Trust in AI-Driven Marketing and its Impact on Brand Loyalty: The Mediating Role of Adoption Intention among Generation Z Consumers

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ABSTRACT

This study is primarily focused on the determination of the influence of Trust in AI-driven marketing on Brand Loyalty, with Adoption Intention as a mediating factor among Generation Z consumers. The data were collected from 450 respondents and analyzed through Structural Equation Modeling using SPSS AMOS. The psychometric properties resulted in CFI = 0.980, TLI = 0.974, RMSEA = 0.062, SRMR = 0.031, which demonstrates excellent fit indices confirming the model's reliability and validity. Results show that trust is a significant predictor of both adoption intention (β = 0.718, P < 0.001) and brand loyalty (β = 0.410, P < 0.001), while adoption intention strongly influences brand loyalty (β = 0.717, P < 0.001). As to the mediation analysis, the result confirmed a significant indirect effect ($\beta \approx 0.390$, P = 0.001), indicating that adoption intention partially mediates the trust–loyalty relationship. The findings of the study present a significant view on the importance of trust in shaping AI-aided marketing and its adoption, leading to loyalty among Generation Z consumers. This study adds to the literature of the Technology Acceptance Model and Relationship Marketing Theory, and provides managerial insights on how brands can enhance customer loyalty through proper implementation of trustworthy AI-driven marketing practices.

Keywords: Trust in AI-Driven Marketing, Adoption Intention, Brand Loyalty, Technology Acceptance Model, Generation Z Consumers
JEL Classifications: M31, M37, O33

1. INTRODUCTION

In the era of digital transformation, Artificial Intelligence (AI) has revolutionized the marketing landscape by enabling brands to deliver personalized, data-driven, and highly responsive customer experiences (Guerra-Tamez et al., 2024). AI-aided marketing tools—ranging from chatbots and recommendation engines to predictive analytics and automated content creation—allow businesses to understand and anticipate consumer behavior with unprecedented precision (Bunea et al., 2024). As companies increasingly integrate AI into their marketing strategies, the effectiveness of these innovations largely depends on the extent to which consumers trust them. Without trust, even the most advanced AI systems may fail to foster meaningful relationships with customers or influence their brand-related decisions (Mohamed and Ünsalan, 2025)

Trust in AI-aided marketing refers to the degree of confidence consumers place in AI-driven interactions, recommendations, and automated decisions. It represents a critical factor in the acceptance and effectiveness of AI technologies, especially in contexts where human-like personalization and data privacy are involved. Previous studies have shown that when consumers perceive AI as reliable, transparent, and ethical, they are more likely to engage with AI-driven brand initiatives (Longoni and Cian, 2022). Conversely, skepticism regarding data misuse, algorithmic bias, or loss of human touch can hinder adoption and erode brand credibility. Hence, trust serves as the foundation upon which AI-mediated brand-consumer relationships are built.

One of the key behavioral responses that arise from trust in AI marketing is adoption intention—the willingness of consumers

to accept and use AI-based marketing systems, tools, or platforms. Adoption intention reflects a psychological readiness to engage with AI applications, influenced by perceived usefulness, ease of use, and emotional comfort. In marketing contexts, a higher level of trust in AI increases consumers' likelihood to adopt AI-driven recommendations, interact with virtual agents, or rely on predictive services. This behavioral readiness, in turn, may play a mediating role in how trust ultimately translates into brand loyalty, an outcome critical for long-term business sustainability.

Brand loyalty remains a cornerstone of marketing success, reflecting consumers' commitment, repeat purchase behavior, and positive word-of-mouth toward a brand. In AI-enabled marketing ecosystems, brand loyalty may no longer depend solely on traditional human-customer interactions but increasingly on the perceived reliability and ethical use of AI technologies (Guerra-Tamez et al., 2024). If consumers trust AI-driven marketing communications and find them helpful, personalized, and respectful of privacy, their loyalty to the brand is likely to strengthen. Conversely, distrust in AI mechanisms may reduce emotional connection and brand advocacy, especially among younger, tech-savvy consumers.

Among these consumers, Generation Z stands out as a highly relevant demographic. Born between the mid-1990s and early 2010s, Gen Zs are digital natives who have grown up surrounded by technology and automation. They are highly engaged in social media, mobile apps, and AI-driven platforms such as TikTok, YouTube, and e-commerce recommendation systems. While they exhibit openness to innovation, Gen Z consumers also demonstrate a heightened sensitivity to issues of data privacy, authenticity, and transparency. Understanding how trust in AI-aided marketing influences their adoption intention and subsequent brand loyalty offers valuable insights for marketers aiming to build sustainable relationships with this emerging consumer group.

Despite the growing scholarly attention on AI in marketing, limited research has explored the psychological mechanisms linking trust in AI-aided marketing to brand loyalty, particularly through the lens of adoption intention among Generation Z consumers. Most existing studies focus on the technological aspects of AI or consumer acceptance models without integrating emotional and relational constructs such as trust and loyalty (Dwivedi et al., 2021). This gap highlights the need for an integrated framework that explains how trust shapes Gen Z consumers' willingness to adopt AI-driven marketing and how this behavioral intention translates into brand loyalty.

Therefore, this study aims to investigate the influence of trust in AI-aided marketing on brand loyalty, with adoption intention as a mediating variable, among Generation Z consumers. By employing a quantitative approach, this research seeks to provide empirical evidence on the behavioral and attitudinal pathways that drive brand loyalty in AI-mediated marketing environments. The findings are expected to contribute to both theory and practice by expanding the understanding of trust and technology adoption models in the context of AI marketing and by offering actionable insights for brands seeking to cultivate loyalty among Gen Z consumers through trustworthy and human-centered AI strategies.

2. REVIEW OF RELATED LITERATURE

2.1. Artificial Intelligence in Marketing
Artificial Intelligence (AI) has transformed modern marketing by enabling brands to create more personalized, data-driven, and interactive customer experiences (Islam et al., 2024). Through applications such as chatbots, predictive analytics, recommendation engines, and automated content creation, AI allows marketers to anticipate consumer needs and improve decision-making efficiency (Fürst et al., 2025). Unlike traditional marketing techniques that rely on manual segmentation and intuition, AI-powered marketing employs machine learning algorithms that continuously analyze large datasets to identify consumer patterns, predict preferences, and tailor messages (Longoni and Cian, 2022). This technological advancement has given rise to what scholars call AI-aided marketing, where algorithms support or even replace human decision-making in marketing communications and customer relationship management (Samimi, 2025).

AI-aided marketing is not merely a technological innovation but a strategic shift in how firms manage customer interactions. It enhances targeting precision, automates repetitive tasks, and personalizes engagement at scale, leading to improved customer satisfaction and operational efficiency(Islam et al., 2024). However, despite its benefits, AI marketing also raises concerns related to privacy, ethics, and transparency, which influence consumer attitudes and behavioral responses toward AI-mediated interactions (Samimi, 2025).

2.2. Trust in AI-Aided Marketing
Trust plays a central role in shaping how consumers perceive and respond to AI-enabled marketing initiatives. In the context of artificial intelligence (AI), trust refers to the degree of confidence users place in AI-driven systems—that they will act reliably, competently, and in an ethically appropriate manner (Afroogh et al., 2024). It reflects a psychological state in which a person is willing to depend on technology when outcomes are uncertain. In marketing contexts, consumers often must rely on AI systems to generate recommendations or manage sensitive data, so trust becomes a key determinant of whether they accept and continue using these systems (Acatrinei et al., 2025).

Several factors influence consumer trust in AI within marketing. These include perceived competence (the accuracy and reliability of AI outputs), transparency (the clarity of how the AI makes decisions and handles data), and benevolence (the belief that the AI system—and by extension the brand deploying it—is acting in the consumer's interests and using data ethically). For example, studies show that even when AI recommendations are accurate, a lack of transparency or a sense of manipulation can undermine trust; conversely, when consumers perceive the AI as transparent and aligned with their interests, they are more likely to accept and rely on its suggestions (Acatrinei et al., 2025). Thus, trust functions as both a cognitive (e.g., competence, reliability) and an affective

(e.g., benevolence, ethical intent) antecedent to technology acceptance in AI-enabled marketing efforts (Aquilino et al., 2025).

2.3. Adoption Intention and the Technology Acceptance Model

Adoption intention represents a consumer's willingness to use and engage with new technology. The Technology Acceptance Model (TAM), originally developed by Davis (1989), posits that two primary predictors of this behaviour are perceived usefulness and perceived ease of use (Davis, 1989; Venkatesh and Davis, 2000). More recently, scholars argue that in contexts such as artificial intelligence (AI), where automation and data collection play central roles, TAM has been usefully extended to include constructs like trust, perceived risk, and privacy concerns (Ibrahim et al., 2024).

In AI-aided marketing contexts, adoption intention refers to how willing consumers are to interact with AI systems such as automated chat assistants, virtual influencers, or predictive recommendation platforms. Trust consistently emerges as a strong antecedent of adoption intention, attenuating the perceived risks that consumers assign to algorithmic decision-making (Guo et al., 2025). When consumers believe that AI technologies are reliable, competent, and aligned with their interests, they are more likely to engage and continue using them — thereby supporting stronger brand relationships.

2.4. Brand Loyalty in AI-Driven Marketing Environments

Brand loyalty remains one of the most critical determinants of business sustainability. It refers to a customer's commitment to repurchase or recommend a brand, often resulting from consistent satisfaction and emotional attachment (Oliver, 1999). In AI-enabled environments, brand loyalty is influenced not only by traditional service quality but also by the perceived quality of AI-driven interactions (Hassan et al., 2025). AI can enhance loyalty by offering seamless experiences, personalized content, and predictive assistance. However, excessive automation may reduce perceived authenticity—leading to customer skepticism (Kirk and Givi, 2025).

Empirical studies show that AI can influence loyalty indirectly through variables such as brand trust and satisfaction. For example, in AI-driven e-commerce, trust was found to have a significant positive influence on loyalty, with personalization strengthening that effect (Hassan et al., 2025). AI systems that are perceived as ethical, transparent, and human-like tend to foster greater emotional connection and brand advocacy. Therefore, the link between AI-aided marketing and loyalty is contingent upon the consumer's willingness to adopt and trust the technology.

2.5. Generation Z as the Emerging Consumer Segment

Generation Z (Gen Z), defined as those born approximately between the mid-1990s and early 2010s, constitutes a distinctive consumer segment characterised by digital nativity, multitasking capability, and social consciousness (Tirocchi, 2023). They matured in an environment saturated with digital technology and are familiar with interacting with AI-driven

systems—from voice assistants to algorithmic feeds on platforms such as TikTok and YouTube. Despite this technological fluency, Gen Z consumers display heightened sensitivity to matters of privacy, data ethics, and brand authenticity. They place high value on transparency and may quickly disengage from brands that misuse data or project inauthenticity (Guerra-Tamez et al., 2024; Tirocchi, 2023).

2.6. Linking Trust, Adoption Intention, and Brand Loyalty

Recent research highlights a sequential relationship among trust, adoption intention, and brand loyalty in AI marketing contexts. Trust functions as an antecedent that reduces uncertainty and builds psychological readiness to use AI applications (Chau et al., 2025). Adoption intention, in turn, mediates the pathway from trust to brand loyalty by translating positive perceptions into actual engagement and brand commitment. When consumers adopt AI tools and experience their benefits—such as convenience and personalized service—their satisfaction strengthens, resulting in higher loyalty (Hassan et al., 2025).

Studies using structural equation modeling (SEM) have demonstrated that trust indirectly affects loyalty through mediators such as adoption intention, satisfaction, and brand experience (Guerra-Tamez et al., 2024). However, this relationship has yet to be extensively validated among Generation Z consumers, who may exhibit unique behavioral responses to AI marketing stimuli. Thus, examining adoption intention as a mediator provides valuable insight into the mechanism linking cognitive trust to affective loyalty in digital contexts.

2.7. Research Gaps and Conceptual Insights

While considerable literature has explored the technological and behavioral aspects of AI in marketing, several gaps remain. First, few studies have empirically examined trust in AI-aided marketing as a predictor of brand loyalty mediated by adoption intention. Most prior research isolates either trust or adoption intention without integrating the two within a single predictive framework. Second, existing studies often target general consumers rather than specific generational cohorts, overlooking the distinctive digital behaviors of Gen Z. Third, the interplay between ethical perceptions, technological competence, and emotional loyalty in AI-mediated interactions is still underexplored.

By addressing these gaps, the present study contributes to a more comprehensive understanding of how trust in AI-aided marketing translates into brand loyalty through the mediating role of adoption intention among Generation Z consumers. This approach advances marketing theory by integrating trust-based models and technology acceptance frameworks while providing actionable insights for businesses seeking to foster long-term loyalty in AI-driven markets.

Based on the theoretical and empirical foundations discussed in the preceding literature, the following hypotheses are formulated to examine the relationships among trust in AI-aided marketing, adoption intention, and brand loyalty among Generation Z consumers.

2.7.1. H_1: Trust in AI-aided marketing and adoption intention

Trust in AI technologies plays a critical role in shaping consumers' willingness to adopt AI-enabled marketing platforms. Research extending the Technology Acceptance Model (TAM) indicates that trust reduces perceived risk, enhances perceived usefulness, and fosters positive behavioral intentions toward technology adoption (Davis, 1989; Venkatesh and Davis, 2000). Recent studies confirm that when consumers perceive AI-driven marketing systems as reliable, transparent, and ethical, they are more likely to adopt these tools and engage with brand-related applications. Specifically, trust has been identified as a key mediator influencing users' behavioral intentions toward AI systems (Dang and Li, 2025), and it significantly enhances perceived usefulness while reducing uncertainty in AI adoption (McGrath et al., 2025). Moreover, empirical evidence shows that trust directly affects consumers' intention to engage with AI-enabled marketing tools, reinforcing its central role in facilitating technology adoption (Nagy and Hajdu, 2022).

- H_1: Trust in AI-aided marketing positively influences adoption intention among Generation Z consumers.

2.7.2. H_2: Adoption intention and brand loyalty

Consumers' intention to adopt AI-driven marketing systems can enhance their overall brand experience and strengthen loyalty. Adoption reflects an active willingness to interact with AI tools that facilitate convenience, personalization, and satisfaction—factors that contribute to emotional attachment and repurchase behavior (Guerra-Tamez et al., 2024). When consumers frequently use AI-assisted brand platforms, their repeated engagement reinforces trust and brand preference over time.

- H_2: Adoption intention positively influences brand loyalty among Generation Z consumers.

2.7.3. H_3: Trust in AI-Aided marketing and brand loyalty

Trust has long been recognized as a cornerstone of enduring brand relationships. In AI-aided marketing contexts, trust in technology extends to trust in the brand itself, as consumers associate the reliability of AI-driven interactions with the credibility of the company behind them. High levels of trust can strengthen emotional connection and brand commitment even without direct human contact (DeZao, 2024).

- H_3: Trust in AI-aided marketing positively influences brand loyalty among Generation Z consumers.

2.7.4. H4: The mediating role of adoption intention

While trust may directly enhance loyalty, prior research indicates that its effect often operates through consumers' behavioural intentions to engage with AI-driven marketing. Trust encourages adoption, and through positive experiences of convenience and personalization, consumers' satisfaction and loyalty are reinforced (Liu et al., 2024). Hence, adoption intention is expected to serve as a mediating variable that explains how trust translates into loyalty.

- H_4: Adoption intention mediates the relationship between trust in AI-aided marketing and brand loyalty among Generation Z consumers.

3. METHODOLOGY

This study employed a quantitative, cross-sectional research design to investigate the influence of trust in AI-aided marketing on brand loyalty, mediated by adoption intention among Generation Z consumers. The study utilized Structural Equation Modeling (SEM) to examine both the measurement and structural relationships among constructs (Kline, 2016). All statistical analyses were conducted using IBM SPSS Statistics for data screening and descriptive analysis, and IBM SPSS AMOS for confirmatory factor analysis (CFA), structural modeling, and mediation testing.

3.1. Population and Sampling

The target population of this research comprised Generation Z consumers, defined as individuals born between 1995 and 2010, who have prior experience interacting with AI-based marketing tools such as chatbots, personalized recommendation engines, or AI-driven advertisements. The sampling method employed was non-probability purposive sampling, ensuring that only qualified respondents with exposure to AI marketing were included in the analysis. Data were collected through an online self-administered questionnaire distributed via social media platforms, university mailing lists, and online retail communities. A total of 450 valid responses were obtained and used in the final analysis. The sample size was deemed adequate for SEM, as it exceeds the recommended minimum threshold of 200 cases and provides sufficient statistical power to estimate multiple parameters and mediation effects (Kline, 2016). The respondents were diverse in terms of gender, income, and educational attainment, ensuring representativeness within the Gen Z population.

3.2. Research Instrument

Data were gathered using a structured survey questionnaire consisting of four sections. The first section included screening questions to verify respondents' age and familiarity with AIaided marketing. The second section measured the three latent constructs—Trust in AIAided Marketing, Adoption Intention, and Brand Loyalty—using established scales adapted from prior research. Table 1 constructs of the Scale, provides each construct measured using a five point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Trust in AIAided Marketing was assessed using four items adapted from prior works on technology trust and AI acceptance (Choung et al., 2022). Adoption Intention was measured using four items reflecting consumers' willingness to interact with AIbased marketing systems, adapted from the Technology Acceptance Model (Davis, 1989; Venkatesh and Davis, 2000). Brand Loyalty was assessed with five items based on established brand commitment scales (Oliver, 1999).

3.3. Measurement Model Assessment

A Confirmatory Factor Analysis (CFA) was conducted using IBM SPSS AMOS to validate the reliability and validity of the measurement model. Model fit was evaluated using multiple indices: Chi-square/df (≤ 3), Comparative Fit Index (CFI ≥ 0.90), Tucker-Lewis Index (TLI ≥ 0.90), Root Mean Square Error of Approximation (RMSEA ≤ 0.08), and Standardized Root Mean

Table 1: Constructs of the scale

Construct	Statements	Sources
Trust in AI-Aided Marketing	[TRST1] AI tools used by brands provide accurate recommendations [TRST2] AI marketing systems behave consistently and reliably [TRST3] AI systems protect my personal information [TRST4] I trust AI tools to assist my purchasing decisions	Choung et al., 2022; Longoni and Cian, 2022; McGrath et al., 2025
Adoption Intention	[ADO1] I intend to use AI-driven recommendations from brands in the future [ADO2] I will explore AI-based brand tools when available [ADO3] I am willing to adopt AI-assisted marketing platforms [ADO4] I will engage with AI marketing to improve my shopping experience	Cheng et al., 2023; Davis, 1989; Venkatesh and Davis, 2000
Brand Loyalty	[BL1] I prefer this brand over other brands [BL2] I would recommend this brand to others [BL3] I intend to continue purchasing from this brand [BL4] I feel committed to this brand	Ahmed et al., 2025; Oliver, 1999

Square Residual (SRMR ≤ 0.08). All factor loadings were above 0.60, indicating satisfactory item reliability.

As reflected in Table 2 model data fit and indices results, the model demonstrated an excellent fit to the data (CFI = 0.980, TLI = 0.974, RMSEA = 0.062, SRMR = 0.031, χ^2/df = 2.703). These results meet the conventional criteria suggested in the literature (Garson, 2016; Hair, 2009; Hu and Bentler, 1999; Sarstedt et al., 2014), confirming that the hypothesized measurement model adequately represents the observed constructs. The fit indices collectively indicate that the data support the specified relationships among the latent constructs of trust in AI-aided marketing, adoption intention, and brand loyalty.

Table 3 convergent and internal consistency provides the composite reliability (CR) values exceeding 0.70 for all constructs, confirming internal consistency, while Average Variance Extracted (AVE) values were above 0.50, demonstrating convergent validity. Discriminant validity was established through the Fornell-Larcker criterion confirming distinctness among constructs.

To assess the quality of the measurement model, the convergent validity and internal consistency of each construct were examined using Confirmatory Factor Analysis (CFA) in IBM SPSS AMOS. Convergent validity evaluates the degree to which multiple indicators of the same construct are in agreement, while internal consistency determines how closely related the items are as a group. Three main indicators were used for this evaluation: standardized factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR) (Cheung et al., 2023).

As presented in Table 3, all standardized factor loadings ranged from 0.683 to 0.916, which are above the recommended minimum threshold of 0.60 (Cheung et al., 2023), indicating that each indicator contributed substantially to its corresponding latent construct. High factor loadings signify that the items exhibit strong correlations with their respective constructs, confirming that the observed variables reliably represent the underlying theoretical dimensions of Trust in AI Marketing, Adoption Intention, and Brand Loyalty.

The Composite Reliability (CR) values for all constructs ranged from 0.881 to 0.935, which surpasses the minimum criterion of 0.70. These values demonstrate that the indicators consistently measure the same construct and that internal consistency among

Table 2: Model Data Fit Indices Results

Model fit indices	Proposed threshold value	Source	Resulting value
CFI	>0.80	Garson, 2016	0.980
TLI	>0.85	Sharma et al., 2005	0.974
RMSEA	<0.08	Kenny et al., 2015	0.062
SRMR	≤0.08	Hu and Bentler, 1999	0.031
Chi-square/ df ratio	<3.00	Hair, 2009	2.703

the items is highly acceptable. The CR for Brand Loyalty (0.935), in particular, suggests excellent reliability and consistency, meaning that the items measuring loyalty (such as preference, repurchase intention, and advocacy) are highly cohesive and dependable.

Meanwhile, the Average Variance Extracted (AVE) values ranged from 0.650 to 0.782, all exceeding the minimum acceptable level of 0.50. This indicates that, on average, more than half of the variance in each construct is explained by its indicators rather than by measurement error. The highest AVE was observed for Brand Loyalty (0.782), implying that the items measuring loyalty capture a high proportion of the construct's variance. Likewise, the AVE for Trust in AI Marketing (0.650) and Adoption Intention (0.670) suggests that the indicators are valid and conceptually aligned with the theoretical dimensions they represent.

As shown in Table 4 Fornel and Larcker criterion, all √AVE values (ranging from 0.806 to 0.885) are greater than the inter-construct correlation coefficients. Specifically, the √AVE of Trust in AI Marketing (0.885) exceeds its correlations with Adoption Intention (r = 0.756) and Brand Loyalty (r = 0.695). Likewise, the √AVE of Adoption Intention (0.818) is higher than its correlations with Brand Loyalty (r = 0.746) and Trust in AI Marketing (r = 0.756). Similarly, the √AVE of Brand Loyalty (0.806) surpasses its correlation coefficients with Adoption Intention (r = 0.746) and Trust in AI Marketing (r = 0.695 (Rönkkö and Cho, 2022; Sarstedt et al., 2014).

Furthermore, the mean scores of the constructs (ranging from 5.061 to 5.252 on a 7-point Likert scale) suggest a generally positive perception among Gen Z respondents toward AI-aided marketing and its influence on their loyalty. The standard deviations (ranging from 1.053 to 1.167) indicate moderate variability in responses,

implying some differences in individual attitudes but no extreme deviations from the overall mean trends (Alhamami et al., 2024).

4. RESULTS

4.1. Structural Model Estimates
Following the establishment of a reliable and valid measurement model, the study proceeded to examine the hypothesized structural relationships among the latent constructs using Structural Equation Modeling (SEM) via IBM SPSS AMOS. The results, summarized in Table 5, reveal that all hypothesized paths were statistically significant (P < 0.001), confirming strong predictive relationships among Trust in AI Marketing (TRST), Adoption Intention (ADPTN), and Brand Loyalty (BRNDLTY).

4.2. Direct Effects
The first hypothesis (H1) predicted that Trust in AI-Aided Marketing would have a positive and significant influence on Adoption Intention among Gen Z consumers. The path coefficient (β = 0.718, P < 0.001) provides strong empirical support for this hypothesis, suggesting that when consumers perceive AI-driven marketing systems as credible, transparent, and reliable, their intention to adopt and use AI-powered brand interactions significantly increases (Choudhury and Shamszare, 2023; Lu et al., 2011; Yang et al., 2024).

The second hypothesis (H2) proposed that Trust in AI-Aided Marketing directly influences Brand Loyalty. The results reveal a significant positive relationship (β = 0.410, P < 0.001), indicating that consumer trust in AI-enabled marketing activities can directly translate into loyalty behaviours, such as repeat purchase and brand advocacy (Dwivedi et al., 2022; Hassan et al., 2025; Ribeiro et al., 2025).

The third hypothesis (H3) tested the effect of Adoption Intention on Brand Loyalty. The relationship was found to be highly significant (β = 0.717, P < 0.001), suggesting that the more likely Gen Z consumers are to adopt AI-based marketing technologies (e.g., AI chatbots, recommendation engines, or personalization systems), the stronger their brand loyalty becomes. This confirms the notion that technology-mediated experiences can enhance customer-brand relationships when users perceive the interaction as efficient, personalized, and value-adding (Guerra-Tamez et al., 2024; Hussain, 2025).

4.3. Mediation Analysis
To test H_4, the mediation role of Adoption Intention in the relationship between Trust in AI-Aided Marketing and Brand Loyalty was analyzed using the Bootstrapped Confidence Interval (BC) method with 5,000 resamples. The results, summarized in Table 5, indicate a significant indirect effect ($\beta \approx 0.390$, 95% CI [0.287, 0.485], P = 0.001). Since the confidence interval does not include zero, the mediation is statistically significant (Yang et al., 2024; Yang, 2024).

Based on the Mediation Path Analysis results as shown in Table 6, the results indicate partial mediation, as the direct effect of Trust on Brand Loyalty remains significant even after including the mediator (Adoption Intention). This implies that while trust directly contributes to loyalty, its influence is strengthened when consumers first develop an intention to engage with or adopt AI-driven marketing applications. Theoretically, this supports the Technology Acceptance Model (TAM) and Trust Transfer Theory, where trust functions as a cognitive antecedent leading to adoption behavior, which subsequently fosters long-term loyalty (Cheng et al., 2023; Shao et al., 2025).

4.4. Discussion
The findings of this study provide meaningful insights into how Trust in AI-Aided Marketing influences the behavioral responses

Table 3: Convergent and internal consistency

Constructs	Items	Standardized factor loading	AVE	Composite reliability
Trust In AI Marketing	TRST1	0.827	0.650	0.881
	TRST2	0.860		
	TRST3	0.793		
	TRST4	0.739		
Adoption Intention	ADO1	0.683	0.670	0.889
	ADO2	0.817		
	ADO3	0.905		
	ADO4	0.852		
Brand Loyalty	BL1	0.862	0.782	0.935
	BL2	0.916		
	BL3	0.913		
	BL4	0.845		

Table 4: Fornel and Larcker Criterion

	BRNDLTY	ADPT	TRST
BRNDLTY	1		
ADPT	0.746	1	
TRST	0.695	0.756	1
AVE	0.650	*0.670*	*0.782*
√AVE	0.806	**0.818**	**0.885**
MEAN	**5.077**	**5.252**	**5.061**
STD	**1.167**	**1.053**	**1.064**

Table 5: Structural Model Estimates

Hypothesis	Path	Estimate (Unstandardized β)	S.E.	C.R.	P	Decision
H1	ADPTN←TRST	0.718	0.061	11.847	***	Supported
H2	BRNDLTY←TRST	0.41	0.084	4.886	***	Supported
H3	BRNDLTY←ADPTN	0.717	0.095	7.563	***	Supported

Table 6: Mediation Path

Path	Indirect Effect	95% CI (BC)	P-value	Interpretation
H_4: TRST→BRNDLTY	≈ 0.390	0.287–0.485	0.001	Significant mediation: Trust indirectly affects Brand Loyalty through Adoption Intention.

of Generation Z consumers, a demographic recognized for its digital proficiency and selective brand engagement. The strong and significant path between trust and adoption intention underscores the pivotal role of trust as a psychological catalyst in mitigating skepticism toward AI systems. When consumers perceive AI applications as fair, unbiased, and protective of user privacy, they are more inclined to participate in AI-driven marketing experiences, such as personalized recommendations or automated customer service interactions (Cheng et al., 2023; Liu et al., 2024; Shao et al., 2025).

The direct and indirect effects of trust on brand loyalty reveal a dual pathway: (1) Trust fosters loyalty directly through emotional and relational connections with the brand, and (2) indirectly through adoption intention, where consumers' willingness to interact with AI-based systems enhances satisfaction and habitual use, thereby reinforcing loyalty over time. This observation reflects the expectation-confirmation theory, which posits that user satisfaction and continued intention emerge when the technology's performance aligns with or surpasses prior expectations (Bhattacherjee, 2001; Lu et al., 2011; Ribeiro et al., 2025).

Moreover, the findings are consistent with recent empirical evidence that AI-enabled marketing can strengthen customer engagement and brand loyalty when users perceive such systems as transparent, ethical, and value-oriented (Belanche et al., 2019; Ho and Chow, 2023; Yang et al., 2024). For Generation Z—marked by high digital literacy and heightened awareness of responsible AI practices—trust extends beyond a technological matter to a broader issue of brand integrity. Organizations that deploy AI ethically, personalize experiences without overstepping privacy boundaries, and communicate transparency in their algorithmic decisions are more likely to cultivate long-term consumer loyalty (Dwivedi et al., 2021; 2022; Saura et al., 2024).

5. CONCLUSION

The study investigated the relationships between Trust in AI-Aided Marketing, Adoption Intention, and Brand Loyalty among Generation Z consumers using Structural Equation Modeling (SEM) with 450 respondents. The findings demonstrated that trust in AI-aided marketing significantly influences both adoption intention and brand loyalty, while adoption intention also serves as a significant mediator in this relationship. This suggests that Gen Z consumers who trust AI-driven marketing systems are more likely to adopt and engage with AI technologies, which subsequently strengthens their loyalty to brands.

The results confirmed all proposed hypotheses, emphasizing the pivotal role of trust as a psychological and relational determinant in AI-related consumer behavior. The significant indirect path ($\beta \approx$ 0.390, P = 0.001) further validated that adoption intention mediates the trust–loyalty link, indicating that loyalty is both a cognitive and behavioral outcome of AI adoption. Overall, the structural model exhibited excellent fit indices (CFI = 0.980, TLI = 0.974, RMSEA = 0.062, SRMR = 0.031), suggesting that the proposed conceptual framework effectively explains the relationships among the variables.

In essence, the study concludes that trust is not merely a precursor to AI adoption but a cornerstone of brand loyalty in the era of intelligent marketing. For Generation Z, loyalty emerges not only from product satisfaction but also from ethical, transparent, and trustworthy use of AI technologies by brands.

5.1. Theoretical Implications

This study advances marketing and consumer behavior theory by integrating trust-based relationship marketing and the Technology Acceptance Model (TAM) within the context of AI-aided marketing. The findings affirm that trust is a critical antecedent of adoption intention, which in turn mediates its effect on brand loyalty, thereby extending TAM beyond its traditional cognitive determinants of perceived usefulness and ease of use. Moreover, by empirically validating trust as both a technological and relational construct, the study contributes to a deeper understanding of how consumers form long-term loyalty in AI-driven brand ecosystems. The demonstrated mediating role of adoption intention enriches existing theoretical frameworks by highlighting that behavioral adoption acts as the key mechanism linking psychological trust to loyalty outcomes, particularly among digitally native Generation Z consumers.

5.2. Managerial Implications

From a managerial perspective, the findings emphasize that building consumer trust in AI systems is essential for fostering adoption and long-term brand loyalty. Marketers should prioritize ethical transparency, data privacy, and fairness in AI algorithms to reinforce credibility and confidence among Gen Z consumers. Clear communication about how AI is used to personalize experiences, combined with responsible data handling, can strengthen both trust and willingness to engage with AI-driven marketing tools. Additionally, organizations are encouraged to integrate AI into loyalty and engagement programs—such as predictive rewards or personalized recommendations—while maintaining user control and consent. By ensuring that AI technologies are perceived as helpful, secure, and value-adding, firms can convert trust into sustained customer relationships and competitive advantage.

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