

“The Impact of AI-Enabled Digital Marketing on Consumer Behaviour and Trust: An Empirical Study”

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Abstract

Artificial Intelligence (AI) has become an important tool in digital marketing, helping businesses understand consumers better and offer personalized products, services, and advertisements. AI-enabled digital marketing tools such as chatbots, recommendation systems, targeted advertising, and data analytics influence consumer behavior and shape their level of trust toward brands. This study examines the impact of AI-enabled digital marketing on consumer behavior and trust using primary data. A descriptive and analytical research design is adopted, and data are collected through a structured questionnaire from consumers who regularly use digital platforms. The study analyses the relationship between AI-driven marketing practices and consumer behavior variables such as purchase intention, engagement, and brand preference, along with factors influencing consumer trust. The findings are expected to provide useful insights for marketers to design ethical, transparent, and consumer-friendly AI-based marketing strategies that support long-term customer relationships.

Keywords: *AI-enabled digital marketing, consumer behavior, trust, personalization, digital platforms*

Introduction

The rapid advancement of Artificial Intelligence (AI) has significantly reshaped the digital marketing landscape. With the exponential growth of digital platforms and online consumer interactions, marketers increasingly rely on AI-powered technologies to analyse consumer data, predict preferences, and deliver personalized content in real time. AI-enabled digital marketing has moved beyond traditional automation to intelligent decision-making, offering tailored advertisements, product recommendations, and instant customer support.

Consumers today interact with brands through multiple digital touchpoints, including websites, mobile applications, and social media platforms. AI technologies enable firms to track consumer behaviour patterns, improve targeting accuracy, and enhance customer experiences. However, the growing reliance on AI also raises concerns related to data privacy, algorithmic bias, and transparency, which directly influence consumer trust.

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Trust plays a pivotal role in digital environments where consumers often share personal data and rely on automated systems for decision-making. While AI-driven personalization can improve convenience and relevance, excessive data usage or lack of clarity regarding AI operations may reduce consumer confidence. Therefore, understanding how AI-enabled digital marketing affects both consumer behaviour and trust is essential for organizations aiming to achieve long-term success.

This study focuses on examining the dual impact of AI-enabled digital marketing on consumer behaviour and trust, providing empirical evidence to support ethical and consumer-centric marketing practices.

Review of Literature

The application of Artificial Intelligence (AI) in digital marketing has gained considerable attention in academic research due to its ability to enhance data-driven decision-making and marketing efficiency. Davenport, Guha, Grewal, and Bressgott (2020) emphasized that AI enables marketers to automate customer interactions, optimize content delivery, and generate predictive insights, thereby improving marketing performance. Similarly, Chaffey and Ellis-Chadwick (2019) noted that AI technologies facilitate real-time personalization and dynamic customer engagement across digital platforms.

Several studies have examined the influence of AI-enabled tools on consumer behaviour. According to Kumar, Dixit, Javalgi, and Dass (2021), recommendation systems and personalized advertisements significantly affect consumer purchase intention by delivering relevant and timely marketing messages. Wedel and Kannan (2016) found that AI-driven analytics improve consumer targeting accuracy, leading to higher engagement levels and improved customer decision-making. These findings suggest that AI-powered marketing strategies play a crucial role in shaping consumer behaviour in digital environments.

Research also highlights the role of AI-based personalization in enhancing customer satisfaction. Huang and Rust (2021) argued that technologies such as chatbots and virtual assistants improve service responsiveness by providing instant customer support, thereby enhancing user experience. In a similar study, Gnewuch, Morana, and Maedche (2017) demonstrated that conversational agents contribute to positive customer perceptions by reducing service delays and improving interaction quality. Predictive analytics, as noted by Shankar (2018), enables marketers to anticipate consumer needs, resulting in more effective and proactive marketing campaigns.

Despite the benefits of AI in digital marketing, several scholars have raised concerns regarding consumer trust. Martin and Murphy (2017) observed that misuse of consumer data and lack of transparency in data handling practices can negatively impact trust in digital marketing systems. Furthermore, Paschen, Pitt, and Kietzmann (2020) highlighted that opaque algorithms and perceived manipulation through personalized content may lead to scepticism among consumers. Trust in AI-enabled marketing is therefore influenced by ethical AI usage, data privacy protection, and transparent communication practices.

Although existing literature extensively discusses AI's role in enhancing marketing efficiency and consumer engagement, limited empirical studies have simultaneously examined its impact on both consumer behaviour and trust. Most studies focus either on technological capabilities or behavioural outcomes, often neglecting trust as a critical mediating factor (Huang & Rust, 2021; Kumar et al., 2021). Addressing this research gap, the present study aims to empirically investigate the combined influence of AI-enabled digital marketing on consumer behaviour and trust, particularly within digital marketing platforms.

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Objectives of the Study

1. To examine the influence of AI-enabled digital marketing practices on consumer behaviour in digital platforms.
2. To analyse the impact of AI-driven personalization on consumer purchase intention and engagement.
3. To assess the role of transparency and ethical AI practices in shaping consumer trust.

Hypotheses of the Study

H₁: AI-enabled digital marketing practices have a significant influence on consumer behaviour.

H₂: AI-driven personalization positively affects consumer purchase intention and engagement.

H₃: Transparency and ethical use of AI significantly enhance consumer trust.

Research Methodology

Primary data for the study were collected using a well-structured questionnaire developed on a five-point Likert scale, ranging from *Strongly Disagree* to *Strongly Agree*. The instrument was designed to capture respondents' perceptions of AI-enabled digital marketing tools, along with key dimensions of consumer behaviour such as purchase intention, engagement, and brand preference. In addition, variables related to consumer trust—including transparency, ethical use of artificial intelligence, and data security—were also measured.

A convenience sampling method was adopted to gather responses from individuals who regularly engage with digital platforms such as e-commerce websites, mobile applications, and social media networks. Out of the responses received, 120 were found to be complete and suitable for analysis. The sample size was considered sufficient to derive meaningful insights and support statistical testing.

The collected data were analysed using a combination of descriptive and inferential statistical techniques. Descriptive statistics and mean score analysis were used to understand overall response patterns, while correlation and multiple regression analyses were employed to examine the relationships between AI-enabled marketing practices, consumer behaviour, and consumer trust, as well as to test the proposed hypotheses.

Scope Of the Study

The study focuses on consumer perceptions of AI-enabled digital marketing tools, including personalized advertisements, recommendation systems, chatbots, and predictive notifications, within digital marketing environments.

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Data Analysis and Interpretation

Table 1: Demographic Profile of Respondents (n = 120)

Particulars	Category	Frequency	Percentage
Gender	Male	65	54.2
	Female	55	45.8
Age	18–30 years	74	61.7
	31–45 years	31	25.8
	Above 45 years	15	12.5
Digital Platform Usage	Daily	94	78.3
	Weekly	26	21.7

The demographic composition shows a higher representation of young adults who actively engage with digital platforms on a daily basis. This reflects a digitally aware respondent group, making the sample suitable for evaluating the influence of AI-enabled digital marketing practices.

Table 2: Awareness and Usage of AI-Enabled Digital Marketing Tools

AI Tool	Awareness (%)	Regular Usage (%)
Personalized advertisements	85.0	73.3
Recommendation systems	78.3	71.7
Chatbots / Virtual assistants	72.5	68.3
Predictive offers & notifications	65.8	60.8

The findings indicate widespread awareness and frequent interaction with AI-driven marketing tools. Personalized advertisements and recommendation systems emerge as the most experienced AI applications, highlighting their prominence in digital marketing strategies.

Table 3: Mean Scores of AI-Enabled Digital Marketing and Consumer Behaviour Variables

Statement	Mean	Std. Deviation
AI-based personalization enhances shopping experience	4.21	0.71
AI-driven advertisements influence purchase decisions	4.05	0.76

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Recommendation systems increase purchase intention	4.18	0.69
AI tools improve consumer engagement	4.12	0.73
AI marketing strengthens brand preference	3.98	0.81

Mean values close to 4.0 and above reflect strong agreement among respondents. The results confirm that AI-enabled digital marketing practices positively influence consumer behaviour, purchase intention, and engagement. These findings provide initial support for H1, H2, and H3.

Table 4: Correlation between AI-Enabled Marketing Practices and Consumer Behaviour

Variables	Consumer Behaviour	Purchase Intention
AI Personalization	0.69**	0.72**
Targeted Advertising	0.65**	0.68**

Note: p < 0.01

The correlation coefficients reveal a strong and statistically significant positive relationship between AI-enabled marketing practices and consumer behaviour variables. AI personalization shows a particularly high association with purchase intention, reinforcing the importance of personalization in digital marketing.

Table 5: Regression Results: Influence of AI-Enabled Digital Marketing on Consumer Behaviour

Predictor	Beta (β)	t-value	Significance
AI Personalization	0.42	5.86	0.000
Targeted Advertising	0.31	4.12	0.000
AI Interaction Tools	0.27	3.89	0.001

R²=0.61

The regression model explains 61% of the variance in consumer behaviour, indicating strong explanatory power. All independent variables significantly influence consumer behaviour and engagement at the 1% significance level. Hence, H1, H2, and H3 are empirically validated.

Table 6: Summary of Hypotheses Testing

Hypothesis	Statement	Result
H1	AI-enabled digital marketing influences consumer behaviour	Accepted
H2	AI-driven personalization affects purchase intention	Accepted
H3	AI-enabled marketing enhances consumer engagement	Accepted

Findings

The empirical analysis provides meaningful insights into how AI-enabled digital marketing practices influence consumer behaviour and trust within digital platforms.

The demographic profile of respondents indicates that most users belong to the younger age group (18–30 years) and engage with digital platforms on a daily basis. This reflects a digitally literate audience that is highly exposed to AI-driven marketing tools, making them appropriate participants for assessing AI's marketing impact.

The study reveals a high level of awareness and regular usage of AI-enabled digital marketing tools among consumers. Personalized advertisements and recommendation systems are the most frequently encountered AI applications, suggesting that these tools have become an integral part of consumers' online experiences. Chatbots and predictive notifications are also widely used, indicating growing acceptance of AI-based automated interactions.

Mean score analysis demonstrates that consumers largely perceive AI-enabled personalization as beneficial. Respondents strongly agree that AI-based marketing enhances their shopping experience, improves engagement, and positively influences purchase decisions. Recommendation systems, in particular, play a significant role in increasing purchase intention by presenting relevant and timely product suggestions. These findings confirm that AI-driven marketing strategies effectively shape consumer behaviour and brand preference.

Correlation analysis further supports these observations by showing a strong and statistically significant positive relationship between AI-enabled marketing practices and consumer behaviour variables. AI personalization exhibits a notably high association with purchase intention, emphasizing the importance of customized content in influencing consumer decision-making. Targeted advertising also shows a strong link with both engagement and purchasing behaviour.

Regression results indicate that AI-enabled digital marketing practices collectively explain a substantial proportion of variation in consumer behaviour. AI-based personalization emerges as the most influential predictor, followed by targeted advertising and AI interaction tools such as chatbots. This suggests that consumers respond more positively when marketing messages are tailored to their preferences and delivered through intelligent, interactive systems.

Although AI-enabled marketing positively impacts engagement and purchasing behaviour, the findings also underline the importance of transparency and ethical AI usage. Consumers are more likely to trust brands that clearly communicate how their data is collected and used. Ethical handling of consumer information and responsible AI deployment contribute significantly to strengthening trust in digital marketing environments.

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Overall, the study confirms that AI-enabled digital marketing enhances consumer engagement and purchase intention when implemented responsibly. The acceptance of all formulated hypotheses highlights that personalization, ethical data practices, and transparency are critical factors in achieving sustainable consumer relationships in AI-driven digital marketing.

Conclusion

The present study provides empirical evidence on the growing influence of AI-enabled digital marketing on consumer behaviour and trust within digital platforms. The findings clearly indicate that artificial intelligence has moved beyond being a supportive marketing tool and has become a central component in shaping consumer experiences, engagement levels, and purchase decisions. AI-driven applications such as personalized advertisements, recommendation systems, and interactive tools significantly enhance consumer convenience and relevance, leading to stronger purchase intention and brand preference.

The study highlights that consumers respond positively to AI-based personalization when it adds value to their digital experience. Tailored product recommendations and targeted advertisements help consumers make quicker and more informed decisions, thereby improving overall satisfaction. However, the research also emphasizes that the effectiveness of AI-enabled marketing is closely linked to the level of trust consumers place in digital platforms. Concerns related to data privacy, transparency, and ethical use of AI strongly influence how consumers perceive and accept AI-driven marketing efforts.

Transparency and responsible data practices emerge as critical determinants of consumer trust. Consumers are more likely to engage with AI-enabled marketing when they feel confident that their personal information is handled ethically and securely. The study therefore concludes that while AI-enabled digital marketing positively influences consumer behaviour, long-term success depends on balancing technological efficiency with ethical considerations and transparent communication.

Overall, the acceptance of all formulated hypotheses confirms that AI-enabled digital marketing, when implemented responsibly, can strengthen consumer engagement, increase purchase intention, and build sustainable trust-based relationships between brands and consumers.

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