict studies by [12], which stated that quality interactions can improve customer experience. This study confirms that good interactions do not automatically guarantee a positive customer experience, especially when emotional expectations are high [20]. It showed that although interaction quality improves communication, it still needs to meet customer needs for an immersive experience in AI-based digital banking.

Hypothesis 9 shows that Customer Experience positively influences Loyalty Intention, which means that customers with a positive experience are more likely to want to use the same product or service in the future. A good customer experience can include satisfactory Interaction, high product quality, and optimal after-sales support. When customers feel satisfied, their emotional attachment to the brand increases, encouraging loyalty [1]. Positive experiences also increase customer advocacy, reinforcing loyal intentions in the long run [3]. This research aligns with previous findings that show a close relationship between customer experience and customer loyalty, emphasizing the importance of a pleasant experience in creating brand loyalty b. Therefore, focusing on improving the quality of customer interaction and support [12] is an essential step for companies to build long-term loyalty [13]

E. CONCLUSION

The findings of the above research show that 7 out of 9 hypotheses proposed in the study are supported. Namely, artificial intelligence positively affects perceived anthropomorphism, confirmation, and interaction quality. Perceived anthropomorphism also has a positive effect on interaction quality, interaction quality has a positive impact on confirmation, confirmation has a positive effect on customer experience, and customer experience has been proven to have a positive impact on Loyalty Intention. A total of 2 unsupported hypotheses, namely perceived anthropomorphism has not been proven to have a positive effect on confirmation and interaction quality has also not been proven to have a positive impact on customers Experience means that while quality interactions can increase confirmations, they don't always have a direct effect on the customer experience. Overall, the study found that Artificial Intelligence significantly influences various variables, including Perceived Anthropomorphism, Confirmation, and Interaction Quality, which in turn affects Customer Experience and Loyalty Intention. However, some elements, such as Perceived Anthropomorphism and Interaction Quality, do not directly impact some related variables.

This study aims to optimize the loyalty intention of bank customers or clients through the identification and analysis of variables that influence the loyalty intention. The implications of this study are: 1) One important factor that can influence customer loyalty is the use of Artificial Intelligence (AI) in digital banking services. AI has great potential to improve the efficiency and quality of services, but in order to function as an effective problem solver, several aspects of its implementation need to be continuously improved and developed. 2) Digital banking services with AI require a strong emotional bond between humans and AI by increasing Perceived Anthropomorphism. One important policy is to develop AI to be more sensitive to user needs. Customers need to feel served in a more humane and comfortable way, and this can be achieved through improving more intuitive application features and increasing system stability to avoid frequent disruptions.; 3) In addition, it is important for banks to improve interaction quality by improving the quality of two-way communication between customers and AI. Higher quality interactions will provide a more enjoyable experience and in accordance with customer expectations, which can ultimately strengthen the relationship between

customers and banks.; 4) Confirmation is a variable that must be improved to generate loyalty intention from bank customers through increased interaction with AI. Companies also need to simplify digital service guides to make them easier for customers to understand. Many customers are confused by guides that are too complicated, so by using AI to provide clearer and more concise guides, banks can reduce existing obstacles; 5) In addition, optimizing user experience by providing attractive, easy-to-use services that comply with applicable regulations will further increase customer satisfaction. By continuing to improve these elements, AI can play an important role in increasing customer satisfaction and strengthening their loyalty to digital banking services in the future.

This study has limitations in the relationship between variables that are still direct, does not consider the relationship of indirect influence, and uses a too-general model without paying attention to demographic factors such as gender, age, education level, and income. Therefore, the suggestion for future research is to include indirect influences in the conceptual framework used and improve the quality of the model by expanding the demographic variables so that the research results are more comprehensive and of high-quality.

BIBLIOGRAPHY

- [1] H. S. Kim and B. Choi, "The effects of three customer-to-customer interaction quality types on customer experience quality and citizenship behavior in mass service settings," *Journal of Services Marketing*, vol. 30, no. 4, pp. 384–397, 2016, doi: 10.1108/JSM-06-2014-0194.
- [2] I. T. J. Brown, "Individual and Technological Factors Affecting Perceived Ease of Use of Web-based Learning Technologies in a Developing Country," *The Electronic Journal of Information Systems in Developing Countries*, vol. 9, no. 1, pp. 1–15, 2002, doi: 10.1002/j.1681-4835.2002.tb00055.x.
- [3] K. N. Lemon and P. C. Verhoef, "Understanding customer experience throughout the customer journey," *J Mark*, vol. 80, no. 6, pp. 69–96, 2016, doi: 10.1509/jm.15.0420.
- [4] P. Bhatnagr, A. Rajesh, and R. Misra, "Continuous intention usage of artificial intelligence enabled digital banks: a review of expectation confirmation model," *Journal of Enterprise Information Management*, Oct. 2024, doi: 10.1108/JEIM-11-2023-0617.
- [5] M. Waqas, Z. L. B. Hamzah, and N. A. M. Salleh, *Customer experience: a systematic literature review and consumer culture theory-based conceptualisation*, vol. 71, no. 1. Springer International Publishing, 2021. doi: 10.1007/s11301-020-00182-w.
- [6] L. Becker and E. Jaakkola, "Customer experience: fundamental premises and implications for research," *J Acad Mark Sci*, vol. 48, no. 4, pp. 630–648, Jul. 2020, doi: 10.1007/s11747-019-00718-x.
- [7] D. Chaney, R. Lunardo, and R. Mencarelli, "Consumption experience: past, present and future," *Qualitative Market Research*, vol. 21, no. 4, pp. 402–420, Sep. 2018, doi: 10.1108/QMR-04-2018-0042.
- [8] R. N. Bolton et al., "Customer experience challenges: bringing together digital, physical and social realms," *Journal of Service Management*, vol. 29, no. 5, pp. 776–808, Nov. 2018, doi: 10.1108/JOSM-04-2018-0113.

- [9] C. M. Barbu, D. L. Florea, D. C. Dabija, and M. C. R. Barbu, "Customer experience in fintech," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 16, no. 5, pp. 1415–1433, Aug. 2021, doi: 10.3390/jtaer16050080.
- [10] I. Khan et al., "Mobile app vs. desktop browser platforms: the relationships among customer engagement, experience, relationship quality and loyalty intention," *Journal of Marketing Management*, vol. 39, no. 3–4, pp. 275–297, Feb. 2022, doi: 10.1080/0267257X.2022.2106290.
- [11] S. Priadana and D. Sunarsi, *Metode Penelitian Kuantitatif*, 1st ed. Jakarta: Pascal Books, 2021.
- [12] P. Bhatnagr and A. Rajesh, "Artificial intelligence features and expectation confirmation theory in digital banking apps: Gen Y and Z perspective," *Management Decision*, 2024, doi: 10.1108/MD-07-2023-1145.
- [13] C. M. Barbu, D. L. Florea, D. C. Dabija, and M. C. R. Barbu, "Customer experience in fintech," *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 16, no. 5, pp. 1415–1433, 2021, doi: 10.3390/jtaer16050080.
- [14] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis Eight*. 2019.
- [15] N. Epley, A. Waytz, and J. T. Cacioppo, "On Seeing Human: A Three-Factor Theory of Anthropomorphism," *Psychol Rev*, vol. 114, no. 4, pp. 864–886, 2007, doi: 10.1037/0033-295X.114.4.864.
- [16] A. Waytz, J. Cacioppo, and N. Epley, "Who sees human? The stability and importance of individual differences in anthropomorphism," *Perspectives on Psychological Science*, vol. 5, no. 3, pp. 219–232, 2010, doi: 10.1177/1745691610369336.
- [17] A. M. Yussaivi, C. Y. Lu, M. E. Syarief, and D. Suhartanto, "Millennial Experience with Mobile Banking and Mobile Banking Artificial Intelligence Evidence from Islamic Banking," *International Journal of Applied Business Research*, no. January, pp. 39–53, 2021, doi: 10.35313/ijabr.v3i1.121.
- [18] R. R. Lin and J. C. Lee, "The supports provided by artificial intelligence to continuous usage intention of mobile banking: evidence from China," *Aslib Journal of Information Management*, vol. 76, no. 2, pp. 293–310, 2023, doi: 10.1108/AJIM-07-2022-0337.
- [19] T. Pikkarainen, K. Pikkarainen, H. Karjaluoto, and S. Pahnla, "Consumer acceptance of online banking: An extension of the technology acceptance model," *Internet Research*, vol. 14, no. 3, pp. 224–235, 2004, doi: 10.1108/10662240410542652.
- [20] P. Bhatnagr, A. Rajesh, and R. Misra, "Continuous intention usage of artificial intelligence enabled digital banks: a review of expectation confirmation model," *Journal of Enterprise Information Management*, 2024, doi: 10.1108/JEIM-11-2023-0617.
- [21] E. Indriasari, F. L. Gaol, and T. Matsuo, "Digital Banking Transformation: Application of Artificial Intelligence and Big Data Analytics for Leveraging Customer Experience in the Indonesia Banking Sector," *Proceedings - 2019 8th International Congress on Advanced Applied Informatics, IIAI-AAI 2019*, no. October, pp. 863–868, 2019, doi: 10.1109/IIAI-AAI.2019.00175.
- [22] K. J. Patel and H. J. Patel, "Adoption of internet banking services in Gujarat," *International Journal of Bank Marketing*, vol. 36, no. 1, pp. 147–169, 2018, doi: 10.1108/ijbm-08-2016-0104.

- [23] S. H. Bhatti, A. Ahmed, A. Ferraris, and ..., "Big data analytics capabilities and MSME innovation and performance: A double mediation model of digital platform and network capabilities," 2022, Springer. doi: 10.1007/s10479-022-05002-w.
- [24] J. Sunil and C. M. Shiny, "Interpreting The Impetus of Artificial Intelligence (AI) On Customer Satisfaction in The Digital Banking Landscape," *International Research Journal of Applied Finance*, vol. 17, no. 2, pp. 105–114, 2024.
- [25] C. Candiwan and R. R. Annikmah, "Exploring the Impact of Artificial Intelligence on User Satisfaction and Acceptance in Digital Banking Services in Indonesia," in *2024 IEEE 30th International Conference on Telecommunications (ICT)*, 2024, pp. 1–8. doi: 10.1109/ICT62760.2024.10606022.
- [26] D. Suhartanto, M. E. Syarief, A. Chandra Nugraha, T. Suhaeni, A. Masthura, and H. Amin, "Millennial loyalty towards artificial intelligence-enabled mobile banking: evidence from Indonesian Islamic banks," *Journal of Islamic Marketing*, vol. 13, no. 9, pp. 1958–1972, Jan. 2022, doi: 10.1108/JIMA-12-2020-0380.
- [27] Hendroatmoko, "Pengaruh Kualitas Layanan Syariah Berbasis Artificial Intelligence dan Religiusitas Terhadap Loyalitas Pelanggan Perbankan Syariah di Indonesia," 2021.
- [28] A. P. Alghiffari and I. O. Matusin, "Antecedents of Customer Loyalty on AI Chatbot Users in Banking Applications," *Jurnal Pendidikan Tambusai*, vol. 7, no. 2, pp. 18915–18927, 2023, doi: 10.31004/jptam.v7i2.9380.
- [29] S. Herwald, S. Voigt, and A. Uhde, "The impact of market concentration and market power on banking stability – evidence from Europe," *Journal of Risk Finance*, vol. 25, no. 3, pp. 510–536, 2024, doi: 10.1108/JRF-03-2023-0075.
- [30] E. Nizam, A. Ng, G. Dewandaru, R. Nagayev, and ..., "The impact of social and environmental sustainability on financial performance: A global analysis of the banking sector," ... of *Multinational Financial ...*, 2019, [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S1042444X18300215>
- [31] S. Shree, B. Pratap, R. Saroy, and S. Dhal, "Digital payments and consumer experience in India: a survey based empirical study," *Journal of Banking and Financial Technology*, vol. 5, no. 1, pp. 1–20, 2021, doi: 10.1007/s42786-020-00024-z.
- [32] L. Becker and E. Jaakkola, "Customer experience: fundamental premises and implications for research," *J Acad Mark Sci*, vol. 48, no. 4, pp. 630–648, 2020, doi: 10.1007/s11747-019-00718-x.
- [33] J. Lee and H. Lee, "The effect of external incentives on sustainable consumption intention: A multi-country study.," *J Environ Psychol*, 2022.
- [34] I. Khan et al., "Mobile app vs. desktop browser platforms: the relationships among customer engagement, experience, relationship quality and loyalty intention," *Journal of Marketing Management*, vol. 39, no. 3–4, pp. 275–297, Feb. 2023, doi: 10.1080/0267257X.2022.2106290.
- [35] D. A. N. Rachmawati, A. Ghofur, Z. Lubis, and M. C. Khitam, "the Influence of Customer Satisfaction, Customer Trust, and Service Quality on Customer Loyalty in the Use of Delivery Services (Case Study on Fay Delivery in Lamongan City)," *International Conference of Business and Social Sciences*, vol. 3, no. 1, pp. 438–443, 2024, doi: 10.24034/icobuss.v3i1.395.

