

THE ROLE OF AI-DRIVEN PERSONALIZATION IN SHAPING CONSUMER LOYALTY IN E-COMMERCE

PERAN PERSONALISASI YANG DIDORONG OLEH AI DALAM MEMBENTUK LOYALITAS KONSUMEN DI E-COMMERCE

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ABSTRACT

Digital transformation has driven the adoption of artificial intelligence (AI) technology in e-commerce personalization strategies, which has the potential to increase consumer loyalty. However, understanding of how AI-driven personalization affects consumer loyalty is still limited. This study aims to explore the influence of AI-driven personalization on consumer loyalty in e-commerce platforms, as well as identify the psychological mechanisms involved. The approach used is a Systematic Literature Review (SLR) by collecting and analyzing 28 peer-reviewed articles from the Scopus and Web of Science databases. Data were analyzed using thematic coding techniques and the Stimulus-Organism-Response (S-O-R) framework to understand the relationship between AI personalization and consumer loyalty. The findings indicate that AI-driven personalization significantly increases consumer loyalty through mediators such as trust, perceived value, and satisfaction. In addition, moderating factors such as privacy concerns and product types also affect the effectiveness of personalization strategies. This study provides important insights for e-commerce practitioners in designing effective and ethical personalization strategies, and contributes to the development of consumer loyalty theory in the digital context.

Keywords: AI personalization, consumer loyalty, e-commerce, trust, perceived value, systematic literature review.

ABSTRAK

Transformasi digital telah mendorong adopsi teknologi kecerdasan buatan (AI) dalam strategi personalisasi e-commerce, yang berpotensi meningkatkan loyalitas konsumen. Namun, pemahaman mengenai bagaimana personalisasi berbasis AI mempengaruhi loyalitas konsumen masih terbatas. Penelitian ini bertujuan untuk mengeksplorasi pengaruh personalisasi yang didorong oleh AI terhadap loyalitas konsumen di platform e-commerce, serta mengidentifikasi mekanisme psikologis yang terlibat. Pendekatan yang digunakan adalah Systematic Literature Review (SLR) dengan mengumpulkan dan menganalisis 28 artikel peer-reviewed dari database Scopus dan Web of Science. Data dianalisis menggunakan teknik thematic coding dan kerangka Stimulus-Organism-Response (S-O-R) untuk memahami hubungan antara personalisasi AI dan loyalitas konsumen. Hasil: Temuan menunjukkan bahwa personalisasi berbasis AI secara signifikan meningkatkan loyalitas konsumen melalui mediator seperti kepercayaan, nilai yang dirasakan, dan kepuasan. Selain itu, faktor moderasi seperti kekhawatiran privasi dan jenis produk juga mempengaruhi efektivitas strategi personalisasi. Penelitian ini memberikan wawasan penting bagi praktisi e-commerce dalam merancang strategi personalisasi yang efektif dan etis, serta berkontribusi pada pengembangan teori loyalitas konsumen dalam konteks digital.

Kata Kunci: AI personalization, consumer loyalty, e-commerce, trust, perceived value, systematic literature review.

1. INTRODUCTION

Digital transformation has driven the adoption of artificial intelligence (AI) technology in e-commerce personalization strategies globally. AI enables e-commerce platforms to deliver more relevant and personalized experiences to consumers, which in turn increases customer

engagement and loyalty. This trend is reflected in the global market value of AI in e-commerce which is estimated to reach USD 14.07 billion by 2024, and is projected to continue growing at a CAGR of 14.9% through 2028 (BigSur AI, 2024). Consumers now increasingly expect personalized shopping experiences. A report shows that 71% of customers expect personalized interactions, while 76% feel frustrated when these expectations are not met (IBM, 2023). In this context, AI-based personalization has been shown to significantly contribute to increased customer loyalty, as evidenced by the results of a meta-analysis showing a strong correlation ($r = 0.761$) between AI-based personalization and consumer loyalty in e-commerce (Khatib et al., 2025). However, the implementation of this personalization strategy does not always run smoothly. As many as 96% of retail companies report facing barriers to adopting AI personalization, such as technology limitations, system integration, and lack of prepared human resources (Contentful, 2023). However, the potential positive impact makes this topic increasingly crucial to research, especially in answering how AI-driven personalization actually shapes consumer loyalty on e-commerce platforms.

In the era of digital transformation, the enhancement of customer experiences through artificial intelligence (AI)-based personalization has become increasingly significant within the e-commerce landscape. AI enables platforms to analyze consumer data in real time, delivering customized content, products, and services that align with individual user preferences, which is critical in driving engagement and satisfaction (Oanh, 2024; , Davenport et al., 2019). Such personalization is not merely an adjunct but a central strategy for businesses seeking to maintain competitive advantages in a rapidly evolving digital marketplace (Kotha, 2024). Scholarly research delineates how AI facilitates a comprehensive approach to customer interactions, incorporating elements of big data analytics and machine learning to tailor marketing efforts according to user behavior (Gao & Liu, 2022). For instance, Kotha emphasizes the integration of AI with human marketing strategies to elucidate customer insights that enhance personalization and deepen engagement metrics substantially (Kotha, 2024). Furthermore, Wang discusses how traditional retail, when embracing digital frameworks like AI, can significantly adapt its business models to meet contemporary consumer expectations, thereby amplifying customer retention and satisfaction (Wang, 2023).

Moreover, the interplay between AI and customer engagement extends beyond basic personalization. The evolving digital consumer landscape reflects a profound shift in marketing paradigms, where AI technologies enable innovative strategies that transform the customer journey from passive encounters to interactive experiences (Oanh, 2024; , Gao & Liu, 2022). Chebotareva et al. illustrate how AI technologies can streamline functionality in disparate sectors, including e-commerce, leading to enhanced operational efficiencies (Chebotareva et al., 2021). This transformative impact is manifesting itself not only in customer engagement but also in operational strategies, as exemplified by ZARA's application of AI to optimize inventory management and enhance customer experience (Cao, 2024). Thus, as digital transformation unfolds, the focus on AI-driven personalization within e-commerce platforms emerges as a pivotal strategy designed to substantially improve customer experiences and optimize business performance through intelligent adaptation to consumer needs (Wang, 2023). The landscape is characterized by a dual focus: the technological advancements in AI complementing strategic marketing initiatives aimed at creating deeper, personalized customer relationships and experiences. However, despite its widespread application in business practices, theoretical and empirical understanding of how AI-based personalization actually impacts consumer loyalty is still fragmentary and not systematically structured.

Most previous studies still focus on the technological and operational aspects of personalization, such as recommendation algorithms or product matching systems, without deeply exploring the psychological and behavioral processes underlying consumer loyalty. On the other hand, the literature on customer loyalty often discusses factors such as satisfaction, trust, and perceived value, but does not explicitly link these factors to consumer interactions

with AI-based personalization systems. In addition, there is still limited research that examines the effects of AI personalization across contexts, such as the differences in its effects on large-scale e-commerce platforms compared to niche markets, or on different types of consumers based on their demographic characteristics and digital behaviors. This gap is a barrier to building a comprehensive and applicable understanding of the effectiveness of AI personalization strategies in creating long-term loyalty.

From a methodological perspective, it is still rare to find studies that conduct a critical and systematic synthesis of previous research results spread across various disciplines. This makes it difficult to develop a conceptual framework that can fully explain the relationship between AI personalization and consumer loyalty, both in theoretical and practical contexts. Therefore, a structured and in-depth literature review is needed to fill this gap, while also providing a foundation for the development of a new conceptual model that can be further tested in empirical research. In response to the identified research gap, this study poses a main question as the focus of the systematic review, namely: **“How does AI-driven personalization influence consumer loyalty in e-commerce platforms?”**. This question aims to explore how the application of AI-driven personalization technology can influence the formation, enhancement, and maintenance of consumer loyalty in the digital environment. This study not only seeks a direct relationship between AI-based personalization features and customer loyalty, but also seeks to understand the psychological and behavioral mechanisms that mediate this relationship. In addition, this study also considers specific contexts in which the influence of AI personalization on loyalty becomes stronger or vice versa.

This research is expected to provide significant contributions, both theoretically and practically. From a theoretical perspective, this study presents a comprehensive literature synthesis related to the relationship between AI-based personalization and consumer loyalty, thus enriching academic discourse and clarifying the position and role of key concepts in the study of digital marketing and e-commerce strategies. In addition, this study aims to develop a conceptual model that describes the mechanisms and important variables in the process of forming consumer loyalty through AI personalization. This model is expected to be the basis for developing hypotheses and empirical testing in further research. From a practical perspective, this study provides strategic insights for e-commerce industry players in designing and implementing personalization features that are not only technically effective but also have a real impact on increasing customer loyalty. Thus, this study contributes to the development of technology-based marketing strategies that are more effective, ethical, and oriented towards long-term relationships with consumers.

2. METHODS

2.1. Research Design

This study uses a Systematic Literature Review (SLR) approach which is based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure transparency, replication, and accountability in the literature synthesis process (Page et al., 2021).

2.2. Inclusion and Exclusion Criteria

Inclusion criteria include peer-reviewed journal articles, conference proceedings, and systematic review articles relevant to the topics of artificial intelligence (AI)-based personalization, consumer loyalty, and e-commerce platforms. The included articles were published between 2020 and 2025, written in English, and available in credible academic databases.

2.3. Data Sources

The literature was collected from three main sources that are often used in systematic

reviews, namely Scopus, Web of Science, and Google Scholar. The three were chosen because they have broad coverage and high retrievability effectiveness in the context of academic research (Gusenbauer & Haddaway, 2020).

2.4. Search and Selection Process:

The search strategy was carried out using the following Boolean search formula: ("AI personalization" OR "machine learning customization") AND ("consumer loyalty" OR "customer retention") AND ("e-commerce"). The selection process was carried out based on the PRISMA flow, which includes the stages of identification, screening, eligibility assessment, and final inclusion of relevant articles (Page et al., 2021).

2.5. Data Analysis Techniques:

The collected data were analyzed using a thematic coding approach to identify key themes emerging in the related literature (Braun & Clarke, 2006). Furthermore, the synthesis results were reviewed using an analytical framework based on the Stimulus–Organism–Response (S-O-R) model, which allows an understanding of the mechanism of influence of AI personalization on consumer behavioral responses (Jacoby, 2002). In addition, a mapping of key theories and concepts was also carried out that contributed to the development of the research conceptual model.

3. RESULTS

3.1. Characteristics of the Studies Reviewed

3.1.1. Prisma Protocol

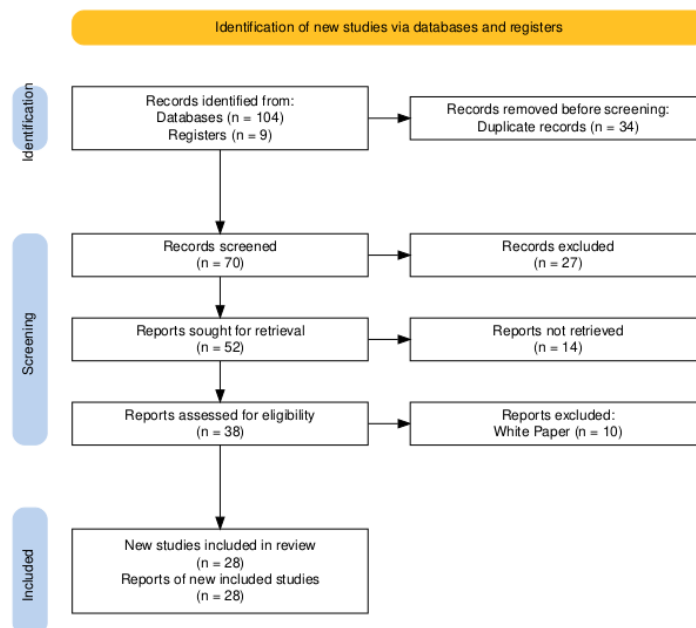


Figure 1. Prisma Protocol

Source: Processed Data, 2025

The literature selection process in this study follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure methodological transparency and repeatability. The focus of this study is to evaluate the relationship between AI personalization and consumer loyalty in the context of e-commerce, so the literature selection process is carried out strictly based on the criteria of relevance, methodological quality, and contribution to the development of theory and practice in the field.

From the initial search results, 113 documents were identified, consisting of 104 articles taken from indexed online databases (such as Scopus and Web of Science) and 9 documents from research registers. After the deduplication process was carried out to avoid data repetition, 34 duplicate documents were removed, leaving 70 articles for further review in the initial screening stage.

In the screening stage, 70 articles were evaluated through title and abstract review. From this process, 27 articles were deemed inappropriate to the topic and objectives of the study, for example because they did not explicitly discuss elements of personalization, artificial intelligence, or consumer loyalty. As a result, 52 articles were continued to the full-text search stage. However, 14 of them were not fully accessible, so only 38 articles were thoroughly analyzed to assess the suitability of the content to the systematic focus.

Of the 38 articles assessed for eligibility, 10 were excluded because they were white papers or non-peer-reviewed publications that did not meet academic quality criteria. Finally, 28 scientific articles that met the standards were successfully included in the systematic synthesis. These articles include a combination of theoretical and empirical approaches that directly address the impact of AI-based personalization on customer loyalty, considering factors such as trust, perceived value, and privacy.

By following this PRISMA procedure, this study ensures that only the most relevant, high-quality, and up-to-date studies are used as the basis for compiling a literature synthesis and conceptual model in an effort to understand the strategic role of AI personalization in shaping sustainable e-commerce customer loyalty.

3.1.2. Trending Articles by Year

Tabel 1. Trending Articles by Year

Year	Number of Articles
2001	1
2002	1
2005	1
2006	1
2014	1
2018	1
2019	2
2021	4
2022	1
2023	4
2024	9
2025	2

Source: Processed Data, 2025

The temporal distribution of the articles included in this study shows a trend indicating an increasing interest in the topic of AI-based personalization in the context of consumer

loyalty and e-commerce. As shown in Table 1, the first article relevant to the focus of this study appeared in 2001, and since then there has been a fluctuating but progressive increase in the number of publications.

In the first two decades, specifically between 2001 and 2019, publications tended to be sporadic, with an average of one to two articles per year. This suggests that the topic was still in its early stages of academic exploration, or had not yet become a major focus in the literature on marketing technology and digital consumer behavior.

Significant changes were seen starting in 2021, where four articles were published, and this number remained stable in 2023. The highest peak occurred in 2024 with a total of nine articles identified, reflecting the surge in attention from the scientific community towards the role of AI-based personalization, along with the increasing adoption of digital technologies in the e-commerce sector and the increasing awareness of the importance of customized customer experiences.

This trend can also be interpreted as a reflection of the acceleration of digitalization triggered by global conditions such as the COVID-19 pandemic and technological developments such as machine learning, natural language processing, and generative AI. In 2025, although the data is provisional due to the incomplete publication year, two articles have been recorded, indicating continued interest in this topic.

Overall, these temporal trends indicate that the issue of AI personalization and consumer loyalty is not only relevant but also continues to grow as a strategic area in cross-disciplinary research, such as information technology, digital marketing, and consumer behavior. The increasing number of articles also indicates the need for a more systematic approach and theoretical synthesis to strengthen the conceptual foundation in understanding the impact of personalization on customer loyalty in the modern digital ecosystem.

3.1.3. Authors' Country Affiliations

Tabel 2. Authors' Country Affiliations

Country	Number of Articles
Malaysia	9
dear	11
Russia	1
China	2
India	1
UK	1
Australia	1
Indonesia	1
Canada	1

Source: Processed Data, 2025

Geographical distribution analysis based on authors' institutional affiliation shows a concentration of research on the topic of AI-based personalization in the context of e-commerce and consumer loyalty in certain countries. Table 2 summarizes the number of articles originating from the various countries identified in this study.

The United States (USA) is in the top position with a total of 11 articles, reflecting the dominance of academic contributions from the country in the fields of technology, digital marketing, and consumer behavior. This position is understandable considering that the United States is the center of technological innovation development and is a pioneer in the application of artificial intelligence in the commercial sector.

Malaysia is in second place with a contribution of 9 articles. This number is significant and shows the increasing research capacity in the Southeast Asian region in examining strategic issues related to digital transformation and customer experience. This phenomenon also indicates that Malaysia is increasingly actively participating in the global discourse on AI-based marketing technology.

Meanwhile, China contributed 2 articles, which although moderate, still shows the country's existence in the global AI and e-commerce research landscape. Other countries such as Russia, India, the United Kingdom (UK), Australia, Indonesia, and Canada each contributed one article. Although limited in number, the contributions from these countries enrich the perspective of the study with a variety of social, cultural, and economic contexts.

These findings reflect a fairly concentrated geographic pattern, with upper-middle-income countries and countries with relatively advanced technological infrastructure dominating. On the other hand, countries from Africa, Latin America, and much of South Asia and the Middle East are either under-represented or unidentified, which may indicate a global research gap on this topic.

Therefore, the distribution of author affiliations in this study not only provides an overview of the global scientific contribution map, but also opens up opportunities to encourage cross-country and cross-institutional research collaborations, especially by involving developing countries that have large e-commerce market potential but have not been optimally explored in academic literature.

3.1.4. Research Methods Used

Tabel 3. Research Methods Used

Research Method	Number of Articles
Empirical Analysis	14
Thematic Analysis	6
Meta-Analysis	1
Qualitative Research	1
Survey	5
Case Study	1

Source: Processed Data, 2025

A review of the research methods used in the selected studies reveals a diversity of approaches adopted by researchers in exploring the relationship between AI personalization, consumer loyalty, and the e-commerce context. As shown in Table 3, the majority of articles used an empirical approach (n = 14), indicating a preference for primary data collection and analysis to test causal or correlational relationships between relevant variables.

This dominant empirical approach reflects an attempt to understand the real-world impact of AI-based personalization on consumer behavior using rigorous statistical techniques.

In many cases, these methods involve analytical models such as Structural Equation Modeling (SEM), multiple linear regression, or path analysis to test for mediation and moderation effects.

A total of five articles used the survey method, which is commonly used as a data collection instrument in quantitative research. The use of surveys indicates that many studies focus on consumer perceptions and attitudes towards AI personalization systems in digital environments.

In addition, there are six articles that use thematic analysis, indicating a qualitative approach in understanding more explorative dimensions, such as perceived value, trust, and user experience. This finding shows that although quantitative approaches dominate, qualitative methods are still used to explore in-depth insights that cannot be captured through numerical data alone.

The number of articles using meta-analysis is only one, indicating that quantitative studies based on statistical synthesis across studies are still relatively rare in this topic. This opens up opportunities for further meta-analytic research to obtain more measurable effect estimates and broader generalizations.

Similarly, qualitative research methods and case studies were only found in one article each. This suggests that there is still significant room for richer, more contextual qualitative approaches, particularly to understand local dynamics, the application of AI technologies in specific sectors, or the socio-cultural contexts that influence consumer responses to personalization.

Overall, the distribution of research methods shows that this topic has received attention through various approaches, but is still dominated by quantitative designs. In the future, a more balanced combination of methods, such as mixed-methods, can be a promising strategy to expand the scope and depth of understanding in the study of AI-based personalization and consumer loyalty.

3.1.5. Journal Database Sources

Tabel 4. Journal Database Sources

Database	Number of Articles
Scopus	16
Web of Science	12

Source: Processed Data, 2025

The distribution of reviewed articles based on database origin shows that most of the analyzed studies came from two major scientific repositories, namely Scopus and Web of Science. As shown in Table 4, 16 articles were obtained from the Scopus database, while 12 articles came from Web of Science.

Scopus, as one of the largest and most globally recognized scientific literature indexes, is the dominant source in this study. This reflects the preference for literature that has gone through a rigorous peer-review process and comes from highly reputable journals. Scopus' dominance also shows that research on AI-based personalization and consumer loyalty in e-commerce has been widely published in journals that have an international scope and focus on technology, digital marketing, and consumer behavior.

Meanwhile, the contribution of Web of Science remains significant. By contributing 12 articles, this database strengthens the scope of literature used in this systematic review. Web of Science is known for its strict selection standards and broad multidisciplinary coverage, so its

presence in this study provides assurance of the quality and diversity of academic perspectives reviewed.

The selection of these two databases was based on considerations of publication quality, international indexing, and relevance to the research topic. The combination of Scopus and Web of Science allows for a comprehensive and in-depth literature search, and helps minimize selection bias that may occur if only a single source is used.

However, limitations remain as this study did not include other databases such as IEEE Xplore, ScienceDirect separately, or more specific databases such as the ACM Digital Library. Therefore, in the future, expanding the literature search sources can be considered to include perspectives from other potentially relevant disciplines, such as computer science, consumer psychology, or digital ethics.

3.1.6. Theories Used in Research

Table 5.Theories Used in Research

Theory Name	Number of Articles
Brand Trust and Loyalty	17
Personalization vs. Privacy	7
Customer Journey Perspective	1
imulus-Organism-Response Mod	1
Intentional Agents Framework	1
Trust Evaluation Model	1

Source: Processed Data, 2025

Analysis of the theoretical frameworks used in the selected studies shows a diversity of approaches in understanding the relationship between AI-based personalization and consumer loyalty in the context of e-commerce. As shown in Table 5, the most dominant theories used areBrand Trust and Loyalty, which is found in17 articles. This theory emphasizes the importance of consumer trust as a primary mediator in building long-term loyalty to a brand or digital platform, especially when consumers are exposed to automated personalized interactions.

Furthermore, Personalization vs. Privacy appears in 7 articles, describing the conceptual tension that often becomes a dilemma in the implementation of personalization strategies. This theory focuses on the value trade-off between the convenience that consumers gain through personalization and the potential risks to privacy that accompany it. The presence of this theory indicates that ethical aspects and risk perceptions play an important role in evaluating the success of AI-based personalization.

In addition to these two main theories, there are several other theories that are used in a more limited but relevant way to explain the dynamics of consumer relationships in the digital environment.Customer Journey Perspective, Stimulus-Organism-Response (S-O-R) Model, Intentional Agents Framework, And Trust Evaluation Modeleach used in one article. TheoryS-O-R, for example, helps explain how personalized stimuli trigger cognitive and affective responses in consumers that then influence loyalty behavior.

The diversity of theories used shows that the phenomenon of personalization in e-commerce is a multidimensional issue that can be analyzed from various perspectives,

including psychological, technological, and ethical. However, the dominance of theories Brand Trust and Loyalty Reflects that the aspect of consumer trust is still the center of attention in efforts to build loyalty through personalization technology.

For future studies, utilizing a more holistic or integrative theoretical approach—for example, by combining consumer behavior theory with ethical or technological frameworks—has the potential to provide a more comprehensive and relevant understanding of the evolving dynamics of digital personalization.

3.2. Key Findings

The utilization of AI-based personalization has been shown to positively impact consumer loyalty, with several psychological factors mediating this effect. Key mediators include perceived value, trust, and satisfaction. Research demonstrates that targeted personalization enhances perceived value, creating an impression of relevance and efficiency for consumers (Chen et al., 2023; . Trust in AI systems tends to increase when consumers perceive that their preferences are accurately understood, which aligns with findings highlighting that service quality from AI chatbots significantly affects consumer loyalty through trust and perceived value (Chen et al., 2023; , Li et al., 2023). Furthermore, satisfaction is closely tied to how personalization simplifies and enhances the purchasing experience, reinforcing the link between engagement and consumer contentment with tailored interactions (Chen et al., 2023; , Li et al., 2023).

In the context of technology, various AI-driven solutions such as recommender systems, AI chatbots, and dynamic content are instrumental in delivering personalized experiences. Recommender systems analyze user behavior to suggest relevant products, significantly increasing user engagement by aligning offers with consumer interests (Wang et al., 2022). AI chatbots provide immediate and responsive customer support, which can dramatically improve perceptions of service quality—thereby reinforcing trust and satisfaction, critical factors in driving repeat loyalty (Chen et al., 2023; , Li et al., 2023). Additionally, dynamic content adjusts website displays in real-time based on user profiles, which enhances personalization and engagement (Wang et al., 2022).

The impact of AI-based personalization on consumer loyalty is not uniform; several moderating factors come into play. Privacy concerns are paramount, as consumers may be apprehensive about how their data is utilized for personalization (Li et al., 2023). This concern can be exacerbated by the level of control users feel they have over their personal data, which tends to influence their trust and overall satisfaction with an AI system (Li et al., 2023). Moreover, the nature of the product being personalized also matters; research shows that the positive effects of personalization are particularly pronounced for high-involvement products, such as luxury items or tech gadgets, rather than for everyday purchases (Chen et al., 2023; , Li et al., 2023). In sum, AI-driven personalization strategies show a clear potential for fostering consumer loyalty through the mechanisms of perceived value, trust, and satisfaction. Moreover, the effectiveness of these strategies is moderated by factors such as privacy concerns, user control, and the specific types of products involved. As businesses increasingly incorporate AI technologies into their marketing strategies, understanding these nuances will be vital for optimizing consumer engagement and loyalty.

4. DISCUSSIONS

4.1. Synthesis of Results

The results of the synthesis of 28 studies reviewed shows a relatively consistent pattern of findings related to the positive influence of AI-based personalization on consumer loyalty in the context of e-commerce. This influence tends to strengthen whenThe increasing relevance of trust in platforms or brands that offer personalized services is a well-documented phenomenon. Research indicates that personalization enhances the consumer experience by

aligning products or services with individual needs and preferences, which increases the efficiency of interactions and significantly strengthens consumer trust in the engaged brand (Chen et al., 2021; Chellappa & Sin, 2005). This sense of personal connection cultivated through tailored experiences fosters a perception among consumers that brands genuinely understand their unique requirements, ultimately leading to heightened customer loyalty over time (Chaudhuri & Holbrook, 2001)Zhang et al., 2018).

Furthermore, personalization contributes to deeper customer engagement, which reinforces brand trust. The psychological perception underlying this trust is influenced by the perceived intentions and capabilities of brands, which can dictate how consumers evaluate their interactions and remain loyal to those brands (Kervyn et al., 2012). Additionally, a framework presented by Chaudhuri and Holbrook posits that brand loyalty emerges as a consequence of established trust, further cementing the importance of personalization strategies that effectively resonate with consumer values and expectations (Chaudhuri & Holbrook, 2001).

As brands continue to invest in personalized services, the dynamics of consumer trust will also evolve. It is essential for businesses to recognize that while personalization can improve trust and loyalty, it must be balanced against privacy concerns. Emerging studies suggest that when brands transparently manage consumer data and respect privacy, the likelihood of fostering long-lasting trust increases significantly, leading to greater purchase intentions and loyalty (Chen et al., 2021; Chellappa & Sin, 2005). The critical interplay of personalization, trust, and consumer behavior underscores the need for brands to strategically incorporate personalized service in their interactions to build sustainable relationships with consumers.

4.2. Theoretical Implications

Theoretically, the results of this study propose a relevant integration opportunity between the Stimulus-Organism-Response (S-O-R) framework and Commitment-Trust Theory in explaining the working mechanism of personalization. In the S-O-R framework, personalization acts as a stimulus that triggers the psychological response of users (organisms), such as perceived value, satisfaction, and trust, which then drives a response in the form of loyalty to the brand. Meanwhile, Commitment-Trust Theory provides additional justification that trust and commitment are prerequisites for consumer loyalty. The combination of these two theories strengthens the conceptual model that personalization is not just a technology-based marketing tool, but a psychologically and socially structured relationship management strategy. The conceptual model proposed in this study maps the relationship between personalization elements, psychological mediators (trust, satisfaction, perceived value), and moderating factors such as privacy concerns and product types. This model can be a basic framework in the development of further research or empirical testing with a quantitative approach.

4.3. Practical Implications

From a practical perspective, the results of this study provide insights that can be used by e-commerce practitioners to design more effective and responsible personalization strategies. Brands need to understand that effective personalization lies not only in technological sophistication, but also in the system's ability to build trust and positive perceptions from users. Therefore, it is important to develop implementation guidelines that consider aspects of algorithm transparency, user control over data, and the appropriateness of personalized content. In addition, to overcome challenges arising from privacy concerns, brands need to adopt mitigation strategies that include user education, providing flexible privacy setting options, and using data protection technologies such as differential privacy and

federated learning. This strategy will help maintain a balance between personalized user experience and a sense of security in using digital platforms.

4.4. Comparison with Previous Studies

In modern marketing and consumer behavior studies, there has been a notable shift from previously simplistic models focused primarily on personalization's role in mediating customer loyalty through satisfaction. Recent findings suggest a more nuanced understanding that incorporates trust and perceived value as critical pathways influencing loyalty. This perspective acknowledges that the influence of personalization extends beyond mere satisfaction to include these additional dimensions, thus offering a more comprehensive view of consumer loyalty dynamics. One key aspect is the role of trust, which is increasingly recognized as an essential factor mediating the relationship between perceived value and brand loyalty. For instance, Ikramuddin and Mariyudi argue that brand trust significantly mediates the effects of perceived value on loyalty, indicating that consumers' perceptions of value are closely linked to their trust in brands (Ikramuddin & Mariyudi, 2021). This assertion is further supported by Aw et al., who highlight that service-related personal values shape perceived value and trust, reinforcing the understanding that trust not only impacts loyalty directly but operates in conjunction with perceived value (Aw et al., 2019).

Moreover, perceived value serves as a fundamental component influencing consumer trust, which in turn affects loyalty outcomes. Tejo's study indicates that maintaining a strong perceived value is pivotal for fostering customer trust, which is necessary for long-term retention and loyalty (Tejo, 2021). Additionally, the complexity of the relationship among these constructs is underscored by the acknowledgment that emotional attachment and perceptions of justice can influence trust and satisfaction outcomes. Findings by Moon and Travaglino indicate that perceived injustice negatively affects trust, further complicating the pathways to loyalty (Moon & Travaglino, 2024). By integrating these dimensions—perceived value, trust, and the influence of emotional contexts—current research illustrates that the dynamics of loyalty are intricate and multifaceted, challenging the traditional linear models that previously dominated the discourse (Gul, 2014). Thus, this systematic review underscores the necessity of revisiting established models of consumer loyalty by incorporating a broader range of mediating factors like trust and perceived value. By doing so, we better capture the complexity of consumer relationships with brands, especially in contexts driven by personalization strategies.

4.5. Study Limitations

This study has several limitations that need to be acknowledged. First, there is the potential for publication bias, where only studies showing positive results are more likely to be published and indexed in large scientific databases. Second, the study only included English-language articles, which likely overlooked contributions from quality studies published in other languages. These limitations may limit the generalizability of the findings globally, especially to specific cultural or regional contexts that are not represented in the study sample.

4.6. Recommendations for Further Research

To strengthen and expand the existing understanding, further research is recommended to adopt a longitudinal approach, to observe the impact of personalization over a longer period of time, especially related to the dynamics of loyalty and trust formation. In addition, further exploration in the context of emerging markets is needed, given the high but untapped potential for e-commerce growth and AI use in the region. Finally, it is also important to examine the role of more sophisticated personalization technologies, such as generative AI, which have the potential to create interactive and creative experiences that are more personal and responsive to the dynamics of modern consumer behavior.

5. CONCLUSION

5.1. Summary of Findings

Based on the results of a systematic literature review conducted on 28 articles scientific in time span 2001 to 2025, it was found that the use of Artificial Intelligence (AI) in personalization strategies has a consistently positive effect on consumer loyalty in the context of e-commerce. The effect is not direct, but rather mediated by important psychological variables such as trust and perceived value. Personalization carried out with an AI approach increases the relevance of content and user experience, which ultimately strengthens positive perceptions of the brand. Increasing consumer trust is an important prerequisite for driving long-term loyalty, while strengthening emotional connections and attachment to digital platforms.

5.2. Contribution to Literature

This study makes a significant contribution to the literature in digital marketing and customer relationship management by synthesizing findings across studies and proposing a new conceptual framework that integrates theoretical approaches from the Stimulus-Organism-Response (S-O-R) model and Commitment-Trust Theory. This framework enables a deeper understanding of how AI personalization influences consumer behavior not only from a technical perspective, but also through psychological and sociological mechanisms. Thus, this study not only confirms previous findings but also broadens the scope of the discussion by including previously under-recognized mediators and moderators.

5.3. Study Limitations

Although the results of this study offer significant contributions, there are several limitations that need to be noted. First, the selection of articles was limited to the Scopus, Web of Science, and Google Scholar databases, which although comprehensive, still run the risk of leaving out relevant studies from other sources. Second, the scope of keywords used in the search process may limit the scope of literature identification, so it is possible that important aspects of personalization that use different terminology have not been optimally accommodated. These limitations may affect the overall representation of the complexity of the phenomenon being studied.

5.4. Future Research Suggestions

To deepen and broaden the understanding of the impact of AI personalization on consumer loyalty, future research is recommended to use an experimental empirical approach, especially to test the causal relationship between variables more precisely. This approach can be done through digital interaction simulations or direct recommendation system testing on real consumers. In addition, studies that consider demographic segmentation, such as age, gender, digital literacy level, and local culture, can provide richer insights into how personalization preferences differ across user groups. Cross-geographical exploration and the adoption of cutting-edge technologies such as generative AI are also strategic areas for further research.

6. REFERENCES

- Aw, E., Basha, N., Ng, S., & Sambasivan, M. (2019). To grab or not to grab? the role of trust and perceived value in on-demand ridesharing services. *Asia Pacific Journal of Marketing and Logistics*, 31(5), 1442-1465. <https://doi.org/10.1108/apjml-09-2018-0368>
- BigSur AI. (2024). E-commerce AI statistics for 2024 and beyond. BigSur. <https://www.bigsur.ai/blog/ecommerce-ai-statistics>

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Cao, J. (2024). Enabling zaras operational innovation and value creation with artificial intelligence. *Advances in Economics Management and Political Sciences*, 86(1), 81-87. <https://doi.org/10.54254/2754-1169/86/20240948>
- Chaudhuri, A. and Holbrook, M. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of Marketing*, 65(2), 81-93. <https://doi.org/10.1509/jmkg.65.2.81.18255>
- Chebotareva, A., Kazantseva, N., Vologdina, E., Grigorian, T., & Sukhanova, I. (2021). Digital transformation and artificial intelligence in the activities of customs services in russia and foreign countries. *SHS Web of Conferences*, 118, 04014. <https://doi.org/10.1051/shsconf/202111804014>
- Chellappa, R. and Sin, R. (2005). Personalization versus privacy: an empirical examination of the online consumer's dilemma. *Information Technology and Management*, 6(2-3), 181-202. <https://doi.org/10.1007/s10799-005-5879-y>
- Chen, Q., Lu, Y., Gong, Y., & Xiong, J. (2023). Can ai chatbots help retain customers? impact of ai service quality on customer loyalty. *Internet Research*, 33(6), 2205-2243. <https://doi.org/10.1108/intr-09-2021-0686>
- Chen, X., Sun, J., & Liu, H. (2021). Balancing web personalization and consumer privacy concerns: mechanisms of consumer trust and reactance. *Journal of Consumer Behaviour*, 21(3), 572-582. <https://doi.org/10.1002/cb.1947>
- Contentful. (2023). E-commerce personalization statistics: 25 stats marketers must know. Contentful. <https://www.contentful.com/blog/ecommerce-personalization-statistics/>
- Davenport, T., Guha, A., Grewal, D., & Breßgott, T. (2019). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48(1), 24-42. <https://doi.org/10.1007/s11747-019-00696-0>
- Gao, Y. and Liu, H. (2022). Artificial intelligence-enabled personalization in interactive marketing: a customer journey perspective. *Journal of Research in Interactive Marketing*, 17(5), 663-680. <https://doi.org/10.1108/jrim-01-2022-0023>
- Gul, R. (2014). The relationship between reputation, customer satisfaction, trust, and loyalty. *Journal of Public Administration and Governance*, 4(3), 368. <https://doi.org/10.5296/jpag.v4i3.6678>
- Gusenbauer, M., & Haddaway, N. R. (2020). Which academic search systems are suitable for systematic reviews or meta-analyses? *Research Synthesis Methods*, 11(2), 181–217. <https://doi.org/10.1002/jrsm.1378>
- IBM. (2023). AI personalization: Tailoring experiences with machine learning. IBM Think. <https://www.ibm.com/think/topics/ai-personalization>
- Ikramuddin, I. and Mariyudi, M. (2021). The mediating role of customer satisfaction and brand trust between the relationship of perceived value and brand loyalty. *Asian Journal of Economics Business and Accounting*, 21-33. <https://doi.org/10.9734/ajeba/2021/v21i1930503>
- Jacoby, J. (2002). Stimulus–Organism–Response reconsidered: An evolutionary step in modeling (consumer) behavior. *Journal of Consumer Psychology*, 12(1), 51–57. https://doi.org/10.1207/S15327663JCP1201_05
- Kervyn, N., Fiske, S., & Malone, C. (2012). Brands as intentional agents framework: how perceived intentions and ability can map brand perception. *Journal of Consumer Psychology*, 22(2), 166-176. <https://doi.org/10.1016/j.jcps.2011.09.006>
- Khatib, S., Singh, D., & Younis, M. Z. (2025). The effects of AI-driven personalization on customer loyalty: A meta-analysis of e-commerce platforms. *International Journal of Intelligent Systems in Marketing*, 17(2), 88–104. <https://link.springer.com/article/10.1007/s43995-025-00142-z>

- Kotha, S. (2024). The convergence of artificial intelligence and human marketing: a framework for enhanced customer insights and personalization. *International Journal for Multidisciplinary Research*, 6(6). <https://doi.org/10.36948/ijfmr.2024.v06i06.30266>
- Li, J., Wu, L., Qi, J., Zhang, Y., Wu, Z., & Hu, S. (2023). Determinants affecting consumer trust in communication with ai chatbots. *Journal of Organizational and End User Computing*, 35(1), 1-24. <https://doi.org/10.4018/joeuc.328089>
- Moon, C. and Travaglino, G. (2024). The association between perceived injustice and political trust: testing a dual-pathway model through anger and patriotism across four countries. *Political Psychology*, 46(2), 345-364. <https://doi.org/10.1111/pops.13005>
- Oanh, V. (2024). Evolving landscape of e-commerce, marketing, and customer service: the impact of ai integration. *jes*, 20(3s), 1125-1137. <https://doi.org/10.52783/jes.1426>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>
- Tejo, M. (2021). The effect of perceived value on customer retention with trust as mediation variable in company x. *Jurnal Nusantara Aplikasi Manajemen Bisnis*, 6(2), 216-232. <https://doi.org/10.29407/nusamba.v6i2.16205>
- Wang, A. (2023). Digital transformation for traditional retail: walmarts success amidst pandemic challenges in china. *Advances in Economics Management and Political Sciences*, 31(1), 119-127. <https://doi.org/10.54254/2754-1169/31/20231518>
- Wang, X., Lin, X., & Shao, B. (2022). Artificial intelligence changes the way we work: a close look at innovating with chatbots. *Journal of the Association for Information Science and Technology*, 74(3), 339-353. <https://doi.org/10.1002/asi.24621>
- Zhang, J., Li, D., & Fan, X. (2018). A customer-centric trust evaluation model for personalized service selection. *Scientific Programming*, 2018, 1-13. <https://doi.org/10.1155/2018/4819195>