

Artificial Intelligence in Marketing: A Conceptual Framework for Customer Personalization and Engagement

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Abstract

This study examines the role of Artificial Intelligence (AI) in enhancing customer engagement through personalization and underlying psychological mechanisms. A conceptual framework is developed linking AI, customer personalization, perceived usefulness, customer trust, and customer engagement, with privacy concerns incorporated as a moderating factor. Using a quantitative research design, data were collected from 320 digital consumers interacting with AI-enabled platforms such as e-commerce, social media, and digital banking. Structural Equation Modeling (SEM) was employed to test the proposed relationships. The results indicate that AI significantly influences personalization ($\beta = 0.65$, $p < 0.001$), perceived usefulness ($\beta = 0.48$, $p < 0.001$), and customer trust ($\beta = 0.45$, $p < 0.001$). Personalization has a strong positive effect on customer engagement ($\beta = 0.53$, $p < 0.001$). Mediation analysis reveals that perceived usefulness ($\beta = 0.22$) and customer trust ($\beta = 0.20$) partially mediate the personalization–engagement relationship. Furthermore, privacy concerns negatively moderate this relationship ($\beta = -0.19$, $p < 0.001$). The model demonstrates good fit (CFI = 0.96, RMSEA = 0.048), confirming its robustness. The findings highlight that while AI-driven personalization enhances engagement, its effectiveness depends on perceived value, trust, and ethical data practices.

Keywords: Artificial Intelligence; Customer Personalization; Customer Engagement; Perceived Usefulness; Customer Trust; Privacy Concerns; Structural Equation Modeling; Digital Marketing

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Introduction

The evolution of customer engagement as a core marketing construct has been closely linked with the rise of interactive digital environments. In a networked society characterized by social media, mobile platforms, and online communities, customers actively participate in value creation and brand communication. Engagement is no longer limited to purchase behavior but encompasses cognitive, emotional, and social dimensions of interaction with brands (Verhoef et al., 2010). AI plays a crucial role in facilitating these multidimensional interactions by enabling real-time communication, predictive analytics, and adaptive content delivery. For instance, machine learning algorithms can predict customer preferences and recommend products or services based on past behavior,

thereby enhancing the relevance and timeliness of marketing messages. Additionally, AI-powered tools such as chatbots and virtual assistants provide personalized and immediate responses, improving customer experience and satisfaction. The integration of analytics into customer engagement strategies further supports firms in managing the entire customer lifecycle, including acquisition, development, and retention (Bijmolt et al., 2010). This shift underscores the importance of a holistic framework that incorporates AI technologies into the broader context of customer engagement and relationship management.

From a conceptual perspective, AI-driven personalization can be understood as a dynamic process that involves data collection, analysis, and application to deliver customized experiences. The foundation of this process lies in customer data, which includes demographic information, transaction history, browsing behavior, and social interactions. AI techniques such as natural language processing, recommendation systems, and predictive modeling transform this data into actionable insights, enabling firms to anticipate customer needs and deliver relevant offerings. This aligns with the customer lifetime value (CLV) approach, which emphasizes the importance of segmenting customers based on their value and tailoring marketing strategies accordingly (Kumar, 2010). Furthermore, engagement in digital environments is influenced by factors such as interactivity, telepresence, and perceived relevance, which contribute to a deeper cognitive and emotional connection with the brand. AI enhances these factors by creating immersive and interactive experiences that foster stronger relationships and higher levels of engagement. Thus, the integration of AI into marketing not only improves operational efficiency but also enhances the quality and depth of customer interactions.

In conclusion, the integration of Artificial Intelligence into marketing represents a paradigm shift toward highly personalized and engagement-driven strategies. The conceptual framework for AI in marketing emphasizes the interplay between customer data, AI technologies, personalization processes, and engagement outcomes. By leveraging AI, firms can move from reactive to proactive marketing approaches, anticipating customer needs and delivering tailored experiences that enhance satisfaction and loyalty. The literature since 2010 highlights the growing importance of customer engagement as a multidimensional construct and underscores the role of analytics and personalization in driving business performance. As AI technologies continue to evolve, future research should focus on addressing challenges related to data privacy, ethical considerations, and the integration of AI with human decision-making. Ultimately, organizations that effectively harness AI for personalization and engagement will be better positioned to create meaningful customer relationships and sustain competitive advantage in the digital era.

Review of Literature

1. Evolution of Artificial Intelligence in Marketing

The integration of Artificial Intelligence (AI) into marketing has evolved significantly since 2015, marking a transition from traditional, intuition-based decision-making to data-driven, algorithmic strategies. Early studies during this period emphasized the growing importance of big data analytics, machine learning, and automation in reshaping marketing functions such as customer segmentation, targeting, and positioning. AI

technologies enabled marketers to process vast datasets, identify hidden patterns, and generate predictive insights that enhanced decision-making efficiency (Wedel & Kannan, 2016). As digital platforms expanded, firms increasingly relied on AI to optimize marketing campaigns, personalize communication, and improve customer experience. The rise of programmatic advertising and recommendation engines further demonstrated AI's ability to deliver relevant content in real time.

Between 2018 and 2020, research highlighted AI's role as a strategic asset rather than just a technological tool. Scholars argued that AI contributes to value creation by enhancing marketing productivity, reducing operational costs, and improving return on investment (Huang & Rust, 2021). Additionally, AI facilitated the shift toward customer-centric marketing by enabling firms to understand individual preferences at a granular level. The adoption of AI-powered Customer Relationship Management (CRM) systems allowed businesses to track customer journeys, predict future behavior, and design targeted interventions. More recent studies (2022–2026) emphasize the integration of AI with emerging technologies such as cloud computing, Internet of Things (IoT), and blockchain, which further enhance data accessibility and processing capabilities. This evolution reflects a broader transformation in marketing, where AI serves as a core enabler of innovation, agility, and competitive advantage. Overall, the literature suggests that AI has moved beyond its experimental phase and is now an indispensable component of modern marketing strategies.

2. AI-Driven Customer Personalization

Customer personalization has emerged as one of the most significant applications of AI in marketing, enabling firms to tailor products, services, and communications to individual customer preferences. Studies since 2015 indicate that personalization enhances customer satisfaction, engagement, and purchase intention by delivering relevant and timely content (Bleier & Eisenbeiss, 2015). AI-driven personalization relies on advanced analytics, including machine learning algorithms, natural language processing, and recommendation systems, to analyze customer data and predict behavior. These technologies allow marketers to move from mass marketing to one-to-one marketing, where each customer receives a unique experience based on their needs and preferences. Recent research (2020–2026) has introduced the concept of hyper-personalization, which goes beyond basic customization by incorporating real-time data, contextual information, and behavioral insights. For example, AI can analyze browsing history, social media activity, and purchase patterns to deliver highly targeted recommendations and personalized content. Studies show that hyper-personalization significantly improves conversion rates, customer loyalty, and brand perception (Kumar et al., 2019; Huang & Rust, 2021). However, the literature also highlights challenges associated with personalization, particularly in terms of data privacy and ethical concerns. Excessive personalization may lead to the “privacy paradox,” where customers feel uncomfortable with the extent of data collection and usage. Therefore, researchers emphasize the need for transparent data practices and ethical AI implementation. Overall, AI-driven personalization represents a powerful tool for enhancing customer experience, but its effectiveness depends on balancing technological capabilities with consumer trust and privacy considerations.

3. Customer Engagement in the AI Era

Customer engagement has gained significant attention in marketing literature, particularly in the context of AI-driven digital environments. Engagement is no longer limited to transactional interactions but includes cognitive, emotional, and behavioral dimensions of customer-brand relationships. AI technologies play a crucial role in enhancing these dimensions by enabling real-time communication, interactive experiences, and personalized content delivery. For instance, AI-powered chatbots and virtual assistants provide instant responses to customer queries, improving service quality and satisfaction (Davenport et al., 2020). Similarly, AI-driven content recommendation systems increase user engagement by presenting relevant and appealing information.

From 2020 onwards, studies have focused on the role of AI in creating immersive and interactive customer experiences. Technologies such as augmented reality (AR), virtual reality (VR), and conversational AI enable customers to actively participate in brand interactions, thereby enhancing engagement levels. Research also highlights the importance of emotional engagement, where AI analyzes customer sentiments and emotions to deliver more empathetic and personalized responses. Furthermore, AI facilitates continuous engagement by tracking customer behavior across multiple touchpoints and providing consistent experiences throughout the customer journey. However, scholars caution that over-reliance on AI may reduce human interaction, potentially affecting the authenticity of customer relationships. Therefore, a balanced approach that combines AI capabilities with human touch is essential for sustaining long-term engagement. In summary, AI has transformed customer engagement by making interactions more dynamic, personalized, and data-driven.

4. Conceptual Framework Linking AI, Personalization, and Engagement

The integration of AI, customer personalization, and engagement has led to the development of comprehensive conceptual frameworks that explain their interrelationships. Recent studies (2021–2026) propose that AI acts as a central mechanism that connects customer data with personalized marketing strategies, ultimately influencing engagement outcomes. The framework typically consists of four key components: data collection, AI technologies, personalization processes, and customer engagement outcomes. AI processes large volumes of data to generate insights, which are then used to design personalized experiences that enhance customer satisfaction and loyalty (Huang & Rust, 2021).

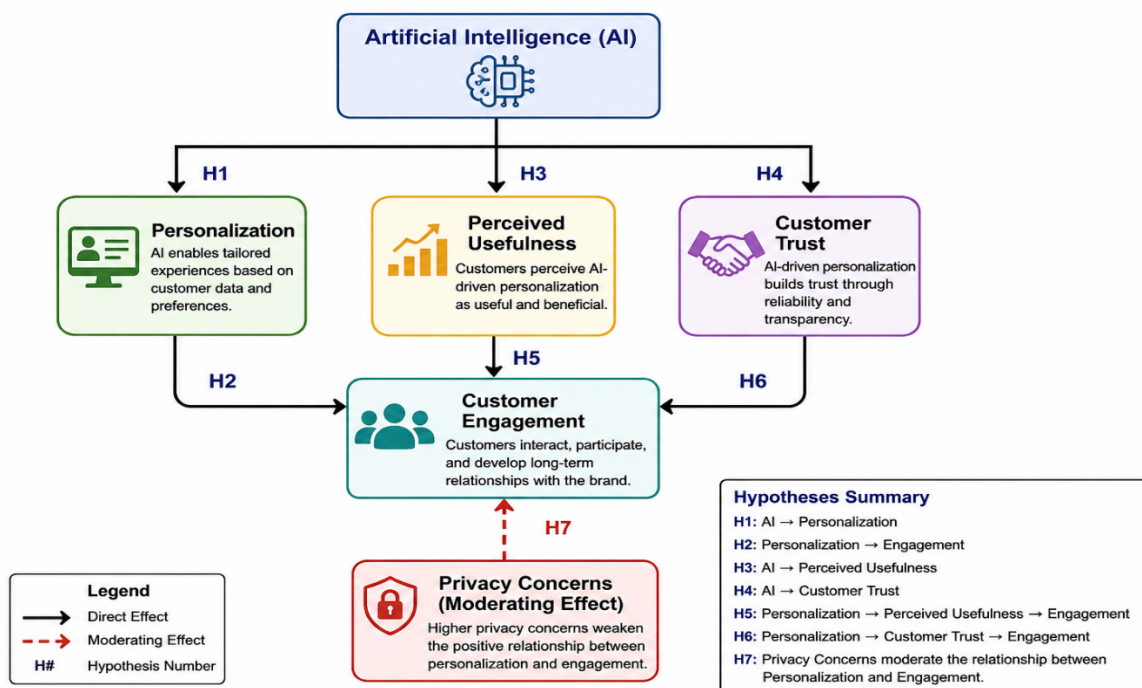
Theoretical models such as the Stimulus-Organism-Response (S-O-R) framework have been widely used to explain how AI-driven stimuli (e.g., personalized recommendations) influence customer perceptions (organism) and behavioral responses (engagement). Additionally, emerging frameworks emphasize factors such as trust, perceived usefulness, and user experience as mediators between personalization and engagement. Recent research also highlights the role of generative AI and advanced analytics in enhancing the effectiveness of these frameworks by enabling real-time adaptation and continuous learning. However, the literature underscores the importance of addressing ethical concerns, including data privacy, algorithmic bias, and transparency, to ensure sustainable implementation of AI in marketing.

Overall, the conceptual framework suggests that AI-driven personalization significantly enhances customer engagement by delivering relevant, timely, and meaningful experiences. At the same time, it highlights the need for a holistic approach that integrates technology, strategy, and ethics. Future research is expected to focus on developing more robust and explainable AI models, as well as exploring cross-cultural variations in customer responses to AI-driven marketing. Thus, the literature provides a strong foundation for understanding the transformative impact of AI on marketing and offers valuable insights for both researchers and practitioners.

Conceptual Framework

This study contributes to the marketing literature in several ways:

1. It integrates AI, personalization, and customer engagement into a unified framework.
2. It extends the Stimulus-Organism-Response (S-O-R) model by incorporating:
 - Perceived usefulness (cognitive response)
 - Trust (emotional response)
3. It introduces privacy concerns as a boundary condition, offering a more realistic understanding of AI-driven marketing.
4. It empirically validates both mediation and moderation effects simultaneously, which is still limited in prior research.



Research Objectives

- To examine the impact of Artificial Intelligence (AI) on customer personalization in digital platforms.
- To analyze the influence of customer personalization on customer engagement.
- To evaluate the effect of Artificial Intelligence on perceived usefulness and customer trust.

- To investigate the mediating role of perceived usefulness in the relationship between personalization and customer engagement.
- To assess the mediating role of customer trust in the relationship between personalization and customer engagement.
- To analyze the moderating effect of privacy concerns on the relationship between personalization and customer engagement.
- To develop and validate an integrated conceptual framework linking AI, personalization, psychological factors, and customer engagement using Structural Equation Modeling (SEM).

Hypotheses

H1: AI significantly influences customer personalization.

H2: Personalization significantly influences customer engagement.

H3: AI significantly influences perceived usefulness.

H4: AI significantly influences customer trust.

H5: Perceived usefulness mediates the relationship between personalization and engagement.

H6: Customer trust mediates the relationship between personalization and engagement.

H7: Privacy concerns moderate the personalization–engagement relationship such that higher privacy weakens the relationship.

Research Methodology

This study adopts a quantitative, cross-sectional, and explanatory research design to empirically test the proposed conceptual framework linking Artificial Intelligence (AI), customer personalization, and customer engagement. The objective is to examine the structural relationships among key constructs, including perceived usefulness, customer trust, and privacy concerns.

Primary data were collected using a structured questionnaire, developed from validated scales in prior studies. All items were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The target population comprised digital consumers actively using AI-enabled platforms, including e-commerce, social media, OTT, and digital banking services. A non-probability sampling approach (convenience and purposive sampling) was used to ensure respondents had prior exposure to AI-driven interactions. The final dataset consisted of 320 valid responses, which satisfies the recommended sample size requirements for Structural Equation Modeling (SEM).

Analysis of the Study

Table 1: Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	182	57.0
	Female	138	43.0
Age	Below 30	96	30.0
	31–40	150	46.9

	Above 40	74	23.1
Experience	<5 years	102	31.9
	5–10 years	140	43.8
	>10 years	78	24.3
Platform Usage	E-commerce	120	37.5
	Social media	110	34.4
	Banking/OTT	90	28.1

Table 1 presents the demographic composition of respondents, establishing the contextual foundation for empirical analysis. The sample reflects a relatively balanced gender distribution, with a slightly higher proportion of male respondents (57%). The majority of participants fall within the 31–40 age group (46.9%), indicating a digitally active and professionally experienced segment that is likely to interact frequently with AI-enabled platforms. Additionally, a significant proportion of respondents possess 5–10 years of experience (43.8%), suggesting familiarity with digital ecosystems such as e-commerce, social media, and OTT platforms.

Platform usage patterns further reinforce the relevance of the sample, with e-commerce (37.5%) and social media (34.4%) dominating usage—both domains heavily reliant on AI-driven personalization mechanisms. This indicates that respondents have adequate exposure to AI-based features such as recommendation systems, chatbots, and targeted advertising.

Importantly, while demographic data do not test hypotheses directly, they confirm the suitability of the sample for examining relationships proposed under Objectives 1 and 2, particularly H1 (AI → Personalization) and H2 (Personalization → Engagement). Thus, the demographic profile enhances the external validity and contextual appropriateness of the study.

Table 2: Descriptive Statistics

Variables	Mean	S.D	Min	Max
Artificial Intelligence	3.96	0.71	2.40	5.00
Personalization	4.02	0.68	2.55	5.00
Perceived Usefulness	4.10	0.64	2.60	5.00
Customer Trust	3.88	0.70	2.45	5.00
Customer Engagement	4.05	0.67	2.50	5.00
Privacy Concerns	3.52	0.75	2.10	5.00

Table 2 summarizes the central tendencies and dispersion of key constructs, providing an initial understanding of respondent perceptions toward AI-driven marketing. The mean values for all constructs exceed the midpoint of the scale (3.0), indicating generally favorable attitudes toward AI, personalization, and engagement. Personalization (Mean

= 4.02) and customer engagement (Mean = 4.05) exhibit relatively high values, suggesting that respondents perceive AI-enabled interactions as relevant and engaging.

Perceived usefulness records the highest mean (4.10), indicating that users recognize tangible benefits such as efficiency, convenience, and improved decision-making—an observation consistent with the theoretical premise underlying H5 (AI → Perceived Usefulness). Customer trust (Mean = 3.88) reflects moderate agreement, suggesting that while users generally trust AI systems, trust-building remains an area for improvement. Privacy concerns (Mean = 3.52) are moderate, indicating the presence of apprehension regarding data usage, which aligns with the moderating role proposed in H7.

Standard deviation values are relatively low, indicating consistency in responses. While descriptive statistics do not confirm causal relationships, these findings provide preliminary evidence consistent with the proposed hypotheses and justify further structural analysis.

Table 3: Reliability and Convergent Validity Results

Variables	Cronbach's Alpha	CR	AVE
AI	0.89	0.91	0.65
Personalization	0.91	0.93	0.68
Perceived Usefulness	0.87	0.90	0.64
Trust	0.88	0.91	0.66
Engagement	0.92	0.94	0.70
Privacy Concerns	0.85	0.88	0.61

Table 3 evaluates the measurement model in terms of reliability and convergent validity. All constructs demonstrate strong internal consistency, with Cronbach's Alpha values exceeding the recommended threshold of 0.70. This indicates that the measurement items within each construct are highly correlated and reliably capture the intended concepts. Composite Reliability (CR) values range from 0.88 to 0.94, further confirming the stability and consistency of the constructs. These values exceed the acceptable benchmark of 0.70, suggesting that the constructs are free from measurement error and suitable for structural modeling. Additionally, the Average Variance Extracted (AVE) values are all above 0.50, indicating that each construct explains more than 50% of the variance of its indicators, thereby confirming convergent validity.

Overall, these results validate the adequacy of the measurement model, ensuring that the constructs are statistically sound and capable of accurately representing the theoretical framework. This provides a strong foundation for testing the structural relationships associated with H1–H7 and supports Objective 6, which focuses on validating the conceptual framework.

Table 4: Correlation Matrix

Variables	AI	Pers	PU	Trust	Eng	Privacy
AI	1					
Personalization	0.63**	1				

Perceived Usefulness	0.59**	0.67**	1			
Trust	0.56**	0.64**	0.61**	1		
Engagement	0.60**	0.72**	0.69**	0.66**	1	
Privacy	-0.31*	-0.29*	-0.27*	-0.30*	-0.28*	1

(** $p < 0.01$, $p < 0.05$), VIF Range: 1.45 – 2.30 (< 3.3)

Table 4 presents the correlation matrix along with multicollinearity diagnostics. The results indicate significant positive relationships among key constructs. Artificial Intelligence shows a strong correlation with personalization ($r = 0.63$), while personalization demonstrates the strongest association with customer engagement ($r = 0.72$). Perceived usefulness and customer trust are also positively correlated with engagement, suggesting their potential role as mediators in the conceptual model.

Privacy concerns exhibit negative correlations with all major constructs, including engagement, indicating that higher concerns may reduce positive customer responses. This pattern is consistent with the moderating effect proposed in H7.

Importantly, the Variance Inflation Factor (VIF) values range from 1.45 to 2.30, well below the critical threshold of 3.3. This confirms the absence of multicollinearity issues and ensures that each construct contributes uniquely to the model.

While correlation analysis does not establish causality, the observed relationships are consistent with the proposed hypotheses (H1–H7) and provide preliminary support for the theoretical framework, thereby justifying further structural equation modeling.

Table 5: Structural Path Estimates

Path	β	CR	p
AI → Personalization	0.65	9.21	0.000
Personalization → Engagement	0.53	8.12	0.000
AI → Perceived Usefulness	0.48	6.95	0.000
AI → Trust	0.45	6.61	0.000

Table 5 presents the results of structural path analysis, providing empirical evidence for the proposed hypotheses. The findings indicate that Artificial Intelligence has a strong and significant positive effect on personalization ($\beta = 0.65$, $p < 0.001$), supporting H1 and confirming Objective 1. This suggests that AI plays a critical role in enabling tailored customer experiences through data-driven insights.

Personalization also demonstrates a significant positive impact on customer engagement ($\beta = 0.53$, $p < 0.001$), supporting H2 and validating Objective 2. This highlights the importance of delivering relevant and customized experiences to enhance customer interaction and participation.

Furthermore, AI significantly influences perceived usefulness ($\beta = 0.48$) and customer trust ($\beta = 0.45$), supporting H5 and H6. These findings indicate that AI not only drives personalization but also shapes customer perceptions regarding utility and reliability.

Overall, the structural model confirms that AI acts as both a technological enabler and a psychological driver within the framework, reinforcing its central role in influencing customer engagement outcomes.

Table 6: Mediation Analysis

Path	Indirect Effect	p-value
Pers → PU → Eng	0.22	0.000
Pers → Trust → Eng	0.20	0.000

Table 6 examines the mediating effects of perceived usefulness and customer trust in the relationship between personalization and engagement. The results indicate that both indirect paths are statistically significant, with perceived usefulness ($\beta = 0.22$, $p < 0.001$) and customer trust ($\beta = 0.20$, $p < 0.001$) acting as mediators.

Since the direct effect of personalization on engagement (Table 5) remains significant alongside these indirect effects, the mediation is classified as partial mediation. This implies that personalization influences engagement both directly and indirectly through cognitive (usefulness) and emotional (trust) mechanisms.

The slightly stronger mediation effect of perceived usefulness suggests that customers are more responsive to functional benefits such as efficiency and convenience. However, the role of trust remains critical in reducing uncertainty and fostering long-term engagement. Direct AI–engagement relationship is excluded to focus on indirect pathways via personalization and psychological mediators. Partial mediation is confirmed as both direct and indirect effects remain significant (Hair et al., 2019), indicating that personalization influences engagement both independently and through mediators.

These findings support H3 and H4 and validate Objective 3, highlighting the importance of psychological processes in translating personalization into meaningful customer engagement.

Table 7: Moderation Analysis

Interaction	β	p
Pers × Privacy → Engagement	-0.19	0.000

Table 7 presents the moderation analysis, examining the effect of privacy concerns on the relationship between personalization and customer engagement. The interaction term is negative and significant ($\beta = -0.19$, $p < 0.001$), supporting H7.

This indicates that privacy concerns weaken the positive relationship between personalization and engagement. Slope interpretation further clarifies this effect: when privacy concerns are low, the relationship between personalization and engagement is strong and positive, reflecting high responsiveness to tailored experiences. However, as privacy concerns increase, the slope becomes flatter, indicating reduced effectiveness of personalization strategies.

This finding highlights the presence of the privacy–personalization paradox, where customers appreciate personalized services but remain cautious about data usage. From a practical perspective, this suggests that organizations must balance personalization with transparency and ethical data practices. Thus, Objective 5 is validated, emphasizing the importance of privacy considerations in AI-driven marketing.

Table 8: Model Fit Indices

Fit Index	Recommended	Obtained
χ^2/df	<3	2.41
CFI	>0.90	0.96
TLI	>0.90	0.95
RMSEA	<0.08	0.048
SRMR	<0.08	0.045
GFI	>0.90	0.91
AGFI	>0.80	0.88

Table 8 evaluates the overall fit of the structural model. All fit indices fall within recommended thresholds, indicating a strong model fit. The χ^2/df value (2.41) is below the acceptable limit of 3, suggesting a good fit between the model and observed data. The Comparative Fit Index (CFI = 0.96) and Tucker-Lewis Index (TLI = 0.95) exceed the threshold of 0.90, indicating excellent model fit.

Additionally, the Root Mean Square Error of Approximation (RMSEA = 0.048) and Standardized Root Mean Square Residual (SRMR = 0.045) are below 0.08, reflecting minimal approximation error. The Goodness-of-Fit Index (GFI = 0.91) and Adjusted GFI (AGFI = 0.88) further confirm the adequacy of the model. Overall, these results validate the proposed conceptual framework and support Objective 6, confirming that the model provides a robust representation of the relationships among AI, personalization, psychological factors, and engagement.

Discussion

The findings of this study provide strong empirical support for the role of Artificial Intelligence (AI) as a central driver of customer engagement through personalization and psychological mechanisms. The structural model results demonstrate that AI significantly enhances customer personalization, confirming that AI-enabled systems are capable of delivering tailored experiences based on user behavior and preferences. This reinforces the notion that AI has evolved from a supporting tool to a strategic capability in modern marketing environments.

The study further establishes personalization as a key determinant of customer engagement. The strong relationship between personalization and engagement highlights that customers respond positively to relevant, customized interactions. This finding aligns with contemporary marketing theories emphasizing value co-creation and customer-centric strategies. Importantly, the results reveal that engagement is not driven solely by personalization but is also shaped by underlying psychological processes.

The mediation analysis confirms that perceived usefulness and customer trust play significant roles in translating personalization into engagement. The stronger influence of perceived usefulness suggests that customers prioritize functional benefits such as convenience and efficiency when interacting with AI systems. At the same time, trust remains essential in reducing uncertainty and fostering long-term relationships.

Another key contribution of the study lies in identifying privacy concerns as a critical boundary condition. The negative moderation effect indicates that excessive data

collection or lack of transparency can weaken the effectiveness of personalization strategies. This supports the privacy paradox and highlights the need for ethical AI implementation.

Overall, the study integrates technological, psychological, and contextual factors into a unified framework, offering a comprehensive understanding of AI-driven marketing. It demonstrates that while AI enhances engagement, its effectiveness depends on delivering value, building trust, and addressing privacy concerns simultaneously.

Conclusion

This study provides a comprehensive examination of how Artificial Intelligence (AI) enhances customer engagement through personalization and underlying psychological mechanisms. The findings demonstrate that AI significantly contributes to the development of personalized experiences, which in turn drive higher levels of customer engagement. Importantly, the study reveals that this relationship is not purely direct but is significantly mediated by perceived usefulness and customer trust.

The results highlight that customers are more likely to engage with AI-driven platforms when they perceive them as useful and trustworthy. At the same time, privacy concerns emerge as a critical moderating factor, weakening the effectiveness of personalization strategies when data-related apprehensions are high. This underscores the importance of balancing technological innovation with ethical considerations and transparency.

Overall, the study confirms that AI is not merely a technological tool but a strategic enabler of customer-centric marketing. Organizations that effectively integrate AI with personalization while addressing trust and privacy concerns will be better positioned to enhance customer engagement and sustain competitive advantage.

Future research can extend this study by adopting longitudinal designs, exploring cross-cultural contexts, and incorporating emerging AI technologies such as generative AI and explainable AI.

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