# AI-Driven Personalization in Social Media Marketing: A Secondary-Data Analysis of Consumer Trust, Perceived Relevance and Purchase Intention

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**Abstract**

Artificial intelligence (AI) is transforming social media marketing through consumer-data analysis, preference prediction, and personalized advertisements, recommendations, and content. While personalization enhances perceived relevance and consumer experience, it also raises concerns about privacy, transparency, surveillance, and trust. This study reviews emerging literature on AI-driven personalization in social media marketing using secondary data and thematic synthesis. Guided by the Stimulus–Organism–Response (S-O-R) framework, the review examines relationships among personalization, perceived relevance, consumer trust, privacy concerns, engagement, and purchase intention. Findings indicate that personalization generally improves relevance, usefulness, and engagement, but its effectiveness depends on trust and responsible data practices. The review highlights a personalization–privacy paradox and identifies transparency, consumer control, ethical data governance, and authenticity as essential for sustainable AI-enabled marketing. Future research should emphasize cross-cultural, longitudinal, behavioural, and responsible AI perspectives.

**Keywords:** Artificial Intelligence, AI Personalization, Social Media Marketing, Consumer Trust, Perceived Relevance, Customer Experience, Privacy, Purchase Intention, Consumer Engagement

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## 1. Introduction

Social media has transformed the relationship between firms and consumers from largely one-way communication toward continuous, data-rich interaction. Consumer searches, clicks, likes, shares, comments, viewing patterns and purchases generate behavioural signals that can be processed to understand preferences and tailor marketing communication. Artificial intelligence has expanded the scale and speed of this process by combining machine learning, predictive analytics, natural language processing and recommendation technologies. The result is a shift from broad segmentation toward increasingly individualized marketing experiences (Beyari & Hashem, 2025; Gujar, 2024; Gowri, 2024). AI-driven personalization is now embedded in product recommendations, targeted advertising, adaptive content, chatbots, personalized email, virtual try-ons and algorithmically selected social media content. Beyari and Hashem (2025) conceptualize AI personalization as a means of strengthening customer experience through more individualized social media strategies. Gujar (2024) similarly describes AI personalization as an important customer-centric mechanism for delivering tailored content, recommendations and services, while Indrawan et al. (2024) emphasize AI-enabled audience segmentation, targeting, chatbots and personalized interaction as major developments in social media marketing.

However, the value of personalization is not automatic. A highly individualized message can be perceived as useful and timely, but it can also feel intrusive when consumers recognize that their behaviour is being monitored. This tension is central to contemporary AI marketing. Teepapal (2025), using an S-O-R model, found that AI-enabled personalization positively influences trust, privacy concerns and perceived usefulness, while trust and usefulness contribute positively to engagement; importantly, personalization itself did not directly produce a significant engagement effect. These finding challenges simple claims that more personalization necessarily leads to stronger consumer responses. Recent literature further shows that AI personalization is becoming a broader strategic issue rather than only a targeting technique. Häglund & Björklund (2024) identify perceived relevance, usefulness, convenience, engagement and purchase intention as recurring benefits of AI-driven personalization, but also identify privacy concern, intrusiveness, algorithmic opacity and authenticity as recurring constraints. Nkembuh (2024) similarly reports opportunities for greater audience engagement, brand perception and conversion alongside ethical and implementation challenges.

A further issue is the increasing sophistication of AI-based personalization. Alipour et al. (2025) examine AI-driven marketing personalization using convolutional neural networks to decode consumer behaviour, illustrating the movement toward computationally sophisticated systems capable of interpreting large-scale behavioural data. Chandrakumar (2024) provides consumer-level evidence among Gen-Z and reports that personalized experiences were associated with higher satisfaction and stronger purchase decisions, while a large proportion of respondents supported stronger regulation of AI personalization. Against this background, the present study addresses a specific research problem: the literature contains substantial evidence about AI personalization, but its consequences are distributed across separate discussions of relevance, usefulness, trust, customer experience, engagement, purchase intention, privacy and ethics. The paper therefore asks: How does AI-driven personalization influence consumer evaluations and behavioural responses in social media marketing, and under what conditions does personalization create value or concern?

The paper contributes by synthesizing the literature into a coherent S-O-R framework, distinguishing cognitive evaluations from trust and customer-experience responses, and explicitly incorporating privacy concerns and transparency/consumer control as contextual conditions. Unlike a technology-centric view that assumes direct effects of AI, the proposed framework emphasizes the consumer interpretation process through which personalization becomes either marketing value or perceived intrusion.

## 2. Theoretical Background

### *2.1 Stimulus–Organism–Response Perspective*

The Stimulus–Organism–Response (S-O-R) framework provides the principal theoretical foundation. Originating in environmental psychology, the framework proposes that external stimuli influence an individual's internal cognitive and affective states, which then shape behavioural responses (Mehrabian & Russell, 1974). The model is particularly suitable for digital marketing because algorithmic interfaces provide environmental cues that consumers interpret before forming behavioural responses. In the present context, AI-driven personalization constitutes the stimulus because it changes the form, relevance, timing and content of social media marketing communication. Perceived relevance and usefulness represent cognitive organismic responses, while trust and customer experience capture broader evaluative responses. Engagement and purchase intention are positioned as behavioural responses. Teepapal (2025) provides direct support for this structure by empirically testing AI personalization within an S-O-R model and identifying trust and perceived usefulness as significant explanatory mechanisms for engagement.

### *2.2 AI-Driven Personalization as the Marketing Stimulus*

Personalization refers to tailoring marketing communication, recommendations or experiences to individual or inferred consumer characteristics. AI expands personalization by enabling real-time processing of large datasets and dynamic prediction of consumer preferences. Gujar (2024) describes this shift as a move toward detailed customer understanding in which AI is used to deliver tailored content, recommendations and services. The strategic significance of personalization is also evident in social media. Indrawan et al. (2024) highlight AI-enabled audience segmentation, real-time data analysis, targeted communication and AI-powered chatbots as mechanisms through which social media marketing becomes more precise and interactive. Alipour et al. (2025) extend this discussion by showing how advanced machine-learning approaches can be used to decode consumer behaviour and support marketing personalization. Together, these studies suggest that AI personalization is not a single tool but a technological capability encompassing prediction, recommendation, targeting and content adaptation.

### *2.3 Perceived Relevance and Perceived Usefulness*

Personalization creates value when consumers perceive that the information shown to them is relevant to their needs and useful for decision-making. Relevance concerns the perceived fit between communication and consumer interests, whereas usefulness concerns the practical value of the information or recommendation. AI-driven systems increase the probability of this fit by continuously learning from behavioural signals. The empirical evidence is consistent with this argument. Teepapal (2025) reports a positive influence of AI-enabled personalization on perceived usefulness and shows that usefulness contributes to engagement. Häglund & Björklund (2024) similarly identify relevance, usefulness and convenience as recurring benefits of AI personalization across the reviewed literature. Chandrakumar (2024) further reports strong consumer preference for personalized recommendations and links personalized experiences with satisfaction and purchase-related responses.

### *2.4 Consumer Trust*

Trust is critical because consumers usually cannot observe how AI systems collect data, classify them or generate recommendations. Trust therefore concerns more than recommendation accuracy; it includes beliefs about whether the platform and brand are competent, reliable and responsible in their use of

consumer information. The classic trust literature suggests that perceived ability, benevolence and integrity contribute to trust judgments (Mayer et al., 1995), while online shopping research demonstrates the importance of trust for digital adoption and consumer response (Gefen et al., 2003). The AI-personalization literature reinforces this relationship. Teepapal (2025) identifies trust as a significant consequence of AI personalization and a significant antecedent of engagement. Beyari and Hashem (2025) likewise emphasize customer experience and responsible use of AI in personalized social media strategies. Walker and Milne (2024) further frame AI-driven technology and privacy as a social-media responsibility issue, placing responsible data use at the centre of consumer confidence.

### *2.5 Customer Experience*

Customer experience represents the broader evaluation arising from consumers' interactions with the firm, platform and personalized marketing environment. It encompasses cognitive, emotional and interactional responses across touchpoints. Beyari and Hashem (2025) position AI personalization as a mechanism for enhancing customer experience by tailoring social media marketing strategies to consumers. Chandrakumar (2024) similarly reports that personalized experiences can improve brand satisfaction and purchase decisions among Gen-Z consumers. Gowri (2024) argues that AI technologies such as recommendation systems, predictive analytics and chatbots can personalize touchpoints and improve satisfaction and loyalty, while also emphasizing the need for privacy protection and ethical data practices. Thus, customer experience can be understood as a major evaluative state through which the benefits of AI personalization become visible to the consumer.

### *2.6 Privacy, Transparency and Consumer Control*

Personalization requires data, and data-intensive personalization creates an inherent trade-off. Consumers may value personalized recommendations while simultaneously becoming concerned about surveillance, data misuse and loss of control. Teepapal (2025) provides direct evidence of this duality by finding that AI-enabled personalization positively affects both trust and privacy concerns. The privacy challenge is reinforced by the broader AI-marketing literature. Indrawan et al. (2024) identify data privacy, transparency, algorithmic fairness and responsible AI as central ethical concerns in AI-enabled social media marketing. Walker and Milne (2024) similarly emphasize social-media responsibility in relation to AI and privacy. Nkembuh (2024) argues that the long-term effectiveness of AI personalization depends on navigating ethical considerations alongside communication effectiveness.

## 3. Methodology

The paper adopts a secondary-data research design based on focused thematic synthesis of the literature supplied for the study. The objective is conceptual integration rather than statistical meta-analysis. The reviewed corpus comprises research addressing AI-driven personalization, social media marketing, customer experience, consumer trust, perceived usefulness/relevance, engagement, purchase intention, privacy and ethical governance. The evidence base includes empirical studies, conceptual articles and systematic reviews, supplemented by foundational theoretical sources. Thematic synthesis was conducted across six analytical domains: (1) AI personalization capability; (2) perceived relevance and usefulness; (3) consumer trust; (4) customer experience; (5) engagement and purchase intention; and (6) privacy, transparency and responsible AI. The synthesis compared convergent findings, retained contradictory findings rather than averaging them away, and then integrated recurring mechanisms within the S-O-R framework. This approach is consistent with the review logic of Häglund & Björklund (2024), which organizes the literature around application domains, mechanisms, outcomes and constraints. The present study extends that logic by focusing specifically on social-media marketing and by positioning customer experience alongside trust and perceived relevance.

## 4. Findings and Discussion

### *4.1 Personalization Creates Value Primarily Through Relevance and Usefulness*

Across the reviewed literature, the most consistent positive outcome of AI personalization is improved relevance. AI systems allow firms to move beyond generic content and adapt communication to behavioural signals, preferences and contextual conditions. Gujar (2024) identifies tailored content, recommendations and services as major expressions of AI-enabled personalization, while Gowri (2024) highlights recommendation systems, predictive analytics and chatbots as tools for making customer interactions more relevant and timely. Yet relevance alone does not guarantee behavioural response. Teepapal (2025) found that AI personalization did not directly increase engagement, whereas perceived usefulness and trust did. This finding implies that technological targeting capability must be converted into consumer-perceived value before it becomes behaviourally meaningful.

### *4.2 Trust Emerges as the Central Evaluative Mechanism*

Trust repeatedly appears as the mechanism that converts personalization into more favorable consumer responses. Häglund & Björklund (2024) identify trust as the main mediating factor linking AI

personalization with engagement, satisfaction, loyalty and purchase intention across the reviewed literature. Teepapal (2025) similarly identifies trust as a significant mediator of engagement, while Beyari and Hashem (2025) connect responsible AI-enabled personalization with enhanced customer experience. Thus, trust functions as a bridge between technological capability and consumer acceptance. The role of trust is also consistent with the ethical dimension of AI marketing. Personalized communication can become more persuasive as algorithms know more about the consumer, but this same informational asymmetry can undermine confidence when the process is not transparent. Walker and Milne (2024) and Indrawan et al. (2024) therefore shift the discussion from personalization efficiency toward responsible data use, transparency and consumer trust.

### *4.3 The Personalization–Privacy Paradox*

A central finding across the literature is the coexistence of personalization benefits and privacy concerns. The same data that allows an algorithm to make a recommendation more relevant may also make consumers feel monitored. Teepapal's (2025) finding that AI personalization positively influences both trust and privacy concerns provides direct evidence of this paradox. Häglund & Björklund (2024) similarly identify perceived intrusiveness, opacity and privacy concerns as important constraints on the value of personalization. Privacy concern should therefore not be treated merely as a separate negative outcome. Rather, it is a contextual evaluation of the same personalization process that produces relevance and usefulness. The strategic problem for marketers is not simply to maximize personalization, but to optimize the perceived value of personalization relative to its perceived privacy cost.

### *4.4 Customer Experience is a Broader Outcome than Engagement Alone*

The evidence also suggests that customer experience should be distinguished from behavioural engagement. Beyari and Hashem (2025) focus explicitly on enhanced customer experience, while Chandrakumar (2024) reports that personalized experiences can improve satisfaction and purchase decisions among Gen-Z consumers. Gowri (2024) similarly links personalized digital interactions to satisfaction, loyalty and engagement. Therefore, the immediate consumer consequence of AI personalization may be an improved or deteriorated experience rather than a direct purchase. Purchase intention and engagement are more plausibly downstream responses to how the consumer evaluates the personalized interaction. This interpretation explains why Teepapal (2025) found no direct personalization-to-engagement effect despite significant effects through trust and usefulness.

### *4.5 Ethical Governance is Becoming Part of the Personalization Value Proposition*

The recent literature increasingly treats responsible AI as part of marketing effectiveness rather than as a separate compliance issue. Indrawan et al. (2024) emphasize transparency, privacy and fairness as necessary conditions for trust in AI-enabled social media marketing. Nkembuh (2024) similarly argues that AI personalization must be accompanied by ethical implementation practices. Walker and Milne (2024) frame privacy responsibility as a central issue in AI-mediated social media. Chandrakumar (2024) reports that 88% of surveyed Gen-Z respondents supported stricter regulation of AI-driven personalization, demonstrating that consumer acceptance may depend on perceptions of governance as well as convenience.

## 5. Proposed Conceptual Framework and Propositions

The proposed framework integrates the recurring relationships identified in the literature. AI-driven personalization is treated as the stimulus. AI-driven personalization is treated as the stimulus. Perceived relevance/usefulness, consumer trust and customer experience form the principal organismic evaluations,

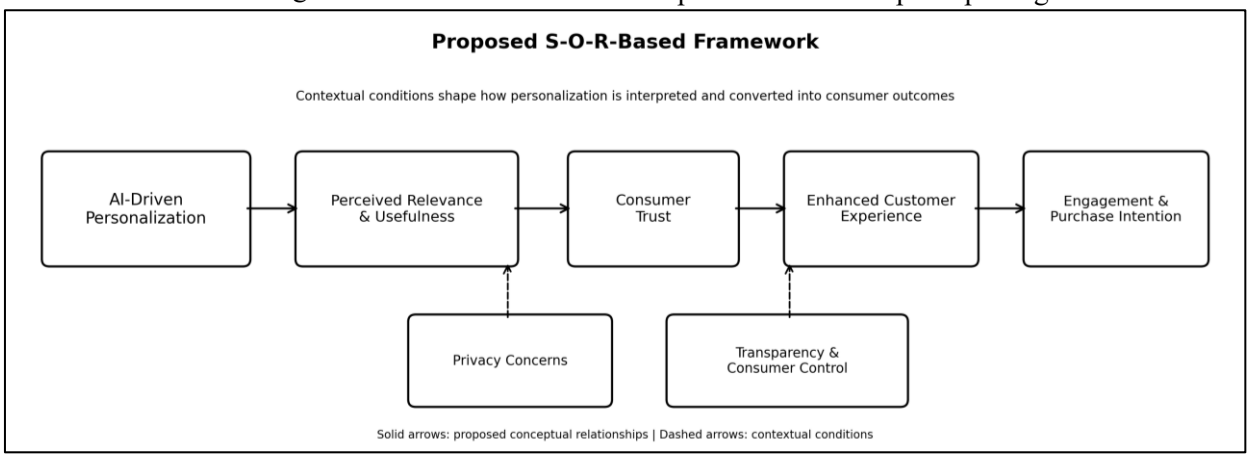


*Figure 1. Proposed S-O-R-based conceptual framework for AI-driven personalization in social media marketing.*

while engagement and purchase intention represent behavioural responses. Privacy concerns and transparency/consumer control are positioned as contextual conditions that influence how personalization is interpreted. The framework is intended as a parsimonious basis for empirical testing rather than a claim that every relationship is universal or strictly linear.

**Proposition 1. AI-driven personalization and perceived relevance/usefulness**

AI-driven personalization positively influences perceived relevance and perceived usefulness because algorithmic systems can tailor content, recommendations and timing to consumers inferred needs and preferences (Gujar, 2024; Teepapal, 2025; Häglund & Björklund, 2024)).

**Proposition 2. AI-driven personalization and consumer trust**

AI-driven personalization positively influences consumer trust when consumers perceive the resulting content and recommendations as useful, accurate and responsibly delivered (Teepapal, 2025; Beyari & Hashem, 2025).

**Proposition 3. Perceived relevance/usefulness and consumer trust**

Perceived relevance and usefulness positively influence consumer trust because relevant communication can signal that the platform understands consumer needs and provides decision-supporting information (Teepapal, 2025).

**Proposition 4. Consumer trust and enhanced customer experience**

Consumer trust positively influences customer experience because confidence in the platform and brand reduces uncertainty surrounding AI-mediated interactions and allows consumers to engage more comfortably with personalized content (Beyari & Hashem, 2025; Walker & Milne, 2024).

**Proposition 5. Enhanced customer experience, engagement and purchase intention**

Enhanced customer experience positively influences consumer engagement and purchase intention. Evidence from Chandrakumar (2024), Gowri (2024) and Häglund & Björklund (2024) indicates that personalized experiences can improve satisfaction, interaction and brand-related outcomes, although Teepapal (2025) suggests that such effects may be indirect rather than automatic.

**Proposition 6. Privacy concerns and transparency as contextual conditions**

Privacy concerns weaken the favorable consequences of AI personalization when consumers perceive data practices as intrusive, opaque or disproportionate to the benefits received, whereas transparency and meaningful consumer control strengthen trust and acceptance (Teepapal, 2025; Indrawan et al., 2024; Walker & Milne, 2024; Nkembuh, 2024; Häglund & Björklund, 2024).

## 6. Theoretical Implications

The paper extends the S-O-R perspective to AI-enabled social media marketing by distinguishing three layers of consumer response. First, perceived relevance and usefulness represent cognitive evaluations of the personalized stimulus. Second, trust and customer experience represent broader consumer evaluations of the interaction. Third, engagement and purchase intention represent behavioural consequences. This layered interpretation is consistent with Teepapal's (2025) finding that personalization does not necessarily generate engagement directly but does so through perceived usefulness and trust. Second, the framework integrates the personalization literature with responsible-AI thinking. Recent studies indicate that privacy, transparency, fairness and consumer control increasingly determine whether consumers accept or resist personalization (Indrawan et al., 2024; Nkembuh, 2024; Walker & Milne, 2024). The framework therefore moves ethical governance from a peripheral discussion toward a condition of sustained marketing effectiveness. Third, the framework conceptualizes customer experience as an important outcome in its own right. Beyari and Hashem (2025), Chandrakumar (2024) and Gowri (2024) suggest that AI personalization is valuable not only because it can influence purchase decisions but because it changes the quality and relevance of consumer interactions.

## 7. Managerial Implications

Managers should design AI personalization around consumer value rather than technological sophistication. Personalization should improve relevance, reduce effort in search and support decision-making. Gujar (2024) and Gowri (2024) emphasize the role of AI-powered recommendations, predictive analytics and tailored interactions in improving customer-facing outcomes. Second, firms should build trust alongside personalization. Accurate recommendations, reliable content, clear disclosure and responsible data practices should be treated as components of the personalization strategy itself. Teepapal (2025) demonstrates that trust and usefulness, rather than personalization alone, are important drivers of engagement. Third, organizations should provide meaningful transparency and consumer control. Consumers should understand, at an appropriate level, why particular content is shown and how personal data contributes to the process. This is consistent with the ethical emphasis of Indrawan et al. (2024), Nkembuh (2024) and Walker and Milne (2024). Finally, marketers should measure AI personalization using a broader performance

dashboard that includes perceived relevance, trust, customer experience, privacy concern, engagement, conversion and purchase intention rather than relying solely on impressions or click-through rates. The literature suggests that technological personalization can generate indirect and sometimes contradictory effects, making single-metric evaluation inadequate (Teepapal, 2025; Häglund & Björklund, 2024).9. Limitations

The paper has limitations associated with its secondary-data design. The synthesis is interpretive rather than a meta-analysis and therefore does not estimate pooled effect sizes. The literature is also rapidly changing, particularly because AI personalization and generative AI evolve faster than conventional marketing technologies. The supplied studies use different contexts, samples and outcome measures, limiting direct comparability. Some emerging publications are also recent and therefore have limited accumulated citation histories. The framework should consequently be treated as a theory-building contribution requiring empirical validation.

## 8. Conclusion

AI-driven personalization has moved social media marketing beyond broad segmentation toward adaptive, individualized and data-intensive customer interaction. The literature reviewed in this paper indicates that personalization can improve relevance, usefulness, satisfaction, engagement and purchase-related responses, but these outcomes are not automatic. Trust and customer experience are central to translating technological personalization into consumer value, while privacy concerns can simultaneously emerge from the same data practices that make personalization possible.

The central contribution of the paper is an S-O-R-based framework that conceptualizes AI personalization as a stimulus, perceived relevance/usefulness, trust and customer experience as the major organismic evaluations, and engagement and purchase intention as behavioural responses. Privacy concerns and transparency/consumer control are treated as contextual conditions rather than peripheral ethical issues. This perspective shifts attention from the narrow question of whether AI personalization works toward the more consequential question of when, why and under what conditions consumers experience AI personalization as valuable, trustworthy and responsible.

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