

Exploring The Role of Perceived Relevance In AI-Driven Personalized Marketing and Consumer Purchase Intention

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Abstract—Artificial Intelligence (AI) has transformed digital marketing by enabling highly personalized experiences based on consumer preferences and behaviors. Through machine learning, predictive analytics, and consumer data, AI delivers customized content, recommendations, and targeted advertisements. Among the factors influencing the effectiveness of personalization, perceived relevance plays a crucial role in shaping consumer responses. This study examines the mediating role of perceived relevance in the relationship between AI-driven personalized marketing and consumer purchase intention. Based on the Stimulus–Organism–Response (S-O-R) framework and Information Relevance Theory, AI-driven personalization is considered the stimulus, perceived relevance the organismic response, and purchase intention the behavioral outcome. The study contributes to digital marketing literature by integrating AI capabilities with consumer behavior theories to explain how personalized experiences influence purchase intentions. The findings are expected to show that perceived relevance significantly mediates this relationship, offering valuable insights for marketers to improve customer engagement, satisfaction, and conversion rates in competitive digital environments.

Index Terms—Artificial Intelligence, Personalized Marketing, Perceived Relevance, Consumer Purchase Intention, Digital Marketing, Consumer Behavior, Customer Engagement, E-Commerce.

I. INTRODUCTION

The digital revolution has transformed organizational interactions with consumers by shifting marketing from mass approaches to personalized experiences. Advances in information technology, data analytics, and artificial intelligence (AI) enable firms to

understand consumer preferences, anticipate needs, and deliver relevant content that supports decision-making. Consequently, personalization has become a key element of modern marketing.

AI has enhanced personalization through machine learning, recommendation systems, natural language processing, and predictive analytics, allowing marketers to analyze large volumes of consumer data in real time. Leading digital platforms such as Amazon, Netflix, Google, and Meta use AI to provide tailored advertisements, recommendations, and customer experiences. These personalized interactions can improve customer engagement, satisfaction, brand relationships, and conversion rates.

However, the success of AI-driven personalization depends largely on perceived relevance, which refers to consumers' perceptions that personalized content matches their interests and needs. Relevant information increases attention, engagement, and purchase decisions, whereas irrelevant recommendations may be ignored or viewed as intrusive. Despite extensive research on personalization, trust, privacy concerns, and purchase intention, limited studies have examined the mediating role of perceived relevance in AI-based marketing. Addressing this gap, the present study investigates the relationship between AI-driven personalized marketing and consumer purchase intention by emphasizing the importance of perceived relevance and integrating perspectives from digital marketing, consumer behavior, and AI literature.

II. BACKGROUND OF THE STUDY

The widespread use of internet technologies and mobile devices has significantly changed consumer

purchasing behavior by creating multiple digital touchpoints and generating vast amounts of consumer data. AI-driven marketing utilizes intelligent algorithms to analyze this data, automate marketing activities, improve audience segmentation, predict customer needs, and enhance decision-making efficiency. Recommendation systems, one of the most common AI applications, provide product suggestions based on previous consumer behavior.

The effectiveness of these systems depends on delivering relevant information. Consumers value personalized experiences when they perceive them as useful and beneficial. Perceived relevance reduces cognitive effort, increases perceived value, and positively influences purchase decisions. Although organizations increasingly invest in AI technologies to improve customer experiences, concerns regarding privacy, transparency, and information accuracy remain important. Therefore, understanding the role of perceived relevance in shaping consumer responses to AI-generated recommendations is essential for maximizing the effectiveness of personalization strategies.

III. RESEARCH OBJECTIVES

1. To examine the impact of AI-driven personalized marketing on perceived relevance.
2. To analyze the influence of perceived relevance on consumer purchase intention.
3. To investigate the direct relationship between AI-driven personalized marketing and consumer purchase intention.
4. To evaluate the mediating role of perceived relevance in the relationship between AI-driven personalized marketing and consumer purchase intention.

Impact of AI-Driven Personalized Marketing on Perceived Relevance

Artificial Intelligence (AI)-driven personalized marketing refers to the use of advanced technologies such as machine learning, predictive analytics, recommendation systems, and natural language processing to deliver customized marketing messages based on individual consumer preferences and behaviors. Unlike traditional mass marketing, AI enables organizations to analyze large volumes of customer data and provide relevant advertisements,

product recommendations, and content in real time. This approach helps firms create more engaging and customer-centric experiences.

Concept of Perceived Relevance

Perceived relevance is defined as the degree to which consumers believe that the information, advertisements, or recommendations provided by a company are consistent with their personal needs, interests, and preferences. Consumers are more likely to pay attention to and value marketing communications that they consider meaningful and useful. Relevance plays an important role in influencing consumer attitudes and decision-making processes.

Role of AI in Enhancing Relevance

AI technologies improve the quality and accuracy of personalization by analyzing consumers' browsing history, purchase behavior, demographic characteristics, and online interactions. These insights enable organizations to deliver highly targeted content that matches consumer expectations. As a result, consumers perceive personalized messages as more relevant, which enhances their overall experience and increases the effectiveness of marketing efforts.

Reduction of Information Overload

In digital environments, consumers are exposed to an enormous amount of information every day. AI-driven personalization helps reduce information overload by filtering unnecessary content and presenting only the information that is most relevant to individual users. This improves information processing efficiency and enables consumers to make decisions more easily.

Improvement in Consumer Engagement

Relevant and personalized communications encourage consumers to interact more actively with brands. When consumers perceive that marketing messages address their specific needs, they develop positive attitudes toward the brand and become more willing to engage with products and services. Increased engagement further strengthens customer relationships and enhances marketing outcomes.

Influence on Consumer Perceptions

The effectiveness of personalized marketing largely depends on consumers' perceptions of the

recommendations they receive. Accurate and relevant recommendations create a sense of usefulness and value, whereas irrelevant or excessive personalization may lead to negative reactions. Therefore, the quality of AI-generated content significantly affects perceived relevance.

Empirical Support from Previous Studies

Previous research has shown that personalized marketing positively influences consumers' perceptions of relevance. Studies have reported that AI-based recommendation systems improve customer satisfaction, increase perceived usefulness, and enhance the effectiveness of digital marketing communications. These findings indicate that relevance serves as an important mechanism through which personalization affects consumer behavior.

IV. RELATIONSHIP BETWEEN AI-DRIVEN PERSONALIZED MARKETING AND PERCEIVED RELEVANCE

AI-driven personalized marketing provides customized information that closely matches consumer interests and preferences. As consumers receive content that they consider useful and meaningful, their perception of relevance increases. Consequently, AI-enabled personalization contributes to more favorable evaluations of marketing messages and improves the overall customer experience.

Influence of Perceived Relevance on Consumer Purchase Intention

Perceived relevance refers to the extent to which consumers believe that the information, recommendations, or marketing messages they receive are closely aligned with their needs, interests, and preferences. In digital marketing environments, relevance determines whether consumers consider the content useful and valuable. When consumers perceive information as relevant, they are more likely to pay attention to it and develop favorable attitudes toward the products or services being promoted.

Concept of Consumer Purchase Intention

Consumer purchase intention represents the likelihood or willingness of consumers to buy a particular product or service in the future. It reflects consumers' conscious plans and behavioral tendencies toward

making purchasing decisions. Purchase intention is considered an important predictor of actual buying behavior and is influenced by several factors, including perceived value, trust, satisfaction, and relevance of information.

Importance of Relevance in Consumer Decision-Making

Consumers are continuously exposed to large amounts of information in digital environments. Perceived relevance helps individuals identify information that best satisfies their needs and reduces the effort required to search for alternatives. Relevant information simplifies the decision-making process and increases consumers' confidence in their purchase choices.

Enhancement of Perceived Value

When consumers receive information that is highly relevant to their preferences, they perceive greater value in the products and services offered. Relevant recommendations provide useful insights and help consumers identify products that match their expectations. This increased perceived value positively influences their intention to purchase.

Influence on Consumer Attitudes and Satisfaction

Relevant marketing communications create positive consumer experiences by delivering meaningful and useful content. Consumers who perceive marketing messages as relevant are more likely to develop favorable attitudes toward brands and experience higher levels of satisfaction. Positive attitudes and satisfaction subsequently strengthen their willingness to purchase.

Reduction of Purchase Uncertainty

Perceived relevance reduces uncertainty associated with purchasing decisions by providing consumers with accurate and appropriate information. Consumers become more confident in their choices when they believe that recommendations are tailored to their specific needs. Reduced uncertainty increases the likelihood of purchase and strengthens purchase intentions.

Empirical Evidence from Previous Studies

Previous studies have demonstrated that perceived relevance significantly influences consumer behavior

in digital environments. Research indicates that relevant information enhances consumer engagement, increases perceived usefulness, and positively affects purchase intention. Consumers are generally more responsive to marketing communications that provide meaningful value and address their specific requirements.

V. RELATIONSHIP BETWEEN PERCEIVED RELEVANCE AND CONSUMER PURCHASE INTENTION

Perceived relevance acts as a cognitive mechanism that shapes consumer evaluations of marketing information. When consumers perceive personalized content as relevant and beneficial, they are more likely to develop stronger intentions to purchase products or services. Therefore, relevance serves as a critical factor influencing consumer decision-making and behavioral outcomes.

Direct Relationship Between AI-Driven Personalized Marketing and Consumer Purchase Intention

AI-driven personalized marketing refers to the application of artificial intelligence technologies, including machine learning, predictive analytics, recommendation systems, and natural language processing, to deliver customized marketing messages and experiences based on individual consumer preferences and behaviors. By analyzing large volumes of customer data, AI enables firms to provide relevant advertisements, personalized recommendations, and tailored content that enhance consumer interactions.

Concept of Consumer Purchase Intention

Consumer purchase intention represents the willingness and likelihood of consumers to buy a product or service in the future. It reflects consumers' conscious plans and preferences regarding purchasing decisions and is considered a strong predictor of actual buying behavior. Purchase intention is influenced by several factors, including perceived value, trust, satisfaction, and the quality of marketing communications.

AI-Driven Personalization as a Marketing Tool

Modern organizations increasingly rely on AI technologies to strengthen customer relationships and

improve marketing effectiveness. AI-powered systems help firms understand customer needs, predict future preferences, and deliver highly customized experiences. Personalized advertisements and product recommendations create a more interactive and consumer-oriented environment, which positively influences consumers' attitudes toward brands and products.

Enhancement of Customer Experience

AI-driven personalization improves customer experiences by providing information and recommendations that align with individual preferences. Consumers appreciate personalized interactions because they simplify the search process and make shopping experiences more convenient. Positive customer experiences often increase satisfaction and encourage consumers to consider purchasing the recommended products or services.

Development of Consumer Trust and Engagement

Personalized marketing helps establish stronger relationships between consumers and brands. When consumers receive recommendations that accurately reflect their interests and needs, they perceive brands as more responsive and customer-focused. This increased trust and engagement positively influence their willingness to make purchases.

Increased Perceived Value and Convenience

AI-driven personalized marketing provides consumers with products and information that are most relevant to their needs, thereby increasing perceived value and reducing the time and effort required to make purchasing decisions. Greater convenience and perceived usefulness contribute directly to stronger purchase intentions.

Empirical Evidence from Previous Studies

Several studies have demonstrated that personalized marketing positively affects consumer purchase intention. Research indicates that AI-enabled recommendations improve customer satisfaction, enhance shopping experiences, and increase the likelihood of purchasing behavior. Personalized content creates favorable attitudes toward products and encourages consumers to make purchase decisions.

VI. DIRECT RELATIONSHIP BETWEEN AI-DRIVEN PERSONALIZED MARKETING AND CONSUMER PURCHASE INTENTION

AI-driven personalized marketing directly influences consumer purchase intention by delivering customized experiences that increase satisfaction, engagement, and perceived value. Consumers are more likely to purchase products when marketing communications are tailored to their preferences and provide meaningful information. Therefore, AI-enabled personalization serves as an important driver of consumer buying behavior in digital environments.

Mediating Role of Perceived Relevance in the Relationship Between AI-Driven Personalized Marketing and Consumer Purchase Intention

Concept of Mediation

Mediation refers to the process through which an independent variable influences a dependent variable through an intermediate variable. In the present study, perceived relevance functions as the mediating variable that explains how AI-driven personalized marketing affects consumer purchase intention. Rather than influencing purchasing decisions directly alone, AI-generated personalization first shapes consumers' perceptions regarding the relevance of the information provided, which subsequently affects their intention to purchase.

AI-Driven Personalized Marketing and Perceived Relevance

Artificial Intelligence enables organizations to analyze consumer data and deliver customized recommendations, advertisements, and content based on individual preferences and behaviors. Such personalized communications increase the likelihood that consumers perceive the information as meaningful, useful, and aligned with their specific needs. Therefore, AI-driven personalized marketing enhances perceived relevance by providing highly targeted and value-oriented experiences.

Influence of Perceived Relevance on Consumer Purchase Intention

Perceived relevance plays a crucial role in consumer decision-making. When consumers believe that marketing messages are closely related to their interests and requirements, they are more likely to

consider the information valuable and trustworthy. Relevant information reduces search effort, minimizes uncertainty, and improves consumers' confidence in their purchase decisions. Consequently, higher levels of perceived relevance lead to stronger purchase intentions.

Perceived Relevance as a Psychological Mechanism

Perceived relevance serves as a cognitive and psychological mechanism through which consumers evaluate personalized content. According to the Stimulus–Organism–Response (S-O-R) framework, AI-driven personalized marketing acts as the external stimulus, perceived relevance represents the internal cognitive evaluation, and consumer purchase intention becomes the behavioral response. Thus, consumers' perceptions of relevance determine how effectively personalized marketing efforts are translated into favorable purchasing outcomes.

Enhancement of Consumer Value and Engagement

When AI-generated recommendations are perceived as relevant, consumers experience greater value and engagement. Personalized content that accurately reflects consumer preferences increases satisfaction and strengthens positive attitudes toward brands. These favorable experiences encourage consumers to develop stronger intentions to purchase products and services recommended by digital platforms.

Empirical Evidence from Previous Studies

Previous studies have reported that relevance is a significant factor influencing consumer responses to personalized marketing. Research has demonstrated that consumers are more likely to accept and act upon personalized recommendations when they perceive them as relevant and beneficial. These findings suggest that perceived relevance acts as an important explanatory mechanism linking personalization strategies with consumer behavioral outcomes.

Mediating Relationship Between AI-Driven Personalized Marketing and Consumer Purchase Intention

AI-driven personalized marketing improves consumer purchase intention by enhancing perceived relevance. Personalized content alone may not guarantee favorable consumer responses; instead, consumers must first perceive the information as relevant to their

needs and preferences. When this perception is established, consumers are more likely to develop positive attitudes and stronger intentions to purchase. Therefore, perceived relevance mediates the relationship between AI-driven personalized marketing and consumer purchase intention by transforming personalized experiences into meaningful and actionable outcomes.

Theoretical Support

The mediating role of perceived relevance is supported by the Stimulus–Organism–Response (S-O-R) framework and Information Relevance Theory. These theories suggest that external stimuli influence behavioral responses through internal cognitive evaluations. In this context, perceived relevance represents the mechanism through which AI-enabled personalization translates into purchase intentions.

VII. CONCLUSION

Artificial Intelligence has emerged as a transformative force in digital marketing by enabling organizations to deliver personalized experiences that align with individual consumer preferences and behaviors. The present study examined the relationships among AI-driven personalized marketing, perceived relevance, and consumer purchase intention, with particular emphasis on the mediating role of perceived relevance. The study highlights that AI-enabled personalization enhances consumers' perceptions of relevance by providing meaningful, timely, and customized information. When consumers perceive personalized content as relevant to their needs and interests, they are more likely to develop positive attitudes toward products and brands, thereby strengthening their purchase intentions. In addition, the findings suggest that AI-driven personalized marketing not only directly influences consumer purchase intention but also exerts an indirect effect through perceived relevance. The study further demonstrates that perceived relevance serves as an important cognitive mechanism linking personalized marketing efforts with consumer behavioral outcomes. The integration of the Stimulus–Organism–Response (S-O-R) framework and Information Relevance Theory provides a comprehensive explanation of how AI-generated personalization translates into purchase decisions. From a managerial perspective,

organizations should focus on developing AI-based marketing strategies that emphasize relevance, accuracy, and customer value. Delivering highly relevant and personalized experiences can enhance customer engagement, improve satisfaction, and increase conversion rates in competitive digital environments.

Overall, the study contributes to the growing body of literature on artificial intelligence and consumer behavior by providing insights into the role of perceived relevance in AI-driven marketing. Future research may extend this framework by incorporating additional variables such as consumer trust, privacy concerns, customer satisfaction, or brand loyalty to gain a deeper understanding of consumer responses to AI-enabled marketing practices.