

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

Nurussilmi¹, Syafruddin Chan^{2*}, Halimatussakdiah³

^{1,2,3}Universitas Syiah Kuala Banda Aceh, Indonesia

ABSTRACT: This study investigates the structural determinants of users' reuse intention toward ChatGPT, focusing on the integration of the Technology Acceptance Model (TAM) with Trust in AI. Utilizing a quantitative, explanatory research design, data were collected via an online questionnaire from 271 valid respondents consisting of students and working professionals in Aceh Province, Indonesia. The empirical model was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4. The measurement model assessment confirmed high construct reliability, convergent validity, and distinct discriminant validity across all variables. The structural model demonstrated substantial explanatory power, accounting for 59.5% of the variance in Reuse Intention ($R^2 = 0.595$) and exhibiting robust out-of-sample predictive relevance ($Q^2 = 0.425$). The hypothesis testing revealed that Perceived Usefulness has a positive and highly significant direct effect on Reuse Intention ($\beta = 0.434$; $t = 6.720$; $p < 0.001$), emerging as the strongest determinant with a moderate effect size ($f^2 = 0.170$). Similarly, Perceived Ease of Use significantly and positively influences Reuse Intention ($\beta = 0.149$; $t = 2.375$; $p = 0.018$), though with a smaller effect size ($f^2 = 0.021$). Conversely, Trust in AI has no significant direct impact on Reuse Intention ($\beta = 0.001$; $t = 0.009$; $p = 0.993$). These findings confirm the enduring relevance of TAM in the generative AI era, demonstrating that long-term user retention is primarily anchored in realized utility and low operational friction. AI developers should prioritize enhancing output precision and practical value while maintaining intuitive conversational interfaces to sustain continuous user commitment.

KEYWORDS: Generative AI, ChatGPT, Technology Acceptance Model, Trust in AI, Reuse Intention.

INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) has fundamentally transformed the way individuals interact with digital technologies. AI systems are increasingly integrated into various aspects of daily life, enabling users to access information, solve problems, automate tasks, and enhance productivity through intelligent computational capabilities (Poser et al., 2022; Saif et al., 2024). Among the most influential AI innovations in recent years is Generative Artificial Intelligence (GenAI), which has significantly changed how people generate, process, and utilize information. One of the most prominent GenAI applications is ChatGPT, a large language model developed by OpenAI and officially introduced in November 2022. Powered by advanced natural language processing and deep learning technologies, ChatGPT can generate human-like responses, provide explanations, support decision-making, and assist users in accomplishing various professional, educational, and personal tasks (K., 2020; Zhai, 2022). Since its launch, ChatGPT has experienced unprecedented global adoption, becoming one of the fastest-growing digital technologies in history. The widespread adoption of ChatGPT reflects its perceived value across diverse contexts. Reports from Similarweb and the AI Index Report 2025 indicate that generative AI technologies have been increasingly utilized in education, research, professional work, and daily productivity activities worldwide (Maslej, 2025). While the United States remains a global leader in AI innovation and adoption due to the presence of major technology companies such as OpenAI, Microsoft, and Google, developing countries have also demonstrated substantial growth in the use of AI-powered applications (Bick et al., 2024; OpenAI, 2025). Indonesia represents one of the emerging markets where ChatGPT has gained considerable attention among students, academics, professionals, and the general public. Despite the growing popularity of ChatGPT, sustained usage remains a critical issue. Initial adoption does not necessarily guarantee continued use, as users may discontinue a technology if it fails to meet their expectations or provide consistent value over time. This issue is particularly relevant in Aceh Province, where online search trends indicate a substantial increase in public interest in ChatGPT during 2025, followed by a gradual decline in subsequent months. Such

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

fluctuations suggest that understanding the factors influencing users' intention to continue using ChatGPT is essential for explaining the long-term sustainability of AI adoption.

Research on technology continuance behavior has frequently relied on the Technology Acceptance Model (TAM), which posits that individuals' behavioral intentions are largely determined by perceived usefulness and perceived ease of use (Davis, 1989). Perceived usefulness refers to the extent to which users believe that a technology enhances their performance, whereas perceived ease of use reflects the degree to which the technology is perceived as effortless to operate. Numerous studies have demonstrated that these two constructs significantly influence users' acceptance and continued use of digital technologies, including AI-based applications (Dwivedi et al., 2023; Venkatesh & Davis, 2000). In the context of ChatGPT, users are more likely to continue utilizing the platform when they perceive it as beneficial for improving productivity, obtaining information, and completing tasks efficiently. However, the unique characteristics of generative AI suggest that traditional TAM variables alone may not fully explain users' continuance behavior. Unlike conventional information systems, ChatGPT autonomously generates content and recommendations, requiring users to evaluate not only its usefulness and ease of use but also the reliability and credibility of its outputs. Consequently, trust in AI has emerged as a critical factor influencing users' willingness to rely on and continue using AI technologies (Glikson & Woolley, 2020). Concerns regarding misinformation, hallucinated responses, privacy issues, and excessive dependency have intensified the importance of trust in shaping users' perceptions and behavioral intentions toward generative AI systems (Choung et al., 2022; Dwivedi et al., 2023).

Although a growing body of literature has examined ChatGPT adoption, existing studies have predominantly focused on educational applications, ethical concerns, learning outcomes, and immediate acceptance behavior. Comparatively limited attention has been devoted to understanding the mechanisms that drive continued usage intentions, particularly in emerging regional contexts such as Aceh Province. Furthermore, studies integrating TAM variables, and trust in AI, into a single explanatory framework remain scarce. This gap suggests the need for a more comprehensive model capable of explaining why users choose to continue using ChatGPT after initial adoption.

Therefore, this study develops an extended Technology Acceptance Model by incorporating perceived usefulness, perceived ease of use, and trust in AI to explain ChatGPT reuse intention among users in Aceh Province. By examining the relationships among these variables, this research contributes to the growing literature on generative AI adoption and provides empirical insights into the factors that support the sustainable use of AI technologies in developing regions.

2. LITERATURE REVIEW

2.1. Perceived Usefulness and Reuse Intention

Perceived Usefulness (PU) is one of the most important constructs in the Technology Acceptance Model (TAM) developed by Davis (1989). It refers to the degree to which an individual believes that using a particular system will enhance his or her job performance (Davis, 1989). This concept is rooted in expectancy-value theory, which suggests that individuals tend to adopt and continue using technologies when they perceive that the expected benefits outweigh the associated costs or effort. Within TAM, perceived usefulness is consistently recognized as the strongest determinant of behavioral intention toward technology adoption and usage (Davis, 1989; Venkatesh & Davis, 2000). Users are more likely to accept and continue using a technology when they believe that it improves their productivity, effectiveness, efficiency, and task accomplishment. Therefore, perceived usefulness functions as a cognitive evaluation of the value generated by a technological system. In the context of artificial intelligence, perceived usefulness becomes increasingly important because AI systems are designed not merely to automate tasks but also to support decision-making, knowledge acquisition, and problem-solving activities. ChatGPT, as a generative AI system, assists users in obtaining information, generating content, brainstorming ideas, and completing academic or professional tasks more efficiently (Almogren et al., 2024; Dwivedi et al., 2023). Consequently, users are likely to evaluate ChatGPT based on its ability to improve their performance and reduce the time required to accomplish various activities. Recent studies indicate that perceived usefulness remains one of the most influential factors affecting users' intention to adopt and continue using AI-based technologies (Gwi-gon & Pidada, 2024; Saif et al., 2024). Users who perceive ChatGPT as beneficial for enhancing learning outcomes, increasing work productivity, and facilitating information access tend to develop stronger intentions to continue using the platform (Dwivedi et al., 2023).

From a post-adoption perspective, perceived usefulness serves as a critical cognitive foundation that directly drives long-term usage behavior, specifically reuse intention. According to the Expectation-Confirmation Model (ECM) by Bhattacharjee (2001), a user's decision to continue using a system after the initial adoption is heavily influenced by their ongoing perception of its usefulness. Unlike pre-adoption expectations, which are often based on second-hand information or speculation, post-adoption perceived usefulness is formed through direct, hands-on experience with the technology. When users consistently experience

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

tangible benefits and valuable outcomes from ChatGPT—such as getting accurate summaries, coding solutions, or creative inspiration—it reinforces their cognitive belief that the tool is indispensable. This continuous realization of value shifts the technology from a novel tool to a daily necessity, thereby directly increasing their intention to reuse the system in the future. Consequently, high perceived usefulness prevents user discontinuance and fosters long-term user loyalty toward ChatGPT. Based on the rationale above, the following hypothesis is proposed:

H1: Perceived Usefulness has a significant positive impact on the Reuse Intention of ChatGPT.

2.2 Perceived Ease of Use and Reuse Intention

Perceived Ease of Use (PEOU) is the second primary construct of the Technology Acceptance Model. Davis (1989) defines perceived ease of use as the degree to which an individual believes that using a particular system would be free of effort. The concept assumes that technologies requiring less cognitive and physical effort are more likely to be accepted and continuously utilized by users. According to TAM, perceived ease of use directly influences users' attitudes toward technology and indirectly affects perceived usefulness (Davis, 1989; Venkatesh & Davis, 2000). Technologies that are easier to operate allow users to accomplish tasks more efficiently, thereby increasing their perceptions of usefulness. As a result, perceived ease of use has become one of the most widely validated predictors of technology acceptance across various contexts.

The relevance of perceived ease of use is particularly evident in conversational AI systems such as ChatGPT. Unlike traditional software applications that may require extensive training or technical expertise, ChatGPT utilizes natural language interaction, allowing users to communicate with the system in a simple and intuitive manner (Dwivedi et al., 2023). Users can generate responses, obtain explanations, and solve problems simply by typing prompts in everyday language. Research suggests that ease of use significantly enhances users' confidence and reduces technological anxiety, leading to more positive experiences during system interaction (Venkatesh & Bala, 2008). In educational contexts, students are more likely to use ChatGPT when they perceive that the platform is easy to learn, easy to navigate, and easy to integrate into their learning activities (Gwi-gon & Pidada, 2024; Saif et al., 2024).

In a post-adoption context, the role of perceived ease of use extends beyond the initial interaction and becomes a crucial factor in sustaining long-term reuse intention. While a user might tolerate a complex interface during the initial trial phase due to curiosity, they will not continue using it routinely if the system requires constant, draining cognitive effort. According to the continuation perspectives of technology utilization, a frictionless user experience minimizes the "interaction cost." When interacting with ChatGPT remains consistently effortless over time—characterized by intuitive prompt handling, rapid responses, and a clean user interface—users experience a high sense of self-efficacy and low frustration. This ongoing convenience ensures that the tool seamlessly integrates into the user's daily workflow or study routines. Therefore, when a technology is perceived as continuously easy to operate, it eliminates behavioral barriers, increases user satisfaction, and ultimately solidifies the user's intention to reuse the system in the future. Based on the rationale above, the following hypothesis is proposed:

H2: Perceived Ease of Use has a significant positive impact on the Reuse Intention of ChatGPT.

2.3 Trust in AI and Reuse Intention

Trust in AI has emerged as a critical construct in explaining user behavior toward intelligent systems. While TAM emphasizes perceived usefulness and perceived ease of use, recent studies suggest that these variables alone may not adequately explain users' acceptance and continuance behavior toward AI technologies because AI systems introduce additional uncertainty, autonomy, and complexity (Dwivedi et al., 2023). Trust in AI refers to the willingness of individuals to rely on AI systems based on positive expectations regarding their competence, reliability, integrity, and predictability (Glikson & Woolley, 2020). Trust develops when users believe that an AI system can consistently perform tasks accurately and provide dependable outputs while minimizing risks and errors.

Unlike conventional information systems, generative AI technologies such as ChatGPT autonomously generate responses and recommendations based on complex machine-learning processes. As a result, users often cannot directly verify how the system produces its outputs. Consequently, trust functions as a psychological mechanism that reduces uncertainty and enables users to rely on AI-generated information despite a limited understanding of its internal processes (Glikson & Woolley, 2020). The importance of trust becomes particularly relevant because concerns regarding misinformation, hallucinations, privacy protection, ethical issues, and response accuracy remain prevalent among AI users (Dwivedi et al., 2023). Choung et al. (2022) argue that trust significantly influences users' willingness to adopt and continuously use AI systems because trustworthy technologies foster confidence and reduce perceived risk. In the context of ChatGPT, trust reflects users' beliefs that the system can provide accurate, reliable, relevant, and secure information. Users who perceive ChatGPT as trustworthy are more likely to develop positive experiences and stronger satisfaction, ultimately leading to higher intentions to continue using the platform (Choung et al., 2022;

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

Glikson & Woolley, 2020). Conversely, concerns regarding reliability and credibility may weaken users' confidence and discourage continued usage.

From a long-term, post-adoption perspective, trust acts as the ultimate psychological glue that sustains a user's reuse intention. While initial adoption can be driven by mere curiosity or the trendiness of generative AI, repeated and habitual usage requires deep cognitive reassurance. In the context of continuous interaction with ChatGPT, trust mitigates the ongoing perception of vulnerability associated with AI pitfalls, such as subtle informational inaccuracies or data privacy risks. When users repeatedly find that ChatGPT's outputs are dependable, non-malicious, and robust across various tasks, their initial trust is reinforced and transformed into structural loyalty. This accumulated trust lowers the user's cognitive defenses, making them comfortable integrating the AI into critical workflows and decision-making processes. Conversely, if trust is breached due to severe hallucinations or perceived insecurity, users will quickly abandon the system regardless of how easy or useful it is. Therefore, a high level of sustained trust is a mandatory prerequisite that directly ensures users will maintain a strong, risk-resistant intention to reuse ChatGPT over time. Based on the rationale above, the following hypothesis is proposed:

H3: Trust in AI has a significant positive impact on the Reuse Intention of ChatGPT.

2.4. Reuse Intention

Reuse intention originates from consumer behavior literature and refers to an individual's willingness to continue purchasing or using a product or service after previous consumption experiences (Engel & Blackwell, 1982). In marketing literature, reuse intention is closely associated with customer loyalty, retention, and long-term business sustainability because repeat customers contribute significantly to organizational performance and profitability (Kotler & Keller, 2016). In information systems research, reuse intention is often conceptualized as continuance intention. Bhattacharjee (2001) argues that users' decisions to continue using a technology are similar to consumers' repurchase decisions because both are influenced by prior usage experiences and post-consumption evaluations. Consequently, continuance intention reflects users' willingness to maintain their relationship with a technology after initial adoption.

The Expectation-Confirmation Model (ECM) proposed by Bhattacharjee (2001) explains that continuance intention is largely determined by users' satisfaction and perceived usefulness after actual system usage. Unlike initial adoption, which may be driven by curiosity or external influence, reuse intention depends on whether users perceive that the technology continues to deliver value and meets their expectations over time. Research in digital technologies consistently identifies reuse intention as a key indicator of long-term success because technology sustainability depends not only on attracting new users but also on retaining existing users (Dwivedi et al., 2023). Users who experience positive outcomes from a system are more likely to continue using it, recommend it to others, and resist switching to competing alternatives.

In the context of ChatGPT, reuse intention refers to users' willingness to continue utilizing the platform for various purposes, including information retrieval, academic assistance, content generation, problem-solving, and productivity enhancement. It reflects a behavioral commitment to repeatedly engage with ChatGPT whenever assistance is needed (Bhattacharjee, 2001; Mishra et al., 2023). Therefore, reuse intention serves as the ultimate behavioral outcome in this study, representing the user's final decision to integrate ChatGPT into their ongoing routines based on their accumulated cognitive assessments of the system's usefulness, ease of use, and trustworthiness.

2.6 Research Model

The conceptual framework of this study consists of three independent variables: perceived usefulness (PU), perceived ease of use (PEOU), and trust in AI (TIA), with customer reuse intention (CRI) serving as the dependent variable.

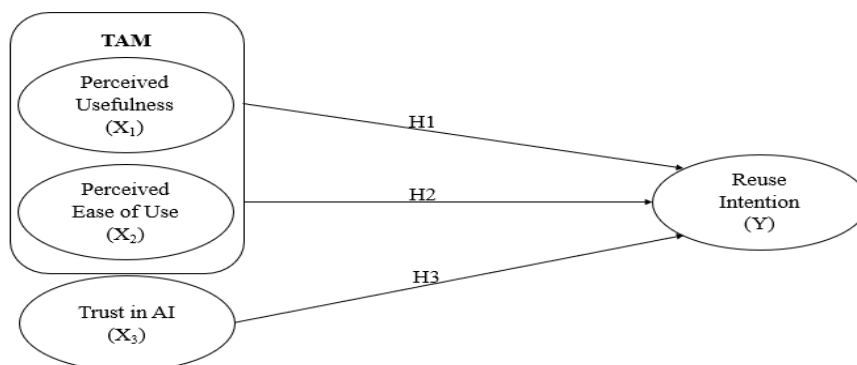


Figure 1. Research Framework

3. METHODS

3.1. Research Design and Object

This study employed a quantitative, explanatory research design to investigate the causal relationships between the constructs. An online survey method was utilized for data collection, and the structural model was evaluated using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4. The research model integrated the Technology Acceptance Model (TAM), Trust in AI, and Reuse Intention. The research object focused on the behavioral aspects of users interacting with ChatGPT, a prominent generative AI platform, within Aceh Province, Indonesia—a region capturing rapid digital transformation within its emerging higher education and professional sectors.

3.2 Population and Sampling Technique

The target population comprised students and working professionals aged 18–65 years residing in Aceh Province who have active experience using ChatGPT. This specific age bracket captures the educationally and economically productive demographic most likely to utilize generative AI technologies for academic, professional, and everyday information-seeking tasks.

Given that the exact total number of ChatGPT users in Aceh is unknown and cannot be definitively listed, a non-probability sampling approach was mandatory. This study combined purposive sampling and snowball sampling. Purposive sampling ensured that all participants met strict screening criteria: (1) currently residing in Aceh, (2) fell within the 18–65 age range, and (3) had used ChatGPT within the past three months. Concurrently, snowball sampling was leveraged by asking initial respondents to forward the survey link to their respective peer networks, thereby maximizing reach and mitigating coverage bias across different regencies in the province.

To determine the minimum sample size required for robust PLS-SEM estimation, the study followed the "10-times rule" and the formal recommendations by Hair et al. (2019), which suggest a minimum sample size of 5 to 10 times the total number of measurement indicators. With 21 indicators utilized across the four structural constructs, the minimum required sample ranged between 105 and 210 respondents. The final data collection yielded 271 valid, completed responses, which comfortably exceeded the recommended threshold and ensured adequate statistical power to minimize Type II errors.

3.3 Measurements and Data Collection Procedure

The survey instrument was divided into two primary sections: screening /demographic profiles and latent variable measurements. All 21 indicators mapping the operational variables (*Perceived Usefulness*, *Perceived Ease of Use*, *Trust in AI*, and *Reuse Intention*) were adapted from validated scales in prior information systems and AI literature, translated into Indonesian, and pre-tested for semantic clarity. Each item was evaluated using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Data collection was executed digitally over a six-week period. The online questionnaire was hosted via Google Forms and disseminated through mainstream social media and instant messaging applications (e.g., WhatsApp, Telegram, and Instagram). To adhere to strict ethical research standards, an informed consent statement was embedded on the first page of the survey; respondents could only proceed if they explicitly agreed to participate voluntarily, and all responses were kept strictly anonymous.

3.4 Data Analysis Strategy

The empirical model was analyzed using PLS-SEM, which is highly suited for this study as it accommodates complex structural models with exploratory elements (such as Trust in AI integrated into TAM) and does not impose strict distributional assumptions of normality (Hair et al., 2019). The data analysis followed a rigorous two-step evaluation process:

1. Measurement Model (Outer Model) Assessment: To guarantee the quality of the constructs, the data were tested for convergent validity (using factor loadings of 0.70 and Average Variance Extracted / AVE 0.50), discriminant validity (verified via the Heterotrait-Monotrait / HTMT ratio < 0.85 and construct reliability (using Cronbach's Alpha and Composite Reliability 0.70).
2. Structural Model (Inner Model) Assessment: Once the outer model was validated, the structural paths were assessed. This included examining collinearity (Variance Inflation Factor / VIF < 3.0) and the coefficient of determination (R^2). Hypotheses were statistically evaluated using a non-parametric bootstrapping procedure (5,000 resamples) to determine path coefficients and p-values. Furthermore, model predictive capabilities were verified through predictive relevance (Q^2).

4. RESULTS AND DISCUSSION

4.1. Profile of Respondents

The demographic and behavioral characteristics of the 271 valid respondents were analyzed using descriptive statistics. This profile provides context regarding the digital ecosystem and generative AI adoption patterns among the productive population in Aceh Province.

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

Table 1. Profile Respondents

No	Description	Frequency	Percentage (%)
1	Gender		
	Male	73	26.94
	Female	198	73.06
2	Age		
	18–40 years old	197	72.69
	41–65 years old	74	27.31
3	Employment Status		
	Student	103	38.01
	Professional Worker	168	61.99
4	ChatGPT Usage Frequency		
	Heavy User (5 times/week)	86	31.73
	Medium User (2–4 times/week)	115	42.44
	Light User (1 time/week)	70	25.83
5	Domicile (Aceh Region)		
	North-East Aceh	232	85.61
	Central Aceh	24	8.86
	West-South Aceh	15	5.54
	Total	271	100.00

The demographic distribution indicates a highly active female participation (73.06%) and a dominant young-to-middle adult group (72.69% aged 18–40), which aligns with the global trends of early tech adoption. Professionally, working professionals represent the majority (61.99%), indicating that ChatGPT has transitioned from a purely academic novelty to an active workplace productivity tool. Geographically, the sample is concentrated heavily in the North-East Aceh region (85.61%). Crucially, over 74% of respondents interact with ChatGPT at least 2 to 4 times a week, qualifying the sample as experienced users suitable for a post-adoption study.

4.2. Measurement Model (Outer Model) Assessment

To ensure the structural model's path coefficients are reliable, the reflective measurement model was evaluated for indicator reliability, convergent validity, internal consistency, and discriminant validity based on Hair et al. (2019) criteria.

Table 2. Outer Model Assessment

Items	Perceived Usefulness	Perceived Ease of Use	Trust in AI	Customer Satisfaction	Reuse Intention	Interpretation
PU1–PU5	0.836 – 0.907	-	-	-	-	Valid (0.70)
PEOU1–PEOU6	-	0.791 – 0.859	-	-	-	Valid (0.70)
TIA1–TIA6	-	-	0.806 – 0.860	-	-	Valid (0.70)
CS1–CS5	-	-	-	0.827 – 0.892	-	Valid (0.70)
RI1–RI4	-	-	-	-	0.787 – 0.895	Valid (0.70)

The indicator matrix confirms that all 21 items exhibit outer loadings well above the conservative threshold of 0.70, with the highest loading found in PU2 (0.907) and RI3 (0.895). This proves excellent individual item reliability, confirming that the indicators accurately operationalize their respective latent constructs without excessive measurement noise.

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

Table 3. Reliability Test

Variable	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability (pa)	Composite Reliability (pc)
Perceived Usefulness	0.772	0.926	0.926	0.944
Perceived Ease of Use	0.683	0.908	0.913	0.928
Trust in AI	0.675	0.904	0.905	0.926
Customer Satisfaction	0.745	0.914	0.914	0.936
Reuse Intention	0.728	0.874	0.876	0.914

As summarized across the validation criteria, all constructs achieved an AVE greater than the required 0.50 cutoff, establishing strong convergent validity—meaning each construct explains more than 50% of its indicators' variance. Furthermore, internal consistency reliability is strictly verified as Cronbach's alpha, rho_a, and rho_c values comfortably exceed the standard 0.70 threshold across all variables.

Table 4. Discriminant Validity HTMT

Latent Constructs	TIA	CS	PEOU	PU
Trust in AI (TIA)				
Customer Satisfaction (CS)	0.871			
Perceived Ease of Use (PEOU)	0.766	0.777		
Perceived Usefulness (PU)	0.766	0.799	0.780	
Reuse Intention (RI)	0.691	0.768	0.716	0.815

To evaluate discriminant validity, the modern Heterotrait-Monotrait (HTMT) ratio was applied. All values in the matrix are below the strict threshold of 0.85 (Hair et al., 2019), with the highest correlation observed between Perceived Usefulness and Reuse Intention (0.815). This statistically demonstrates that each construct is distinct and represents a completely unique phenomenon in the structural model.

4.3. Structural Model (Inner Model) Assessment

Before testing hypotheses, potential systematic bias was checked using collinearity diagnostics. Subsequently, the model's explanatory power and out-of-sample predictive performance were evaluated.

Table 5. Collinearity Test

Variable Path Correlations	Variance Inflation Factor (VIF)	Status Free Collinearity (FC) if <3.0
Perceived Usefulness -->Reuse Intention	2.742	FC
Perceived Ease of Use -->Reuse Intention	2.605	FC
Trust in AI -->Reuse Intention	3.104	FC
Perceived Usefulness -->Customer Satisfaction	2.501	FC
Perceived Ease of Use -->Customer Satisfaction	2.489	FC
Trust in AI -->Customer Satisfaction	2.338	FC
Customer Satisfaction -->Reuse Intention	3.386	Marginal Check (< 5.0)

The structural model exhibits acceptable multi-collinearity properties. While Trust in AI and Customer Satisfaction present VIF metrics slightly above 3.0 relative to Reuse Intention, they remain well below the formal critical threshold of 5.0, proving that the structural estimations will not suffer from inflated standard errors or unstable path evaluations.

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

Table 6. Coefficient of Determination (R²) & Predictive Relevance (Q² Predict) Test

Latent Target Construct	Coefficient of Determination (R ²)	Predictive Relevance (Q ² Predict)
Customer Satisfaction	0.705	0.516
Reuse Intention	0.595	0.425

The model demonstrates robust predictive power. The independent variables explain 70.5% of the variance in Customer Satisfaction ($R^2 = 0.705$), which represents a substantial explanatory effect. Meanwhile, 59.5% of the variance in Reuse Intention ($R^2 = 0.595$) is successfully accounted for by the model, signaling moderate-to-high explanatory strength. Additionally, the Q^2 values calculated via the PLS-predict framework are substantially above zero (0.516 and 0.425), confirming strong out-of-sample predictive relevance for both endogenous constructs.

4.4. Hypotheses Testing

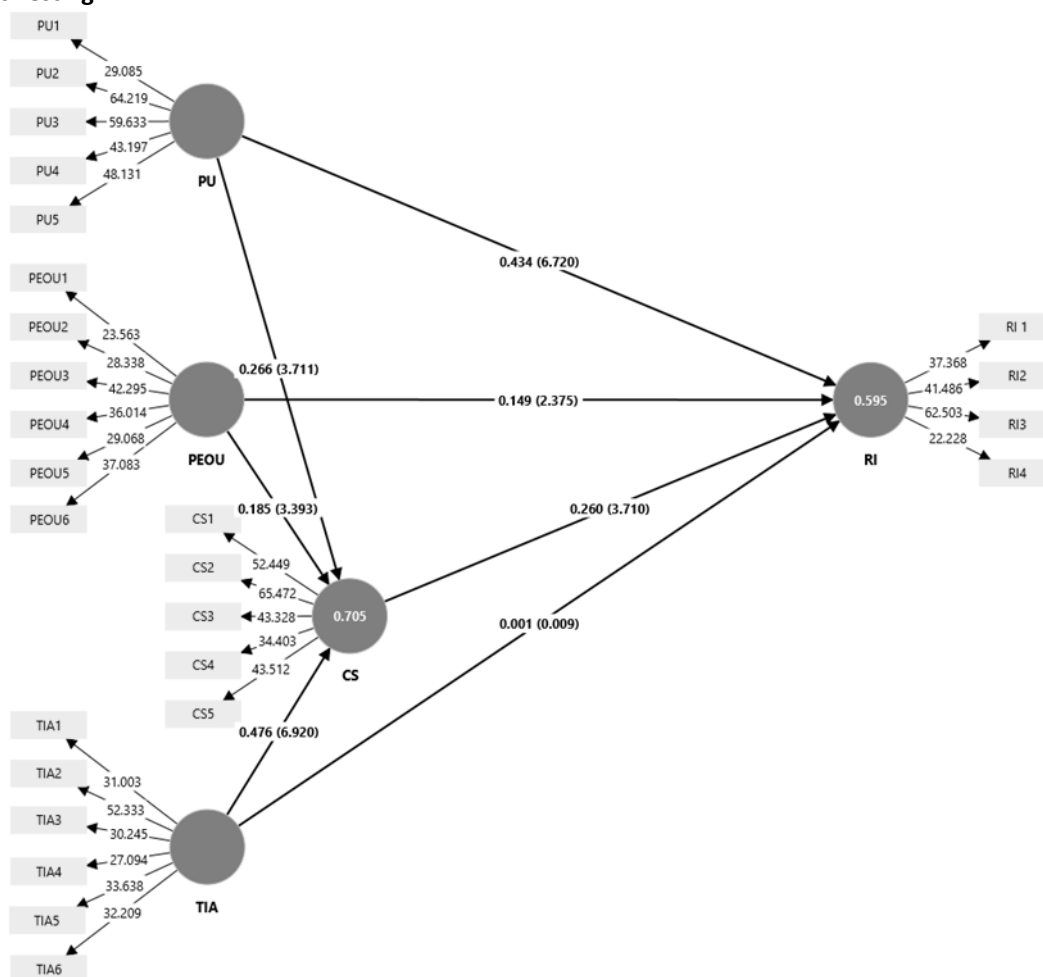


Figure 2. Final PLS-SEM Structural Model Path Coefficients]

4.4.1. The Influence of Perceived Usefulness on Reuse Intention

The structural model estimation revealed that Perceived Usefulness has a positive and significant direct effect on Reuse Intention ($\beta = 0.434$; $t = 6.720$; $p < 0.001$). This indicates that users who perceive ChatGPT as highly beneficial for improving productivity, supporting learning activities, facilitating task completion, and enhancing work performance are highly driven to continue using the technology. Among all direct predictors, Perceived Usefulness emerged as the strongest direct determinant of Reuse Intention, exhibiting a moderate effect size ($f^2 = 0.170$). These empirical findings strongly validate the classical Technology Acceptance Model (TAM), confirming that utility is the fundamental anchor for long-term technology retention. When users obtain immediate, high-value assistance from generative AI—such as instant coding solutions, precise summaries, or brainstorming aid—the realized utility converts the system from a temporary trial application into an essential everyday workflow asset. This outcome mirrors prior research on post-adoption behaviors, highlighting that cognitive assessments of utility dictate long-term user attachment.

User Reuse Intention Toward ChatGPT: Assessing the Effects of Perceived Usefulness, Perceived Ease of Use, And Trust in Artificial Intelligence

4.4.2. The Influence of Perceived Ease of Use on Reuse Intention

Perceived Ease of Use was found to exert a positive and significant direct influence on Reuse Intention ($\beta = 0.149$; $t = 2.375$; $p = 0.018$). This confirms that users demonstrate a significantly higher willingness to continue using ChatGPT when the platform is intuitive, easy to navigate, and requires minimal mental friction. Although its direct structural effect is weaker than that of Perceived Usefulness, ease of use is verified as a mandatory entry baseline, exhibiting a small direct effect size ($f^2 = 0.021$). The significance of Perceived Ease of Use underlines the critical role of conversational natural language interfaces. Because ChatGPT allows users to obtain sophisticated outcomes using natural language prompts rather than specialized coding languages or intricate software controls, it effectively bypasses traditional technological anxiety. Minimizing the "interaction cost" enhances users' sense of personal tech capability (self-efficacy), ensuring they routinely return to the tool for everyday tasks without feeling overwhelmed by complex procedures.

4.4.3. The Influence of Trust in AI on Reuse Intention

Contrasting with the primary TAM constructs, Trust in AI did not yield a statistically significant direct effect on Reuse Intention ($\beta = 0.001$; $t = 0.009$; $p = 0.993$). The direct effect size was entirely negligible ($f^2 = 0.000$), demonstrating that a user's standalone trust in the AI's integrity or accuracy does not directly translate into an increased intention to reuse the system. This unexpected result is highly insightful for generative AI research. It indicates that ChatGPT is widely leveraged for informational, productivity, and learning tasks that carry a relatively low perception of personal or physical risk. In these low-stakes environments, users are motivated primarily by utilitarian efficiency; as long as the system produces highly useful and rapid outputs, users will continue utilizing it regardless of potential system hallucinations or uncertainties. Users appear to consciously manage the lack of structural trust by applying personal verification or cross-checking AI responses, continuing to exploit its high utility while remaining aware of its operational limitations. Trust, therefore, operates as an indirect catalyst—likely working through the cultivation of satisfying user experiences—rather than a direct push factor for reuse.

5. CONCLUSION

This study investigated the structural impacts of Perceived Usefulness, Perceived Ease of Use, and Trust in AI on the Reuse Intention of ChatGPT among users in Aceh Province. The empirical findings confirm that Perceived Usefulness and Perceived Ease of Use function as positive, statistically significant drivers of Reuse Intention, with Perceived Usefulness acting as the primary anchor of the system's long-term retention. Conversely, Trust in AI fails to directly stimulate continuous intention, indicating that the immediate realization of high utility and low operational complexity outweighs abstract trust concerns in everyday user routines. Theoretically, this research confirms the enduring relevance of TAM in the emerging paradigm of generative artificial intelligence, showing that user post-adoption behavior is still governed by core utility and ease of access. For developers and AI practitioners, the results suggest that engineering long-term user retention requires prioritizing the actionable value, contextual precision, and rapid generation of outputs, all while maintaining a frictionless conversational interface.

Future research should expand on these boundaries by examining indirect mediating pathways—such as the role of Customer Satisfaction—and integrating variables such as perceived risk, AI literacy, and habitual usage across more diverse regional and cultural landscapes.

REFERENCES

- 1) Almogren, A. S., Al-rahmi, W. M., & Dahri, N. A. (2024). Exploring factors influencing the acceptance of ChatGPT in higher education: A smart education perspective. *Heliyon*, 10(11), e31887. <https://doi.org/10.1016/j.heliyon.2024.e31887>
- 2) Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351–370. <https://doi.org/https://doi.org/10.2307/3250921>
- 3) Bick, A., Blandin, A., & Deming, D. J. (2024). *The rapid adoption of generative AI* (No. 32966). <https://doi.org/10.3386/w32966>
- 4) Choung, H., David, P., & Ross, A. (2022). Trust in AI and its role in the acceptance of AI technologies. *International Journal of Human-Computer Interaction*, 1–13. <https://doi.org/https://doi.org/10.1080/10447318.2022.2050543>
- 5) Davis, F. D. (1989). Information Technology Introduction. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/https://doi.org/10.2307/249008>
- 6) Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. Louise, Jeyaraj, A., Kar, A. kumar, Baabdullah, A. m., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. ahmad, Al-Busaidi, A. s., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of*

- Information Management*, 71(102642), 63. <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2023.102642>
- 7) Engel, J. F., & Blackwell, R. D. (1982). *Consumer Behavior* (4th Edition). The Dryden Press.
 - 8) Glikson, E., & Woolley, A. W. (2020). Human trust in artificial intelligence: Review of empirical research. *Academy of Management Annals*, 14(2), 627–660. <https://doi.org/https://doi.org/10.5465/annals.2018.0057>
 - 9) Gwi-gon, K., & Pidada, I. A. I. (2024). Uncovering Customer Reuse Intention on Coffee Shop Mobile Application : Is That Impactful ? *Jurnal Ilmiah Manajemen Dan Bisnis*, 9(1), 11–19. <https://doi.org/https://doi.org/10.38043/jimb.v9i1.4989>
 - 10) Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2019). *Multivariate Data Analysis* (8th Edition). Cengage Learning.
 - 11) K., S. (2020). *Microsoft teams up with OpenAI to exclusively license GPT-3 language model*. The Official Microsoft Blog. <https://blogs.microsoft.com/blog/2020/09/22/microsoft-teams-up-with-openai-to-exclusively-license-gpt-3-language-model/>
 - 12) Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th Global). Pearson Education Limited.
 - 13) Maslej, N. (2025). *AI Index 2025: State of AI in 10 Charts*. Stanford Institute for Human-Centered Artificial Intelligence (HAI). <https://hai.stanford.edu/news/ai-index-2025-state-of-ai-in-10-charts?queryID=151a3e7aa12d3a9343cc20e5211aa6f6>
 - 14) Mishra, A., Shukla, A., Rana, N. P., Currie, W. L., & Dwivedi, Y. K. (2023). Re-examining post-acceptance model of information systems continuance: A revised theoretical model using MASEM approach. *International Journal of Information Management*, 68(April 2022), 102571. <https://doi.org/10.1016/j.ijinfomgt.2022.102571>
 - 15) OpenAI. (2022). *ChatGPT: optimizing language models for dialogue*. OpenAI. <https://openai.com/blog/chatgpt/>
 - 16) OpenAI. (2025). *How people are using ChatGPT*. OpenAI. https://openai.com/index/how-people-are-using-chatgpt/?utm_source=chatgpt.com
 - 17) Poser, M., Wiethof, C., & Bittner, E. A. C. (2022). Integration of AI into Customer Service: A Taxonomy to Inform Design Decisions. *European Conference of Information Systems (ECIS)*, May, 1–18. https://aisel.aisnet.org/ecis2022_rp/65
 - 18) Saif, N., Khan, S. U., Shaheen, I., Alotaibi, A., Alnfai, M. M., & Arif, M. (2024). Chat-GPT; validating Technology Acceptance Model (TAM) in education sector via ubiquitous learning mechanism. *Computers in Human Behaviour*, 154, 108097. <https://doi.org/https://doi.org/10.1016/j.chb.2023.108097>
 - 19) Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences*, 39(2), 273–315. <https://doi.org/https://doi.org/10.1111/j.1540-5915.2008.00192.x>
 - 20) Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186–204. <https://doi.org/https://doi.org/10.1287/mnsc.46.2.186.11926>
 - 21) Zhai, X. (2022). *ChatGPT User Experience: Implications for Education*. 1–18. <https://doi.org/https://dx.doi.org/10.2139/ssrn.4312418>



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0)

(<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.