

From Personalization to Explainability: Pathways to Consumer Trust in AI-Driven Cross-Channel Marketing in India

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INTRODUCTION

Abstract: *In the evolving landscape of cross-channel marketing, particularly in emerging markets such as India, artificial intelligence (AI) acts as a transformative force by enabling personalised interactions, responsive services, innovative content, and transparent recommendations. This study develops a theoretical framework that integrates key AI attributes -personalisation, responsiveness, creativity, and explainability-to analyse their collective impact on consumer outcomes, including purchase intentions, trust, advertising value, and customer-brand relationships. Employing a quantitative methodology, Structural Equation Modelling (SEM) via AMOS was applied to survey data from 223 digitally active consumers in Tiruchirappalli, Tamil Nadu. The findings reveal that personalisation, responsiveness, and explainability significantly enhance consumer trust and strengthen brand relationship. However, AI-generated content (AIGC) influences purchase intention only indirectly through perceived value and flow experience, while the direct effect of AI features on purchasing behaviour is minimal. Overall, AI attributes substantially improved intermediate outcomes, such as trust and advertising value; however, their impact on final behavioural intentions depended critically on these mediating pathways. The study concludes that AI is not a direct driver of purchases but a catalyst for relational and value-based engagement, underscoring the necessity for businesses to prioritise explainability, ethical data practices, and authentic consumer value to achieve sustainable marketing success.*

Keywords: Artificial intelligence, cross-channel marketing, personalisation, responsiveness, consumer trust.

JEL Classification: M31, M37, C38, C83, O33, L86

Artificial intelligence (AI) is transforming marketing by enabling personalised and efficient consumer interactions across multiple channels. Applications such as intelligent chatbots, generative AI content, and explainable recommendation engines allow organisations to deliver tailored experiences through websites, social media, mobile applications, e-commerce, and in-store touchpoints. By leveraging consumer data and predictive analytics, AI enhances responsiveness, customises content, and provides relevant recommendations, thereby increasing operational efficiency and the perceived value. Studies indicate that chatbots improve real-time engagement, personalisation fosters loyalty, and AI-generated content is becoming integral to campaigns, representing not only technological advancement but also strategic evolution. While traditional marketing relied on human creativity, the surge in data and demand for personalisation now exceeds the human processing capacity. AI automates tasks, generates recommendations, and scales the content creation process. In cross channel contexts, consumers expect seamless integration—for example, discovering products via an app, receiving email promotions, and purchasing in store with AI influenced suggestions to make purchases. Marketers must unify these interactions into a coherent, value driven journey, although doing so presents significant implementation challenges.

PROBLEM STATEMENT

Despite its growing adoption, AI marketing applications yield inconsistent consumer experiences characterised by trust deficits and concerns over privacy and transparency. Practitioners face three interconnected challenges: consumer reactions vary significantly by channel (Balakrishnan et al., 2021); the relative impact of AI features (personalisation, explainability, and creativity) on loyalty and purchase intent remains unclear (Wu & Jing, 2021); and ethical concerns regarding fairness, transparency, and data security persist (Rodgers & Nguyen, 2022). Evidence highlights these issues: AI-generated content (AIGC) excels in rationality but lacks emotional appeal (Priporas et al., 2025); chatbots improve service but raise trust concerns (Ghosh, 2024); and cultural differences hinder universal strategy effectiveness (Yeo et al., 2022).

OBJECTIVES OF THE STUDY

The primary objective of this study is to examine the impact of key artificial intelligence features in cross-channel marketing—specifically personalisation,

responsiveness, AI-generated content creativity, and explainability—on consumer outcomes such as purchase intentions and loyalty, while also testing the mediating roles of trust, advertising value, flow experience, and the customer-brand relationship. Furthermore, it aims to compare the effects of AI-generated content with those of human-generated content across rational and emotional appeals and to explore how moderating factors, including cultural dimensions, privacy concerns, and perceived explainability, may enhance or diminish the effectiveness of AI-driven marketing strategies.

LITERATURE REVIEW

The incorporation of artificial intelligence (AI) in marketing has generated significant academic interest, highlighting its capacity to revolutionise consumer engagement through enhanced personalisation, responsiveness and content generation (Wu & Jing, 2021; Ghose, 2024). AI-driven personalisation reduces information overload and increases message relevance, thereby boosting purchase intention. However, its success hinges on consumer trust and willingness to share data (Yeo et al., 2022; Kim et al., 2021). Similarly, chatbots and voice assistants improve service efficiency and satisfaction, fostering brand trust and loyalty, with their acceptance varying across different cultural contexts (Gkikas et al., 2021; Kim et al., 2021). Research on AI-generated content (AIGC) reveals its strength in rational appeals, complementing the emotional depth of human-generated content; however, transparency in its use is crucial to maintain consumer trust (Priporas et al., 2025; Rodgers & Nguyen, 2022). Trust remains a central pillar in consumer decision-making, heavily influenced by AI's responsiveness and explainability, while engaging, tailored advertisements can create a flow experience that strengthens brand relationships and behavioural intentions (Kim et al., 2021; Wu & Jing, 2021). Furthermore, explainable AI (XAI) promotes transparency, reduces ambiguity, and builds trust, which in turn strengthens customer-brand relationships and loyalty, with technologies such as augmented reality (AR) aiding omnichannel continuity (Gkikas et al., 2021; Yeo et al., 2022). This synthesis underscores AI's dual role in driving marketing innovation while presenting ongoing challenges related to ethics, privacy, and contextual acceptance, which necessitate further exploration.

CONCEPTUAL FRAMEWORK AND HYPOTHESES FORMULATION

This study's conceptual framework links five AI features (Personalisation, Responsiveness, AIGC Creativity, Explainability, CBR) to Purchase Intention/Loyalty via mediating constructs (Trust, Advertising Value/Flow).

H1: Personalisation positively influences consumer trust and purchase intention.

H2: Responsiveness of AI-enabled chatbots and voice assistants positively affects trust and customer-brand relationships.

H3: AI-generated content (AIGC) creativity enhances advertising value and flow experience, leading to higher purchase intentions.

H4: The Explainability of AI applications strengthens trust and positively affects customer-brand relationships.

H5: Trust, advertising value, and flow experience mediate the relationship between AI features and purchase intention.

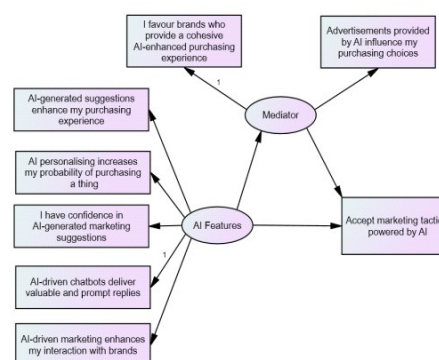


Figure.1: Conceptual Framework based on AMOS output

METHODOLOGY

Employing a quantitative design, this study surveyed 223 consumers in Tiruchirappalli, India (May-June 2025) via a structured questionnaire with validated five-point Likert scales. The purposively sampled respondents, primarily middle-aged (35-44 years) and digitally active, reported frequent exposure to AI across channels such as in-store recommendations and e-commerce. Data were analysed using Structural Equation Modelling (SEM) in AMOS, a method chosen for its capacity to test complex relationships with mediating variables simultaneously. This approach facilitates a comprehensive assessment of how AI features influence consumer outcomes in an emerging market context.

DATA ANALYSIS

Testing the Hypothesis:H1

The chi-square statistic ($CMIN = 3.958$, $df = 1$, $p < 0.05$) and relative chi-square ($CMIN/df = 3.958$) were within the acceptable limits for structural models. The goodness-of-fit measures—GFI (.988), AGFI (.930), and CFI (.939)—all surpassed the recommended threshold of .90, indicating that the model adequately represented the observed data. The Root Mean Square Residual ($RMR = .088$) fell below the .10 threshold, thereby reinforcing the adequacy of the model.

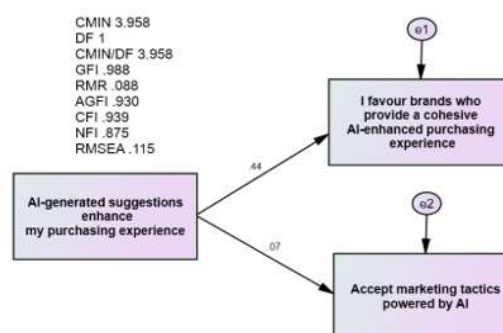


Figure 2: Results of the Structural Model for H1: The Impact of Personalisation on Trust and Purchase Intention

The regression analysis indicated a robust and statistically significant impact of personalisation on trust (Estimate = .501, S.E. = .070, C.R. = 7.200, $p < .001$; Standardised Estimate = .435). This finding demonstrates that AI-generated personalised suggestions markedly improve consumer trust, especially in brands that offer integrated AI-enhanced purchasing experiences. The relationship between personalisation and purchase intention was positive but not statistically significant (Estimate = .074, S.E. = .067, C.R. = 1.097, $p = .273$; Standardised Estimate = .073), indicating that personalisation alone does not directly influence consumer acceptance of AI-driven marketing strategies.

Table 1. Testing H1's Regression Weights and Hypothesis

Path Tested	Estimate	S.E.	C.R.	p-value	Std. Estimate	Result
Trust <--- Personalisation	0.501	0.07	7.2	***	0.435	Supported
Purchase Intention <--- Personalisation	0.074	0.067	1.097	0.273	0.073	Not Supported

Testing the Hypothesis: H2

Hypothesis H2 posits that the responsiveness of AI-enabled chatbots and voice assistants has a positive impact on consumer trust and the customer-brand relationship. The structural model was estimated using AMOS, and the model fit indices indicated an acceptable, albeit suboptimal, level of fit. The chi-square statistic (CMIN = 12.792, $df = 1$, $p < 0.01$) was significant, and the relative chi-square (CMIN/df = 12.792) exceeded the recommended threshold, suggesting potential model complexity. The GFI (.964) and CFI (.882) approached the recommended .90 threshold, whereas AGFI (.784) and NFI (.874) were marginal, indicating the potential for model enhancement.

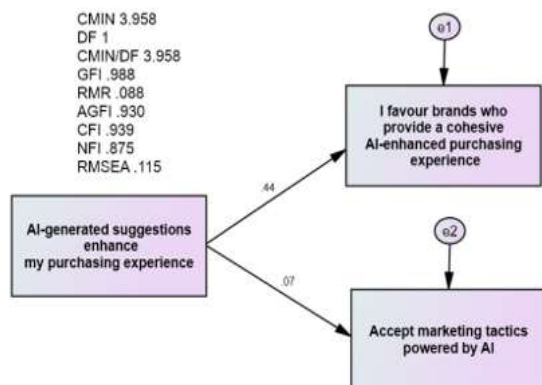


Figure 3: Results of the Structural Model for H2: Impact of Responsiveness on Trust and Customer-Brand Relationship

The relationship between responsiveness and trust was positive and statistically significant (estimate = .464, SE = .077, C.R. = 5.993, $p < .001$; Standardised Estimate = .373). This suggests that consumers who view chatbots and voice assistants as responsive are more inclined

to trust brands that offer integrated AI-enhanced purchasing experience. The relationship between responsiveness and the customer-brand relationship was found to be positive and significant (Estimate = .489, S.E. = .065, C.R. = 7.529, $p < .001$; Standardised Estimate = .451). These findings corroborate previous research, indicating that AI system responsiveness enhances service quality perceptions and strengthens consumer-brand relationships (Gkikas et al., 2021; Ghose, 2024).

Table 2. Testing H2's Regression Weights and Hypothesis

Path Tested	Estimate	S.E.	C.R.	p-value	Std. Estimate	Result
Trust <--- Responsiveness	0.464	0.077	5.993	***	0.373	Supported
Customer-Brand Relationship <--- Responsiveness	0.489	0.065	7.529	***	0.451	Supported

Testing the Hypothesis: H3

The structural model for this relationship was evaluated using AMOS, and the fit indices indicated a robust model fit. The chi-square statistic was significant (CMIN = 3.012, $df = 1$, $p < 0.05$), and the relative chi-square (CMIN/df = 3.012) was within the acceptable range. The Goodness-of-Fit Index (GFI = .997), Comparative Fit Index (CFI = .924), and Normed Fit Index (NFI = .989) met or surpassed the recommended threshold of .90, indicating a satisfactory model fit.

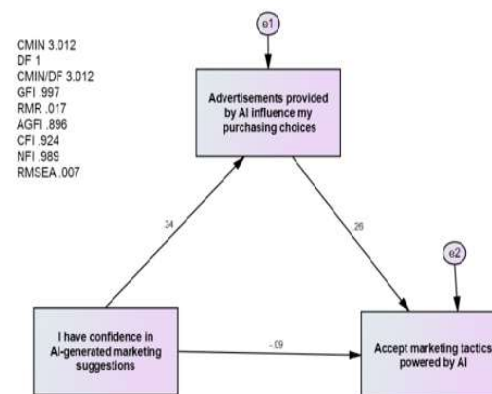


Figure 4: Structural Model Outcomes for H3: Impact of AIGC Creativity on Advertising Value, Flow Experience, and Purchase Intention

The regression findings offer limited support for H3. The relationship between AIGC creativity, advertising value, and flow was positive and statistically significant (Estimate = .344, S.E. = .064, C.R. = 5.370, $p < .001$; Standardised Estimate = .339). This suggests that consumers who trust AI-generated marketing recommendations view AI advertisements as having an impact on their purchasing decisions. Additionally, advertising value and flow significantly and positively

Table 5. Regression Weights and Testing the Hypothesis for H5

Path Tested	Estimate	S.E.	C.R.	p-value	Std. Estimate	Result
Mediator <--- AI Features	1.088	0.121	9.025	***	0.91	Supported
Trust <--- Mediator	1	-	-	-	0.805	Supported
Advertising Value/Flow <--- Mediator	0.615	0.087	7.058	***	0.547	Supported
Purchase Intention <--- AI Features	-.382	0.582	-.658	0.511	-.294	Not Supported
Purchase Intention <--- Mediator	0.543	0.506	1.073	0.283	0.5	Not Supported

FINDINGS / RESULTS

The structural equation modelling (SEM) results confirmed an adequate model fit and revealed distinct pathways through which AI features influence consumers. Personalisation significantly increased trust ($\beta=.435$) but did not directly affect purchase intention. Responsiveness strongly predicted both trust ($\beta=.373$) and customer-brand relationships ($\beta=.451$). AIGC creativity enhanced advertising value and flow ($\beta=.339$), which then positively impacted purchase intention, although its direct effect was negligible. Explainability substantially built trust ($\beta=.558$), which subsequently strengthened brand relationships, demonstrating an indirect relational effect. Overall, AI features significantly predicted key mediators such as trust and advertising value, but their direct impact on purchase intention was insignificant. These findings underscore that AI's influence of AI on consumer behaviour is primarily indirect, mediated by trust and perceived value, rather than direct.

CONCLUSION AND IMPLICATIONS

This study examined AI's role of AI in cross-channel marketing and found that features such as personalisation and explainability significantly boost consumer trust, advertising value, and brand relationships. However, their impact on purchase intention is indirect and mediated primarily through these factors. Theoretically, this reinforces the idea that AI serves as a catalyst for confidence and value, rather than being a direct driver of sales. Practically, this implies that successful AI integration requires prioritising transparency, ethical data use, and genuine value creation to build trust, not just technological deployment. A key limitation is the geographic and contextual specificity of the sample, which may affect its generalisability. Future research should test this model across diverse cultures and industries, incorporate additional variables like perceived risk or emotional appeal, and explore emerging AI modalities such as generative agents or AR/VR to advance both theory and practice in creating seamless AI-enhanced customer experiences.

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