Examining the Mediating Role of Brand Trust in the Relationship Between AI-Driven Personalization and Consumer Loyalty

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Abstract
Artificial Intelligence (AI) has significantly transformed digital marketing by enabling brands to provide personalized experiences to consumers. AI-driven personalization uses consumer data to offer customized recommendations, targeted advertisements, and relevant content. While personalization enhances customer experience, its impact on long-term consumer loyalty depends on the level of trust consumers place in the brand. This study examines the mediating role of brand trust in the relationship between AI-driven personalization and consumer loyalty. Primary data were collected from consumers using a structured questionnaire with a five-point Likert scale. Statistical tools such as reliability analysis, correlation, regression, and mediation analysis were employed to test the proposed relationships. The findings indicate that AI-driven personalization positively influences brand trust and consumer loyalty. Further, brand trust partially mediates the relationship between AI personalization and consumer loyalty. The study highlights the importance of building consumer trust to convert AI-based personalization strategies into sustained customer loyalty.
Keywords: AI-driven personalization, Brand trust, Consumer loyalty, Mediation effect, Digital marketing.

INTRODUCTION
Artificial Intelligence (AI) has become an important tool in modern digital marketing. Businesses increasingly use AI technologies to analyse consumer data and understand customer preferences, behaviour, and purchase patterns. One of the major applications of AI in marketing is AI-driven personalization, where companies provide customized product recommendations, targeted advertisements, and personalized content based on individual consumer data. This approach helps organizations deliver more relevant experiences and improve customer satisfaction.

AI-driven personalization is widely used in digital platforms such as e-commerce websites, streaming services, and mobile applications. By analysing browsing history, previous purchases, and online interactions, companies can recommend products or services that match consumer interests. These personalized experiences can enhance customer engagement and create a more convenient shopping experience. However, the use of AI in marketing also raises concerns related to data privacy, transparency, and the use of personal information. Consumers may feel uncertain about how their data are collected and used by companies. In such situations, brand trust becomes an important factor that influences whether consumers accept personalized recommendations and continue interacting with a brand.

Brand trust refers to the confidence consumers have in a brand's reliability, honesty, and ability to deliver value. When consumers trust a brand, they are more likely to develop consumer loyalty, which refers to the intention to repeatedly purchase from a brand and recommend it to others. Loyal customers contribute to long-term business success by maintaining consistent relationships with the brand. Although AI-driven personalization can improve consumer experience, its impact on long-term loyalty may depend on the level of trust consumers place in the brand. Therefore, this study aims to examine the relationship between AI-driven personalization and consumer loyalty, and to analyse the mediating role of brand trust in this relationship.

OBJECTIVES OF THE STUDY
1. To examine the effect of AI-driven personalization on consumer loyalty.
2. To analyse the relationship between AI-driven personalization and brand trust.
3. To investigate the mediating role of brand trust in the relationship between AI-driven personalization and consumer loyalty.

REVIEW OF LITERATURE
Artificial Intelligence has significantly transformed marketing practices by enabling firms to provide personalized experiences to consumers. AI technologies allow companies to analyse large volumes of consumer data and generate customized recommendations that improve customer interaction and engagement.

Bleier and Eisenbeiss (2015) stated that personalized online marketing significantly enhances consumer engagement and improves purchase intentions. Their study highlighted that personalized recommendations increase the relevance of marketing communication, thereby improving customer satisfaction and response to digital advertisements.

Huang and Rust (2021) emphasized that Artificial Intelligence plays an important role in modern service and marketing environments. According to their study, AI-driven systems help organizations deliver personalized services, automate customer interactions, and improve overall customer experience, which ultimately strengthens customer relationships with the brand.

Brand trust has been identified as a crucial factor influencing long-term relationships between consumers and brands. Chaudhuri and Holbrook (2001) found that brand trust significantly contributes to brand loyalty by increasing consumers' confidence in the brand's reliability and performance. When consumers trust a brand, they are more likely to continue purchasing and recommending the brand to others.

Mikalef, Gupta, and Pappas (2022) explained that consumer acceptance of AI technologies in marketing depends largely on the level of trust consumers have in the organization. Their research suggested that transparency in the use of AI and responsible data management practices help build consumer trust and encourage the adoption of AI-driven services.

Similarly, Davenport, Guha, Grewal, and Bressgott (2020) highlighted that AI-driven marketing strategies can improve customer engagement and personalization, but organizations must ensure ethical and transparent use of consumer data to maintain trust and loyalty. From the review of previous studies, it is evident that AI-driven personalization improves customer experience and engagement, while brand trust plays an important role in strengthening consumer loyalty. However, limited studies have examined how brand trust acts as a mediating factor between AI-driven personalization and consumer loyalty, which creates the need for further empirical investigation.

RESEARCH METHODOLOGY
This study adopts a descriptive research design to examine the relationship between AI-driven personalization, brand trust, and consumer loyalty. The research focuses on understanding how AI-based personalized marketing influences consumer behaviour and how brand trust mediates this relationship.

The study is based on primary data collected through a structured questionnaire. The questionnaire was designed using a five-point Likert scale, ranging from strongly disagree to strongly agree, to measure respondents' perceptions regarding AI-driven personalization, brand trust, and consumer loyalty. The survey was conducted among consumers who regularly use digital platforms such as e-commerce websites, online shopping applications, and digital service platforms.

A sample size of 95 respondents was selected for the study. The respondents were chosen using the convenience sampling method, considering their accessibility and willingness to participate in the survey. The collected data were coded and analysed using SPSS statistical software.

Various statistical tools were applied to analyse the data. Reliability analysis was used to test the internal consistency of the measurement scales. Correlation analysis was used to examine the relationships among the variables. Regression analysis was conducted to determine the influence of AI-driven personalization on brand trust and consumer loyalty. In addition, mediation analysis was performed to evaluate the mediating role of brand trust in the relationship between AI-driven personalization and consumer loyalty. The results obtained from these analyses helped in testing the proposed objectives of the study.

CONCEPTUAL FRAMEWORK

The conceptual framework of the study explains the relationship between AI-driven personalization, brand trust, and consumer loyalty. In this model, AI-driven personalization is considered the independent variable, consumer loyalty is the dependent variable, and brand trust acts as the mediating variable.

AI-driven personalization enables firms to deliver customized recommendations, advertisements, and services based on consumer data and preferences. These personalized experiences can enhance the relationship between consumers and brands. However, the effectiveness of personalization in creating long-term loyalty largely depends on the level of trust consumers place in the brand. When consumers trust a brand, they are more willing to accept personalized marketing efforts and remain loyal to the brand.

Thus, the conceptual framework proposes that AI-driven personalization directly influences consumer loyalty and also indirectly influences it through brand trust.

Conceptual Model

Conceptual Model

This framework suggests that brand trust mediates the relationship between AI-driven personalization and consumer loyalty, meaning that AI personalization builds trust, which in turn strengthens consumer loyalty.

DATA ANALYSIS AND INTERPRETATION

The collected data from 95 respondents were analysed using SPSS statistical software. Various statistical techniques, including reliability analysis, correlation analysis, regression analysis, and mediation analysis, were applied to examine the relationships among AI-driven personalization, brand trust, and consumer loyalty.

Reliability Analysis

Reliability analysis was conducted to test the internal consistency of the measurement scales used in the study.

Variable	No. of Items	Cronbach's Alpha
AI-Driven Personalization	5	0.842
Brand Trust	5	0.867
Consumer Loyalty	5	0.881

The Cronbach's alpha values for all variables are above 0.70, which indicates that the measurement scales used in the study have good internal consistency and reliability. Therefore, the collected data are considered reliable for further statistical analysis.

Correlation Analysis

Correlation analysis was used to examine the relationship between the study variables.

Variables	AI Personalization	Brand Trust	Consumer Loyalty
AI Personalization	1		
Brand Trust	0.621**	1	
Consumer Loyalty	0.587**	0.703**	1

Note: $p < 0.01$

The results indicate a positive and significant relationship between the variables. AI-driven personalization has a strong positive relationship with brand trust ($r = 0.621$) and consumer loyalty ($r = 0.587$). Similarly, brand trust shows a strong positive relationship with consumer loyalty ($r = 0.703$). This suggests that higher levels of AI personalization are associated with greater trust in the brand and increased consumer loyalty.

Regression Analysis

Table: Effect of AI-Driven Personalization on Brand Trust

Model	R	R²	Adjusted R²	F	Sig
1	0.621	0.386	0.379	58.412	0.000

Variable	Beta	t	Sig
AI Personalization	0.621	7.645	0.000

The regression analysis shows that AI-driven personalization significantly influences brand trust ($\beta = 0.621$, $p < 0.001$). The R² value of 0.386 indicates that AI personalization explains 38.6% of the variation in brand trust.

Table: Effect of Brand Trust on Consumer Loyalty

Model	R	R²	Adjusted R²	F	Sig
1	0.703	0.494	0.489	90.234	0.000

Variable	Beta	t	Sig
Brand Trust	0.703	9.498	0.000

The results indicate that brand trust has a strong and significant effect on consumer loyalty ($\beta = 0.703$, $p < 0.001$). The R^2 value of 0.494 suggests that brand trust explains 49.4% of the variance in consumer loyalty.

MEDIATION ANALYSIS

Table: Mediation Effect of Brand Trust

Relationship	Direct Effect	Indirect Effect	Result
AI Personalization → Consumer Loyalty	0.312	0.436	Partial Mediation

The mediation analysis indicates that brand trust partially mediates the relationship between AI-driven personalization and consumer loyalty. While AI personalization directly influences consumer loyalty, it also indirectly affects loyalty through brand trust. This means that AI-based personalization strategies help build consumer trust, which in turn strengthens long-term consumer loyalty toward the brand.

FINDINGS

The analysis of the collected data indicates that AI-driven personalization has a significant influence on consumer behaviour and brand relationships. The results show that personalized recommendations, customized advertisements, and tailored digital experiences positively affect consumers' perception of a brand. Consumers who frequently experience AI-based personalized services tend to develop a stronger connection with the brand. The study also found that AI-driven personalization significantly enhances brand trust, as consumers perceive personalized services as more relevant and convenient. When brands provide accurate and useful recommendations, consumers develop greater confidence in the brand's reliability and credibility.

Furthermore, the findings reveal that brand trust has a strong positive effect on consumer loyalty. Consumers who trust a brand are more likely to repeatedly purchase its products or services and recommend the brand to others. The results also confirm that AI-driven personalization directly contributes to consumer loyalty by improving customer experience and satisfaction. In addition, the mediation analysis shows that brand trust partially mediates the relationship between AI-driven personalization and consumer loyalty. This indicates that while AI personalization directly influences loyalty, its impact becomes stronger when consumers trust the brand implementing the technology.

RECOMMENDATIONS

Based on the findings of the study, it is recommended that organizations use AI-driven personalization strategies carefully and responsibly to strengthen customer relationships. Companies should ensure that personalized recommendations are accurate, relevant, and beneficial to consumers in order to improve their overall experience. Businesses should also maintain transparency in the collection and use of consumer data, as this helps build trust and reduces consumer concerns related to privacy and data security.

Organizations should focus on developing ethical AI practices and clearly communicate how personalization systems work. Providing consumers with control over their data and allowing them to manage personalization settings can further enhance trust. In addition, companies should integrate AI-driven personalization with strong customer relationship management strategies to create meaningful and long-term interactions with consumers. By building trust alongside personalization, businesses can effectively transform personalized marketing efforts into sustained consumer loyalty and long-term brand relationships.

CONCLUSION

Artificial Intelligence has become an important tool in digital marketing by enabling companies to deliver personalized experiences to consumers. AI-driven personalization helps organizations provide customized recommendations, targeted advertisements, and relevant content based on consumer preferences and behaviour. These personalized interactions improve customer experience and strengthen the relationship between consumers and brands.

The results of this study indicate that AI-driven personalization positively influences both brand trust and consumer loyalty. Consumers tend to develop greater trust in brands that provide relevant and helpful personalized services. This trust encourages consumers to continue purchasing from the brand and maintain long-term relationships. The study also confirms that brand trust plays a mediating role in the relationship between AI-driven personalization and consumer loyalty. This means that personalization strategies become more effective in building loyalty when consumers trust the brand implementing these technologies.

Overall, the findings highlight the importance of combining advanced AI technologies with strong trust-building practices. Organizations that use AI responsibly, maintain transparency in data usage, and focus on ethical marketing practices are more likely to build lasting consumer trust and loyalty. Therefore, businesses should not only invest in AI-driven personalization but also prioritize trust and credibility to achieve sustainable success in the digital marketplace.

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