THE INFLUENCE OF AI-CHATBOT SERVICE QUALITY AND CUSTOMER TRUST ON BRAND IMAGE AMONG SHOPEE USERS IN INDONESIA

Vita Asyrifah
Padjadjaran University, Indonesia
Email: vita24002@mail.unpad.ac.id (corresponding author)

Popy Rufaidah
Padjadjaran University, Indonesia
Email: popy.rufaidah@unpad.ac.id

Abstract

This research focuses on how AI chatbot service quality and costumer trust influence brand image in e-commerce platforms in Indonesia. It's important to understand how human-like interactions and the resulting trust influence user perceptions, as chatbots become the primary interface for costumer interaction. Therefore, this research was conducted with the aim to assess how service quality, together with costumer trust, shape the way users perceive in e-commerce brand. The method used in this research is a quantitative survey of active users on one of the largest e-commerce company in Indonesia, along with a literature review to provide the basis for this topic and build theoretical framework. In this research, chatbot service quality measured in five key dimensions, including semantic understanding, human-AI collaboration, human interaction, personalization, and the efficiency of operational. Meanwhile, customer trust was evaluated in two key dimensions, such as trust in the seller and trust in the product that seller offers. Research has shown that both chatbot service quality and customer trust significantly had a positive effect on brand image, while customer trust having a stronger impact. These two variables has significantly contributed to shaping users' perceptions towards brand image. These findings highlight the importance of providing a seamless and engaging digital experience to achieve a competitive advantage in online market.

Keywords: AI-Chatbot Service Quality; Customer Trust; Brand Image

JEL Classification: M31, D91, L86

Article History: Submitted: 2025-10-30; Revision 2026-01-03; Accepted: 2026-01-05; Published: 2026-01-15

How to Cite: Asyrifah, V. & Rufaidah, P. (2026). The Influence of AI-Chatbot Service Quality and Customer Trust on Brand Image among Shopee Users in Indonesia. *Media Ekonomi dan Manajemen, 41*(1), 148-164.

INTRODUCTION

In the era of rapid digital transformation, customer trust has been widely recognized as a fundamental element in online transactions, which are inherently characterized by uncertainty and asymmetric information (Senali et al., 2024). Numerous studies have consistently demonstrated that trust plays a significant role in shaping consumers' purchase intentions and behavioral outcomes in e-commerce environments (Senali et al., 2024 Gefen et al., 2003). Conceptually, trust has been defined as a willingness to

accept vulnerability and rely on another party under conditions of risk and uncertainty (Mayer et al., 1995). Furthermore, recent studies emphasize that customer trust is not a unidimensional concept but a multidimensional construct encompassing trust in sellers and trust in the products offered (Senali et al., 2024).Despite the extensive attention given to customer trust, existing research predominantly treats trust as an isolated antecedent of transactional or behavioral outcomes, such as purchase intention or customer loyalty. This approach overlooks the possibility that trust may interact with technology-driven service attributes in shaping higher-order cognitive evaluations, particularly brand image. As digital platforms increasingly rely on automated and intelligent service systems, understanding how trust operates alongside technological service quality becomes a critical yet underexplored issue in the literature.

Simultaneously, artificial intelligence has emerged as one of the most disruptive technological innovations in customer service, particularly through the deployment of AI-based chatbots (Chen et al., 2022). These chatbots are designed to enhance operational efficiency, reduce service costs, and provide scalable customer support to vast numbers of users (Verma et al., 2021). In many e-commerce platforms, chatbots now function as the primary interface between customers and brands, thereby exerting a substantial influence on customer experiences, perceptions, and evaluations (Chen et al., 2022). However, traditional service quality measurement models, such as SERVQUAL, were originally developed for human-to-human interactions and are therefore inadequate for capturing the distinctive characteristics of AI-driven service encounters.

To address this limitation, (Chen et al., 2022). introduced the AI Chatbot Service Quality (AICSQ) framework, which conceptualizes service quality in AI-mediated interactions through dimensions such as semantic understanding, personalization, human AI collaboration, and operational efficiency. While the development of AICSQ represents a significant advancement in service quality research, empirical investigations examining its broader implications particularly its impact on brand-related outcomes remain limited and fragmented. As a result, the role of AI chatbot service quality in shaping brand image remains theoretically underdeveloped and empirically inconclusive.

Brand image has long been recognized in marketing literature as a crucial determinant of consumer satisfaction and loyalty (Hosseini & Behboudi, 2017) and loyalty (Kandampully & Suhartanto, 2000). It reflects consumers' overall perceptions, beliefs, and associations toward a brand, formed through accumulated experiences and interactions over time (Keller, 2003). As an intangible asset, brand image plays a strategic role in helping firms achieve and sustain competitive advantage, particularly in highly dynamic and competitive markets. Nevertheless, there is ongoing debate regarding the mechanisms through which emerging digital service technologies such as AI-based chatbots contribute to the formation of brand image, especially when compared to traditional human-based service encounters .

The rapid advancement of information technology and the internet has fundamentally transformed how firms engage with customers, particularly within the highly competitive e-commerce industry (Leeflang et al., 2014). Indonesia represents one of the fastest-growing e-commerce markets globally, characterized by intense competition and rapid technological adoption. Consequently, e-commerce platforms are under constant pressure to innovate and enhance user experience in order to differentiate themselves from competitors. Despite this dynamic context, empirical evidence from emerging markets such as Indonesia remains scarce, limiting

the applicability and generalizability of findings derived largely from studies conducted in developed economies.

Although prior studies have examined customer trust, AI chatbot service quality, and brand image independently such as (Senali et al., 2024) on trust determinants (Chen et al., 2022) on the development of the AICSQ scale (Hosseini & Behboudi, 2017) on trust brand image relationships a significant research gap persists. Very few studies have integrated AI Chatbot Service Quality as a technology-based construct with customer trust as a relational construct within a single empirical framework to explain brand image formation. This lack of integration has resulted in fragmented insights and inconsistent conclusions regarding the relative importance of technological versus relational factors in digital branding.

Therefore, this study seeks to address this gap by empirically investigating the combined effects of AI Chatbot Service Quality and customer trust encompassing both seller trust and product trust on brand image within a leading e-commerce platform in Indonesia. By positioning chatbot service quality and customer trust within an integrated research model, this study offers a novel perspective that bridges technology adoption, service quality, and branding literature. The findings are expected to contribute to the advancement of digital marketing and information systems theory while providing practical insights for e-commerce firms seeking to leverage AI-driven services to strengthen brand equity and foster long-term customer relationships.

LITERATURE REVIEW

AI-Chatbot Service Quality

Chen et al. (2022) explain that digital transformation driven by Artificial Intelligence (AI) has fundamentally changed how companies deliver customer service. Through the implementation of AI-based chatbots, new forms of communication have emerged that differ significantly from traditional human-to-human interactions. These chatbots are capable of understanding natural language, generating tailored responses, and operating continuously without time limitations. Based on these unique characteristics, (Chen et al. (2022) developed the AI Chatbot Service Quality (AICSQ) measurement model to evaluate the effectiveness of AI chatbot–based service interactions. Using a comprehensive mixed-method approach, they validated AICSQ as a robust multidimensional construct consisting of semantic comprehension, human–AI collaboration, human-like interaction, personalization, and efficiency. Their findings indicate that higher levels of AICSQ positively influence customer satisfaction and continuance intention.

AI-based chatbots play a crucial role in enhancing operational efficiency and service scalability in digital environments. In their study (Vebrianti et al., 2025), emphasize that chatbot service quality is not determined solely by response speed, but also by the consistency of information, the ease of interaction, and the system's ability to handle large volumes of customer inquiries simultaneously. Consistent with this view, (Vebrianti et al., 2025), argue that high-quality chatbot services contribute to a more reliable and seamless service experience, thereby strengthening customers' evaluations of digital platforms. This perspective highlights efficiency and system reliability as essential components of chatbot service quality.

The study conducted by (Vebrianti et al., 2025),approaches AI service quality from a human–machine interaction perspective, emphasizing that the effectiveness of AI-based service systems is influenced not only by technical performance but also by the chatbot's ability to support natural and socially appropriate interactions. Their findings indicate that successful chatbot services require elements such as polite and respectful

 p-ISSN: 0854-1442 (Print) e-ISSN: 2503-4464 (Online)

language use, emotionally appropriate responses, and contextual adaptability during conversations, which contribute to users' positive service experiences. In line with this perspective, (Vebrianti et al., 2025)suggest that when chatbots demonstrate human-like communication behaviors, customers are more likely to perceive the service as high quality. This reinforces the importance of the human-like interaction dimension as an essential component within the AICSQ construct.

The study conducted by , (Puspita et al., 2025), examines users' experience with AI-based features in the Shopee e-commerce platform by employing a modified Technology Acceptance Model (TAM) framework. Their research highlights that the effectiveness of AI features in digital commerce is closely linked to users' perceptions of usefulness, ease of use, personalization, and the overall experiential value generated by AI-driven recommendations and interactions. The findings indicate that positive experiences with AI features strengthen users' behavioral intention and continued application usage, particularly among young users who represent the dominant consumer segment. This perspective underscores the significance of user experience and perceptual factors as key determinants in evaluating the quality and acceptance of AI-enabled e-commerce services.

Customer Trust

Trust is a fundamental element in business relationships, and its importance becomes even more critical in digital and AI-enabled e-commerce environments characterized by minimal physical interaction and uncertainty (Mayer et al., 1995; Senali et al., 2024). In the context of digital platforms, trust is generally defined as a user's willingness to rely on a system's functionality, integrity, and reliability when engaging in transactions or interactions mediated by technology. Within AI-driven platforms, trust also encompasses confidence in algorithmic decision-making, data privacy, transparency of recommendations, and the perceived fairness and accountability of automated systems. Prior studies have shown that trust functions as an antecedent of purchase intention in both social commerce and e-commerce settings (Gefen et al., 2003; Senali et al., 2024). Trust in digital and AI-based services is commonly measured through indicators such as perceived reliability, security, credibility of information, user confidence in system recommendations, and willingness to continue using or transacting through the platform.

Specifically, (Senali et al., 2024) , argue that trust in online shopping environments is not a unidimensional construct, but can be decomposed into two interrelated dimensions: Trust in Seller and Trust in Product. Trust in Seller reflects consumers' belief that sellers on the platform are honest, competent, and able to fulfill their obligations, while Trust in Product refers to consumers' belief that the products offered will match the quality and specifications promoted. (Senali et al., 2024) , further found that seller reputation and customer reviews play an important role in shaping both types of trust. In the context of Shopee, these two trust dimensions are highly relevant because transactions require consumers to place trust not only in the platform, but also in millions of sellers and their products.

Brand Image

The concept of brand image continues to evolve in the era of AI-driven advertising. Recent studies highlight that emerging technologies such as generative AI and electronic-band virtual influencers are reshaping how consumers perceive brands, particularly in terms of authenticity and brand-related cues presented through digital interactions (Ali et al., 2025; Rehman et al., 2025). The increasing use of artificial intelligence and machine learning enables brands to deliver more

personalized, dynamic, and human-like experiences, which contribute to the way consumers emotionally perceive and cognitively evaluate a brand (Wijekoon et al., 2024).

Brand image is defined as consumers' perceptions and beliefs about a brand, formed through the set of associations held in their memory (Keller, 2003). It represents a valuable intangible asset that differentiates a brand from its competitors and reflects how a brand is positioned in consumers' minds (Hosseini & Behboudi, 2017). Brand image is developed through consumers' prior experiences with the brand, marketing communications, and word of mouth information (Khodadad Hosseini & Behboudi, 2017). In contemporary digital contexts, interactions mediated by technology, such as AI-powered customer service tools and chatbots, also contribute to shaping and reinforcing brand image.

Measurement of brand image generally focuses on consumers' overall perceptions, associations, and evaluations of a brand, including attributes such as uniqueness, credibility, and favorability. These dimensions capture how well a brand is recognized and interpreted by consumers across various touchpoints, forming the basis for assessing brand image in empirical research.

AI Chatbot Service Quality and Brand Image

Service quality has long been recognized as an important determinant of consumer perceptions in marketing research; however, traditional service quality models such as SERVQUAL were developed for human delivered services and therefore do not fully capture quality attributes in AI-mediated environments. Findings from (El-Shihy et al., 2024), show that in digital banking contexts, AI chatbots often function as the primary point of customer interaction, meaning that customers' evaluations of service quality and brand image are strongly shaped by their chatbot experience. The study identifies several AI-specific service quality dimensions such as accuracy of response, consistency, ease of use, omnipresence, personalization, self-learning capability, availability, human-like empathy, and the option to access human assistance which significantly influence customer satisfaction and loyalty. These findings indicate that high-quality chatbot interactions contribute to positive brand perceptions and stronger customer loyalty, reinforcing the need to conceptualize service quality within AI-driven service environments using AI-relevant dimensions rather than traditional human-service models.

H1: There is a positive and significant influence of AI Chatbot Service Quality on Brand Image.

Customer Trust and Brand Image

Customer trust contributes to the development of a favorable brand image because trust reduces perceived risk, strengthens psychological assurance during online transactions, and enhances consumers' positive cognitive and emotional evaluations of the brand. Prior research indicates that when consumers trust the platform and the parties involved in it, they tend to associate the brand with reliability, credibility, and professionalism, which in turn strengthens brand image (Senali et al., 2024).

H2: There is a positive and significant effect of Customer Trust on Brand Image.

AI Chatbot Service Quality and Brand Image

In digital service environments, AI-based chatbots represent a primary point of contact through which customers interact with a platform. Prior studies show that customers' evaluations of chatbot performance, such as response accuracy, consistency, personalization, and human-like interaction, shape their overall perception

 p-ISSN: 0854-1442 (Print) e-ISSN: 2503-4464 (Online)

of the company's service quality and brand image, High levels of AI Chatbot Service Quality signal that the platform is reliable, technologically capable, and customer-oriented, which fosters positive brand associations and strengthens brand credibility in users' minds. Conversely, poorly performing chatbots may create frustration and reduce consumers' confidence in the brand. Therefore, quality interactions with AI chatbots contribute not only to functional service satisfaction but also to the development of a more favorable and trustworthy brand image (Hosseini & Behboudi, 2017).

H3: There is a positive and significant simultaneous effect of AI Chatbot Service Quality and Customer Trust on Brand Image.

Figure 1 shows the research model that connects AI-Chatbot service quality and customer trust to brand image in the setting of Indonesian e-commerce. The model posits that AI-Chatbot Service Quality assessed via seven variables, encompassing semantic understanding, intimate human, AI collaboration, human-like interaction, ongoing enhancement, personalization, cultural adaptability, and efficiency exerts a direct impact on brand image (H1). Another anticipated positive relationship was between customer trust and brand image, (H2), including trust in seller and trust in product. Brand image in this framework is comprised of two factors: functional and emotionally based. In general, the figure illustrates that both T-based SQ and RT serve as important antecedents in the formation of consumer brand perceptions.

RESEARCH METHOD

Population and Sample

This study employed a quantitative explanatory approach to examine the effect of AI-Chatbot Service Quality and Customer Trust on Brand Image among users of one of the most widely used e-commerce platforms in Indonesia. Primary data were collected through an online survey distributed to Shopee users who had interacted with the platform's AI-based chatbot during purchasing activities. The population in this study consists of all Shopee users in Indonesia, while the sample includes active users who have experience using the chatbot feature. A purposive sampling technique was applied to ensure that only respondents with relevant chatbot interaction were included.

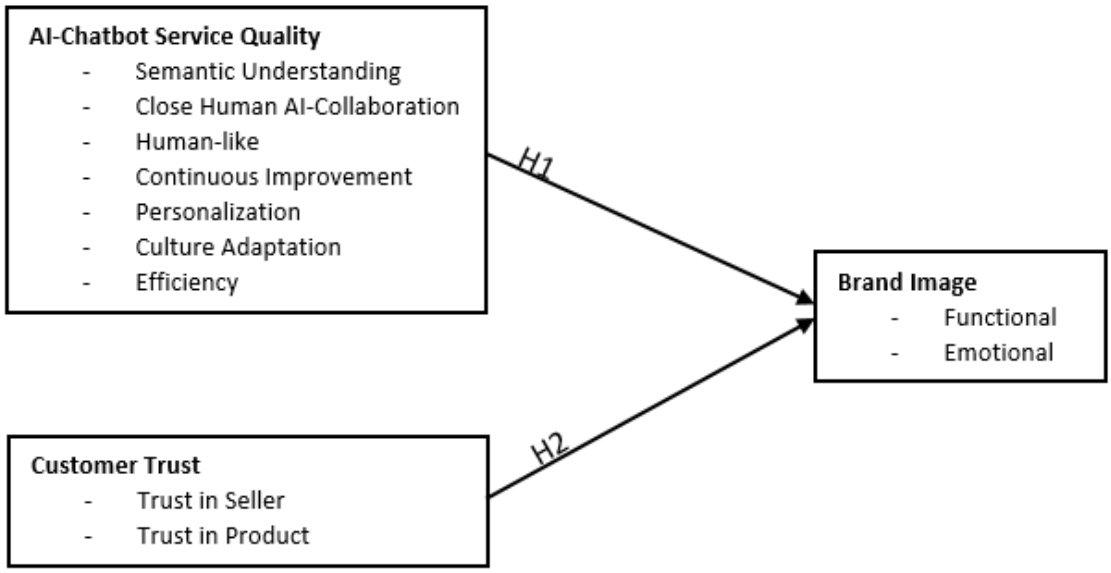

Figure 1. Research Model

A structured questionnaire using a Likert scale was used to measure the constructs of AI-Chatbot Service Quality, Customer Trust, and Brand Image. The number of respondents was determined by considering the adequacy requirements commonly applied in PLS-SEM studies, ensuring that the sample size was sufficient to support model estimation and statistical testing. The total number of valid responses obtained in this study was 114, and this amount met the recommended minimum standard for PLS-SEM analysis. Data were analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS to evaluate both the measurement model and the structural model. This analytical approach is appropriate for examining complex relationships between latent variables in technology-driven consumer behavior research.

Variable Measurement

The measurement of variables in this study was developed from previously validated scales to ensure reliability and construct correctness. All factors were scored using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

AI-Chatbot Service Quality (AICSQ) measures users' perceptions of the quality of chatbot-based interactions Chen et al. (2022). AICSQ consists of seven dimensions, i.e. (1) semantic understanding with Indicators is chatbot understands user questions, rarely misinterprets intentions, provides relevant answers, and measures as perception of chatbot accuracy and comprehension. (2) Close Human AI Collaboration, with indicators is ability to direct to human agents, speed up service, work jointly with human agents, and measures as smoothness of escalation and hybrid service quality. (3) Human-like interacttion, with indicators is natural language, friendliness, human-like conversational experience, and measures as degree of anthropomorphism and empathy. (4) Continuous improvement, with indicators is improved understanding over time, enhances responses, improved service quality, and measures as perceived learning ability and progress. (5) Personalization, with indicators is relevant suggestions, remembers preferences, adjusts responses, and measures as chatbot's ability to customize service. (6) Culture adaptation, with indicators is uses culturally appropriate language, understands cultural norms, aligns with cultural context, and measures as cultural sensitivity of the chatbot. (7) Efficiency, with indicators is quick responses, solves issues fast, easy to use, and measures as speed and ease of problem resolution.

Trust in e-commerce context customer trust is defined as the degree of confidence users have toward sellers and products on the platform (Senali et al., 2024). It consists of two dimensions, i.e. (1) trust in seller, witj indicators is sellers are honest, care about customer needs, knowledgeable, keep promises, protect customer interests, and measurement as belief in provider integrity and competence. (2) Trust in product, with indicators is product matches description, good quality, meets expectations, safe to use, consistent performance, and measurement as reliability and authenticity of purchased products.

Brand image represents consumers' overall perception of the brand formed through accumulated interactions and experiences (Keller, 2003; Hosseini & Behboudi, 2017). Two dimensions were used, i.e. (1) Functional Brand Image, with Indicators: quality of service, system reliability, ability to meet needs, value for money, trustworthy product delivery, and Measurement as cognitive and utilitarian evaluations of the brand. (2) Emotional brand image, with indicators is confidence, pride, comfort, happiness in using Shopee, and measurement as emotional responses and affective associations with the brand.

 p-ISSN: 0854-1442 (Print) e-ISSN: 2503-4464 (Online)

Data Analysis

This study employed a causal research design to assess the impact of AI-Chatbot Service Quality and Customer Trust on Brand Image among Shopee Users in Indonesia. This study employed the Partial Least Squares Structural Equation Modeling (PLS-SEM) methodology for quantitative data analysis, utilizing SmartPLS version 4 software. PLS-SEM was selected due to its predictive objectives and its capacity to evaluate intricate relationship models among latent variables, including AI Chatbot Service Quality, Customer Trust, and Brand Image. Another benefit of this method is that it may be used with different assumptions about data normality and works well with smaller sample sizes (Hair et al., 2021).

Two-stage testing is the practice under PLS-SEM analysis procedures. The first step is to test the measurement model, in order to confirm that all of the indicators used are valid and reliable. That is, the validity considerations of convergent and discriminant/baseline must be examined. When the measurement model is adequate, the second step is to test the structural model. The hypothesis testing is performed on the influence effect of proposed variables and predictive capability of the research model at this stage.

RESULT AND DISCUSSION

Descriptive Statistic

Table 1 shows that the majority of respondents are female, indicating that women dominate the sample of Shopee users who participated in this study. The age distribution in the Table 2 indicates that most respondents are in the 22–26 age group, suggesting that the sample is dominated by young adult users who are actively engaged in online shopping. The education profile in the Table 3 shows that most respondents hold an undergraduate (S1) degree, which reflects a sample group with relatively good educational background and digital literacy. The occupational profile in Table 4 demonstrates that the majority of respondents are students, indicating that active online shoppers in this study largely come from the academic community. Table 5 shows that respondents are highly active in using digital platforms and prefer mobile banking and e-wallets for transactions, reflecting familiarity with cashless payment systems.

Table 1. Respondents' Gender Distribution

Gender	Frequency	Percentage
Male	46	40.4%
Female	68	59.6%
Total	114	100%

Table 2. Respondents' Age Distribution

Age Range	Frequency	Percentage
< 17 years	-	0%
17-21 years	11	9.6%
22-26 years	62	54.4%
27-31 years	13	11.4%
31-35 years	12	10.5%
>35 years	16	14%
Total	114	100%

Table 3. Respondents' Education Level

Education Level	Frequency	Percentage
High School (SMA)	19	16.7%
Diploma (D1-D4)	27	23.7%
Undergraduate (S1)	57	50.0%
Master's Degree (S2)	8	7.0%
Doctoral Degree (S3)	3	2.6%
Total	114	100%

Table 4. Respondents Occupation

Occupation	Frequency	Percentage
Student	10	8.8%
Employee	84	73.7%
Freelancer	3	2.6%
Entrepreneur	10	8.8%
Unemployed	7	6.1%
Total	114	100%

Table 5. Digital & Payment Activity

Most Frequently Used Platforms	
Platform	**Percentage**
Instagram	65%
WhatsApp	1%
Tiktok	34.2%
Facebook	2.6%
Youtube	3.5%
Twitter	1.8%
Preferred Online Payment Methods	
Mobile Banking	61.4%
Virtual Account	30.7%
Others (Debit card, e-Wallet, etc.)	7.9%

Based on the results of the descriptive analysis, the majority of respondents in this study were young e-commerce users, predominantly female, aged 22–26 years, and mostly had a bachelor's degree and were students. This profile indicates that respondents have a high level of digital activity, are accustomed to using online platforms in their daily lives, and interact intensively with bold shopping services. Furthermore, their preference for social media and digital payment methods such as mobile banking and e-wallets indicates that the respondent group has a good level of technological literacy and is accustomed to cashless transactions. With these sample characteristics, this study can represent a relevant group of e-commerce users to be studied in the context of interaction experiences with AI chatbots and brand image formation on the Shopee platform.

Partial Least Square Structural Equation Model

The first step in model judgment as per (Ghozali, 2021) is the validation of outer model using PLS-SEM. At this level, these constructs are checked for convergent, discriminant validity (via factor's loading) and reliability of the constructs; such as composite reliability, Cronbach's alpha.

 p-ISSN: 0854-1442 (Print) e-ISSN: 2503-4464 (Online)

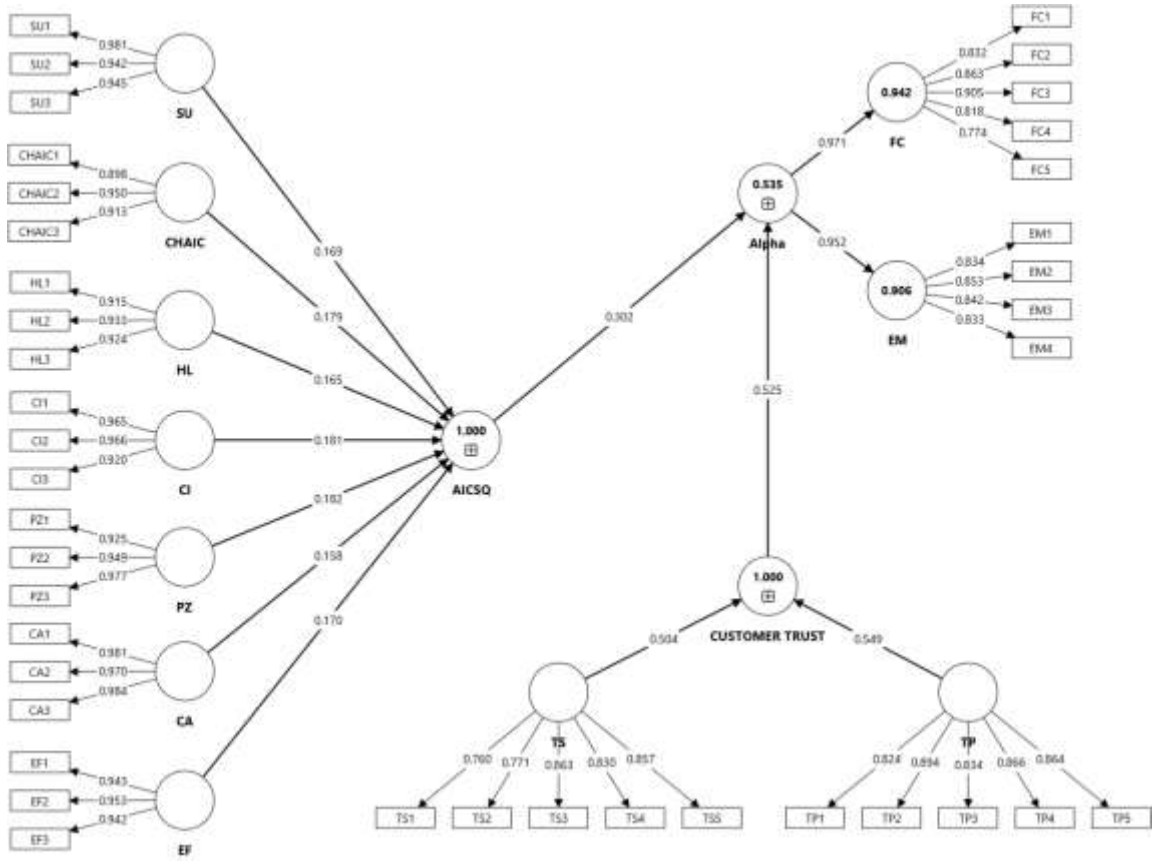

Figure 2. PLS-SEM Result of the Research Model
Source: Author's own elaboration (2025)

Convergent validity testing examines each construct indicator. In this regard, (Chin et al., 2020) The results of the measurement model analysis show that all indicators meet the convergent validity and reliability criteria. Indicators with factor loading values below 0.50 were removed from the model, while the retained indicators demonstrated loading values generally above 0.70, indicating that they are able to represent their respective constructs appropriately. The AVE values for all constructs were also above 0.50 (AI-Chatbot Service Quality = 0.615; Customer Trust = 0.633; Brand Image = 0.653), meaning that each construct explains more than half of the variance of its indicators. In addition, the second-order construct testing results also showed satisfactory loading values across all dimensions, confirming that the constructs and their respective dimensions are valid and reliable for further structural model analysis. The results of convergent and discriminant validity testing are presented in Figure 2, Table 6, Table 7, and Table 8.

Table 6. Outer Loading and Reliability

Code	Measurement	Loading Factor
	AI-Chatbot Service Quality	
	Semantic Understanding a = 0.953, CR= 0.970, AVE = 0.915	
SU1	The chatbot on the Shopee platform can understand my questions clearly.	0.981
SU2	The chatbot on the Shopee platform rarely misinterprets my intentions.	0.942
SU3	The chatbot on the Shopee platform provides answers that are relevant to my questions	0.945

Table 6. Continue

Code	Measurement	Loading Factor
Close Human AI-Collaboration a = 0.910, CR = 0.943, AVE = 0.847		
CHAIC1	The chatbot on the Shopee platform can direct me to a human agent if needed.	0.898
CHAIC2	The chatbot on the Shopee platform helps to speed up communication with customer service.	0.950
CHAIC3	The chatbot on the Shopee platform works together with human agents to resolve my issues.	0.913
Human-like a = 0.915, CR = 0.946, AVE = 0.854		
HL1	The chatbot on the Shopee platform uses natural and easy-to-understand language.	0.915
HL2	The chatbot on the Shopee platform feels friendly in its communication.	0.933
HL3	The chatbot on the Shopee platform provides a conversational experience similar to that of a human.	0.924
Continuous Improvement a = 0.947, CR = 0.966, AVE = 0.904		
CI1	The chatbot on the Shopee platform is getting better at understanding my needs over time.	0.965
CI2	The chatbot on the Shopee platform often improves its answers or responses.	0.966
CI3	The chatbot on the Shopee platform shows improvement in its service quality.	0.920
Personalization a = 0.946, CR = 0.965, AVE = 0.903		
PZ1	The chatbot on the Shopee platform provides suggestions that are relevant to my needs.	0.925
PZ2	The chatbot on the Shopee platform remembers my preferences or interaction history.	0.949
PZ3	The chatbot on the Shopee platform adjusts its answers to my situation.	0.977
Culture Adaptation a = 0.978, CR = 0.986, AVE = 0.958		
CA1	The chatbot on the Shopee platform uses language that is appropriate to my customs.	0.981
CA2	The chatbot on the Shopee platform understands the common communication styles in my culture.	0.970
CA3	The chatbot on the Shopee platform feels relevant to my cultural context.	0.984
Efficiency a = 0.941, CR = 0.962, AVE = 0.859		
EF1	The chatbot on the Shopee platform uses language that is appropriate to my customs.	0.943
EF2	The chatbot on the Shopee platform understands the common communication styles in my culture.	0.953
EF3	The chatbot on the Shopee platform feels relevant to my cultural context.	0.942
Customer Trust		
Trust in Seller a = 0.875, CR = 0.909, AVE = 0.668		
TS1	I believe the sellers on the Shopee Platform are honest in providing information.	0.760
TS2	I feel that the sellers on the Shopee Platform care about my needs.	0.771
TS3	I am confident that the sellers on the Shopee Platform have good knowledge of the products they sell.	0.863
TS4	I believe the sellers on the Shopee Platform will keep their promises or commitments.	0.830
TS5	The Shopee Platform can be trusted to protect customer interests.	0.857

 p-ISSN: 0854-1442 (Print) e-ISSN: 2503-4464 (Online)

Table 6. Continue

Code	Measurement	Loading Factor
	Trust in Product a = 0.909, CR = 0.932, AVE = 0.734	
TP1	I believe the products I buy on the Shopee Platform match the provided description.	0.824
TP2	I believe the products on the Shopee Platform are of good quality.	0.894
TP3	I believe the products on the Shopee Platform meet my expectations.	0.834
TP4	I believe the products on the Shopee Platform are safe to use/consume.	0.866
TP5	I believe the products on the Shopee Platform consistently deliver satisfactory results.	0.864
	Brand Image	
	Functional a = 0.894, CR = 0.922, AVE = 0.705	
FC1	The Shopee Platform is impressive for the quality of its service.	0.832
FC2	The Shopee Platform is impressive for the reliability of its system.	0.863
FC3	The Shopee Platform is impressive in fulfilling my needs.	0.905
FC4	The Shopee Platform is impressive as a platform that provides value for the price I pay.	0.818
FC5	The Shopee Platform is impressive in its function as a place for sellers of products that are as promised.	0.774
	Emotional a = 0.861, CR = 0.906, AVE = 0.706	
EM1	The positive impression of the Shopee Platform makes me feel confident.	0.834
EM2	The positive impression of the Shopee Platform gives me a sense of pride when using it.	0.853
EM3	The positive impression of the Shopee Platform provides comfort when using its services.	0.842
EM4	The positive impression of the Shopee Platform always makes me happy to use it.	0.833

Source: Author's own elaboration

Table 7. Fornell-Larcker criterion

	AICSQ	Brand Image	Customer Trust
AICSQ	0.829		
Brand Image	0.582	0.962	
Customer Trust	0.528	0.679	0.950

Source: Author's own elaboration

Table 8. Composite Reliability and Cronbach's Alpha

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
AICSQ	0.924	0.931	0.939
Brand Image	0.919	0.924	0.961
Customer Trust	0.893	0.893	0.949

Source: Author's own elaboration

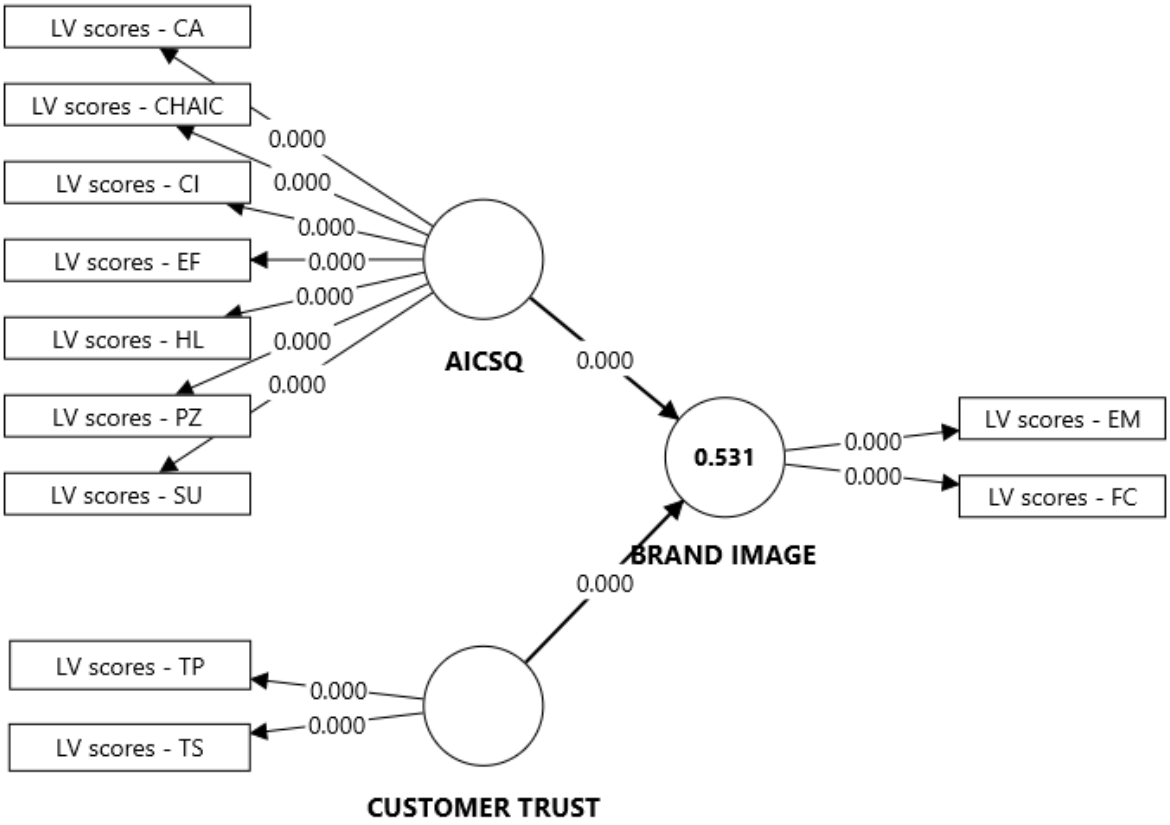

Figure 3. Second-Order Construct Model with PLS-SEM Results
Source: Author's own elaboration (2025)

After the measurement model was validated, the structural model was evaluated (Figure 3). The R^2 value for Brand Image in Table 9 was 0.531, indicating that AI Chatbot Service Quality and Customer Trust together explain 53.1% of the variance in Brand Image, which reflects a moderate explanatory power. The effect size results in Table 10 show that Customer Trust has a stronger effect on Brand Image (f^2 = 0.409) compared to AI Chatbot Service Quality (f^2 = 0.148). The Q^2 value of 0.482 also indicates that the model has good predictive relevance for the Brand Image construct (Table 11). The SRMR value of 0.062 indicates that the model has a good overall fit (Table 12), and the VIF values below 5 confirm that there is no multicollinearity among predictors. Furthermore, both structural paths were statistically significant, where AI Chatbot Service Quality → Brand Image and Customer Trust → Brand Image showed T-statistics above 1.96 and p-values below 0.05 (Table 13). Overall, these results demonstrate that the model is valid, reliable, and capable of explaining the relationships between the studied variables (Hair et al., 2021).

Table 9. R-square and R-square adjusted

Variables	R^2	R^2 adjusted
AICSQ	1	1
Brand Image	0.535	0.526
Customer Trust	1	1

Source: Author's own elaboration

p-ISSN: 0854-1442 (Print) e-ISSN: 2503-4464 (Online)

Table 10. f-square

Variables	f-square
AICSQ -> Brand Image	0.148
Customer Trust -> Brand Image	0.409

Table 11. Q-square

Variabel	SSO	SSE	Q^2 (=1-SSE/SSO)
Brand Image	228,000	118,194	0.482

Source: Author's own elaboration

Table 12. Model Fit

Indicators	Saturated model	Estimated model
SRMR	0.062	0.062
d_ULS	0.256	0.256
d_G	0.404	0.404
Chi-square	256.860	256.860
NFI	0.765	0.765

Source: Author's own elaboration

Table 13. Hypothesis Testing

Variabels	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	s (|O/STDEV|)	P values
AICSQ -> Brand Image	0.310	0.315	0.084	3,712	0.000
Customer Trust -> Brand Image	0.516	0.512	0.067	7,683	0.000

Source: Author's own elaboration

Discussion

This study examined the influence of AI Chatbot Service Quality and Customer Trust on Brand Image within the Shopee e-commerce platform in Indonesia. The findings strengthen the theoretical understanding of how technology-mediated service interactions and consumer psychological mechanisms contribute to brand development in digital environments. The results confirm that AI-based service encounters are not merely functional support processes, but play a strategic role in shaping how consumers evaluate and internalize a brand.

The first major contribution lies in demonstrating that AI Chatbot Service Quality is directly associated with the formation of brand image. This reinforces the theoretical view that service technology functions as an extension of organizational capability and brand identity. The findings support prior arguments that chatbot characteristics such as semantic understanding, personalization, and interaction efficiency influence how consumers interpret the firm's competence and customer orientation (Chen et al., 2022). This study advances that perspective by showing that AI-mediated service quality does not only affect short-term user responses such as satisfaction or continuance intention, but also contributes to long-term brand meaning and brand equity formation.

The second theoretical contribution relates to the role of Customer Trust in digital commerce brand building. The results provide evidence that trust operates as a fundamental relational mechanism

that strengthens positive brand perceptions in technology-mediated market environments. This aligns with previous literature emphasizing the importance of trust in reducing uncertainty, reinforcing perceived credibility, and shaping favorable brand associations in service contexts (Hosseini & Behboudi, 2017; Senali et al., 2024). The findings extend this body of knowledge by confirming that trust in digital platforms, sellers, and AI-supported interactions collectively supports the accumulation of brand value in e-commerce ecosystems.

More broadly, the study contributes to the theoretical integration of service technology quality, consumer trust dynamics, and brand asset development within a single conceptual framework. It highlights that brand image in digital platforms is not only the outcome of marketing communication, but also emerges from the interplay between technological performance and relational credibility during customer–system interactions. These insights enrich the development of theory in the areas of AI-enabled service management, digital consumer behavior, and brand equity in platform-based markets.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined the influence of AI Chatbot Service Quality and Customer Trust on Brand Image within the Shopee e-commerce platform in Indonesia. The findings confirm that interactions with AI-based chatbots represent a meaningful and strategic touchpoint in customers' overall experience with the platform, and that the quality of these interactions contributes to how consumers form long-term perceptions of the brand. High quality chatbot services characterized by clarity of communication, personalization, and responsive interaction strengthen the impression that the platform is competent, reliable, and customer-oriented, which in turn supports the development of a positive brand image.

The study also demonstrates that customer trust plays a crucial role in reinforcing brand meaning in digital commerce settings. Trust in the platform, sellers, and the products offered helps reduce perceived uncertainty and strengthens customers' sense of security when engaging in online transactions. In this regard, trust functions not only as a transactional factor, but as a relational foundation that supports brand credibility and enhances consumers' positive evaluations of the brand in the long run.

Overall, the findings highlight that brand building in the digital marketplace is shaped by the combination of two key factors: technological excellence reflected through AI-mediated service quality, and relational excellence reflected through customer trust. Together, these elements illustrate how technology-enabled interactions and psychological assurance mechanisms jointly contribute to the accumulation of brand value in e-commerce environments.

Recommendations

For a stronger effect of Customer Trust, Shopee management needs to concentrate their effort on enhancing both Trust in Seller and trust in Product. For instance, it enables vendors to have more accurate confirmation of sales, convenient QA and product return systems that complement a higher level of transparency which ultimately generates consumer confidence in fair selling. However, While AICSQ is important, we need to pay attention for the volume of dimensions that enhance the experience of human-likeness (e.g., Personalization and Human-like interaction) in chatbot service 5. This can be achieved by training the AI to communicate using a more empathetic language, learn about an individual's interaction history and escalate quickly complex issues to a capable human when necessary—all of which are used in order

 p-ISSN: 0854-1442 (Print) e-ISSN: 2503-4464 (Online)

to optimize for Close Human-AI Collaboration dimension.

Limitation and Recommendation

Limitations Several limitations might affect the validity and generalizability of the study. A major constraint is the narrow research coverage, which concerned only users of one e-commerce website in Indonesia. Thus, the narrow context could limit their external validity to other systems or consumers. Furthermore, non-probability purposive sampling may have led to selection bias, because the sample only included participants who met certain criteria and agreed to participate. In this case, the author reported that listening to others' response without prior knowledge was not likely to be affected with motivational bias. In addition, the cross-sectional nature of the study precludes examining changes in users' perceptions. These limitations and their potential influence on the power of the associations found in the study need to be critically considered along with possible implications of our findings when interpreting general conclusions.

REFERENCES

Ali, L., Ali, F., Abdalla, M. J., & Alotaibi, S. (2025). Beyond the hype: Evaluating the impact of generative AI on brand authenticity, image, and consumer behavior in the restaurant industry. *International Journal of Hospitality Management*, *131*(May). https://doi.org/10.1016/j.ijhm.2025.104318

Chen, Q., Gong, Y., Lu, Y., & Tang, J. (2022). Classifying and measuring the service quality of AI chatbot in frontline service. *Journal of Business Research*, *145*(July 2021), 552–568. https://doi.org/10.1016/j.jbusres.2022.02.088

Chin, W., Cheah, J. H., Liu, Y., Ting, H., Lim, X. J., & Cham, T. H. (2020). Demystifying the role of causal-predictive modeling using partial least squares structural equation modeling in information systems research. *Industrial Management and Data Systems*, *120*(12), 2161–2209. https://doi.org/10.1108/IMDS-10-2019-0529

El-Shihy, D., Abdelraouf, M., Hegazy, M., & Hassan, N. (2024). The Influence of AI Chatbots in Fintech Services on Customer Loyalty within the Banking Industry. *Future of Business Administration*, *3*(1), 16–28. https://doi.org/10.33422/fba.v3i1.644

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Inexperience and experience with online stores: The importance of TAM and trust. *IEEE Transactions on Engineering Management*, *50*(3), 307–321. https://doi.org/10.1109/TEM.2003.817277

Hair, J. F. (2021). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*.

Imam Ghozali. (2021). *Partial Least Squares : Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.2.9 Untuk Penelitian Empiris*, *3/E*.

Kandampully, J., & Suhartanto, D. (2000). Customer loyalty in the hotel industry: The role of customer satisfaction and image. *International Journal of Contemporary Hospitality Management*, *12*(6), 346–351. https://doi.org/10.1108/09596110010342559

Keller, K. L. (2003). *Strategic Brand Management: Building, Measuring and Managing Brand Equity*.

Khodadad Hosseini, S. H., & Behboudi, L. (2017). Brand trust and image: effects on customer satisfaction. *International Journal of Health Care Quality Assurance*, *30*(7), 580–590. https://doi.org/10.1108/IJHCQA-04-2016-0054

Leeflang, P. S. H., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014). Challenges and solutions for marketing in a digital era. *European Management Journal*, *32*(1), 1–12. https://doi.org/https://doi.org/10.1016/j.emj.2013.12.001

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integrative Model of Organizational Trust Author (s): Roger C . Mayer , James H . Davis and F . David Schoorman Published by : Academy of Management Stable URL : http://www.jstor.com/stable/258792 REFERENCES Linked references are available on JSTOR f. *Academy of Management Review*, *20*(3), 709–734.

Puspita, D. D., Pratama, A., & Faroqi, A. (2025). Analysis of Experience using Shopee E-Commerce AI Features Among Young People with Modified TAM. *Journal La Multiapp*, *6*(6), 1424–1435. https://doi.org/10.37899/journallamultiapp.v6i6.2472

Rehman, A., Kumar, S., Salam, M. A., & Virmani, N. (2025). How does AI-powered virtual influencer's anthropomorphism impact trust and brand love? The moderating role of opinion leadership. *Technological Forecasting and Social Change*, *219*(April), 124198. https://doi.org/10.1016/j.techfore.2025.124198

Senali, M. G., Iranmanesh, M., Ghobakhloo, M., Foroughi, B., Asadi, S., & Rejeb, A. (2024). Determinants of trust and purchase intention in social commerce: Perceived price fairness and trust disposition as moderators. *Electronic Commerce Research and Applications*, *64*(February), 101370. https://doi.org/10.1016/j.elerap.2024.101370

Vebrianti, R., Aras, M., Putri, M. S. S., & Swandewi, I. A. (2025). AI Chatbots in E-Commerce: Enhancing Customer Engagement, Satisfaction and Loyalty. *Paper Asia*, *41*(2b), 248–260. https://doi.org/10.59953/paperasia.v41i2b.445

Verma, P., Dumka, A., Bhardwaj, A., Ashok, A., Kestwal, M. C., & Kumar, P. (2021). A Statistical Analysis of Impact of COVID19 on the Global Economy and Stock Index Returns. *SN Computer Science*, *2*(1), 1–13. https://doi.org/10.1007/s42979-020-00410-w

Wijekoon, S., O'Cass, A., & Vesal, M. (2024). The impact of entrepreneurial marketing on new venture brand image and performance: a capability perspective. *European Journal of Marketing*, *58*(6), 1463–1492. https://doi.org/10.1108/EJM-07-2022-0568