

Impact of Artificial Intelligence on Consumer Purchase Decisions: A Review

Amritpal Singh Sidhu¹, Sushmita², Amandeep Kaur^{3*}

¹ University Business School, Maharaja Ranjit Singh Punjab Technical University, Bathinda-151001, Punjab, India.

Email: maanamrit01@gmail.com

² Department of Commerce, Punjabi University, Patiala-147002, Punjab, India.

Email: sushmita53@ymail.com

³ Department of Business Studies, Punjabi University Guru Kashi Campus, Talwandi Sabo-151302, Talwandi Sabo, Punjab, India.

Email: amandeepdbs@pbi.ac.in

Corresponding Author

Ms. Sushmita

² Research Scholar, Department of Commerce, Punjabi University, Patiala-147002, Punjab, India.

Email: sushmita53@ymail.com.

ABSTRACT

Artificial intelligence (AI) is rapidly transforming the way consumers search for information, evaluate products, and make purchase decisions. The increasing adoption of AI-powered technologies, including recommendation systems, chatbots, virtual assistants, and generative AI, has enabled businesses to deliver highly personalized and interactive consumer experiences. As a result, AI has become an important driver of consumer engagement, purchase intention, and decision efficiency in digital marketplaces. This mini-review examines the role of AI in shaping consumer purchase decisions by synthesizing recent literature on AI technologies and their influence on consumer behavior. The review highlights how AI enhances information search, product discovery, personalization, trust, and consumer engagement, ultimately influencing purchasing outcomes. At the same time, it critically discusses major ethical and societal concerns associated with AI adoption, including privacy and data security risks, algorithmic bias, transparency issues, and challenges to consumer autonomy. The findings suggest that while AI offers significant opportunities to improve consumer experiences and marketing effectiveness, its growing ability to predict and influence behavior raises important questions regarding fairness, trust, and informed decision-making. Future advancements in AI should therefore be accompanied by responsible governance, explainable algorithms, and consumer-centric design approaches to ensure that technological innovation supports both business objectives and consumer welfare. This review provides a concise overview of the opportunities, challenges, and future directions of AI-driven consumer decision-making in an increasingly digital economy.....

Keywords: Artificial intelligence; Consumer behavior; Purchase intention; Personalization; Recommendation systems; Generative AI; Consumer trust; Algorithmic bias; Digital marketing..

INTRODUCTION

Artificial intelligence (AI) is rapidly transforming the retail and marketing landscape by enabling businesses to deliver personalized, efficient, and data-driven consumer experiences. AI refers to computational systems capable of performing tasks that typically require human intelligence, including learning, reasoning, pattern recognition, prediction, and decision-making. Advances in machine learning, natural language processing, computer vision, and generative AI have accelerated the integration of AI into consumer-facing applications, fundamentally reshaping how individuals search for information, evaluate alternatives, and make purchasing decisions (Haque et al., 2024). The proliferation of digital commerce has created vast amounts of consumer data,

providing unprecedented opportunities for AI-driven analytics and personalization. Modern e-commerce platforms increasingly rely on recommendation systems, intelligent chatbots, virtual assistants, and predictive algorithms to understand consumer preferences and deliver tailored product suggestions. These technologies help consumers navigate information-rich environments while simultaneously enabling firms to improve customer engagement, conversion rates, and long-term loyalty. As a result, AI has become a critical strategic tool for influencing consumer behavior throughout the purchase journey (Mohd Amin et al., 2025).

Consumer purchase decisions have traditionally been explained through behavioral models that involve several interconnected stages, including need recognition,

information search, evaluation of alternatives, purchase selection, and post-purchase assessment. The emergence of AI has significantly altered these stages by providing real-time recommendations, personalized content, and automated support mechanisms (Tarnanidis et al., 2025). Recommendation systems can narrow product choices based on past interactions and behavioral patterns, while AI-powered chatbots provide immediate responses to customer queries, reducing uncertainty and perceived purchase risk. Furthermore, advances in generative AI have introduced new forms of interactive consumer engagement through personalized content generation, conversational shopping assistants, and automated product explanations (Kumar et al., 2024).

Personalization represents one of the most influential mechanisms through which AI affects consumer purchase behavior. By analyzing browsing history, transaction records, demographic characteristics, and online interactions, AI systems can deliver highly relevant recommendations that align with individual preferences. Such tailored experiences enhance perceived usefulness and convenience, which are recognized determinants of purchase intention and consumer satisfaction. Consequently, AI-driven personalization has become a key differentiator in competitive digital marketplaces (Srivastava & Gurme, 2026). Beyond personalization, AI also shapes consumer trust and decision confidence. Consumers increasingly interact with algorithmic systems when searching for products, comparing alternatives, or seeking customer support. The perceived accuracy, transparency, and reliability of AI-generated recommendations can significantly influence purchasing outcomes. While effective AI systems can reduce information overload and improve decision quality, concerns about privacy, algorithmic bias, data security, and the manipulation of consumer choices have emerged as significant challenges. These ethical and societal concerns have stimulated growing academic interest in understanding the benefits and risks of AI-mediated consumer decision-making (Aydin, 2026).

Recent developments in generative AI have further intensified discussions regarding the future of consumer behavior. Advanced conversational systems can generate personalized marketing messages, answer product-related questions, simulate human-like interactions, and support consumers throughout the purchasing process. Such capabilities are expected to increase consumer engagement while simultaneously raising questions regarding authenticity, transparency, and consumer autonomy. As organizations continue to invest heavily in AI-powered marketing technologies, understanding their influence on consumer purchase decisions has become increasingly important for researchers, practitioners, and policymakers (Rahman et al., 2026).

Given the expanding role of AI across digital commerce ecosystems, a comprehensive examination of its impact on consumer purchase decisions is warranted. Therefore, this mini-review explores the major AI technologies shaping consumer behavior, including recommendation systems, chatbots, virtual assistants, and generative AI tools. It further examines how these technologies influence information search, personalization, trust,

engagement, and purchase intention, and discusses major ethical challenges and future research directions. By synthesizing recent literature, this review provides insights into the evolving relationship between AI and consumer purchasing behavior.

AI Technologies Shaping Consumer Decisions

Recommendation Systems

Recommendation systems are among the most influential AI tools in modern e-commerce, shaping how consumers discover and select products. By analyzing browsing history, previous purchases, and user preferences, these systems provide personalized suggestions that help consumers navigate an increasingly crowded digital marketplace (Xu & Chen, 2025). Research suggests that recommendation systems can enhance purchase intentions by reducing information overload and making product searches more efficient. Personalized recommendations often increase perceived relevance, convenience, and satisfaction, leading consumers to engage more deeply with online platforms. As a result, recommendation engines have become a key driver of sales and customer retention (Xu & Chen, 2025). However, their effectiveness is not without limitations. Over-personalization may narrow consumers' exposure to alternative products, creating "filter bubbles" that reinforce existing preferences rather than encouraging informed exploration. In addition, many recommendation algorithms operate as black boxes, making it difficult for consumers to understand why certain products are suggested. Such lack of transparency can undermine trust, particularly when recommendations appear intrusive or overly targeted (Mathews et al., 2025).

Another concern is the extensive use of personal data required to generate accurate recommendations. While consumers often appreciate personalized experiences, growing awareness of privacy risks has increased scrutiny of how companies collect, store, and use behavioral data. Consequently, balancing personalization with transparency and privacy protection remains a significant challenge (Wieringa et al., 2021). Overall, recommendation systems have improved the efficiency and personalization of consumer decision-making. Nevertheless, future developments should focus not only on predictive accuracy but also on fostering consumer trust, transparency, and autonomy in AI-driven purchasing environments.

Chatbots and Virtual Assistants

Chatbots and virtual assistants have become increasingly important in shaping consumer purchase decisions by providing real-time, personalized support throughout the shopping journey. Powered by advances in natural language processing (NLP) and machine learning, these AI tools can answer product-related questions, offer recommendations, compare alternatives, and assist consumers in making informed choices (Agapitou et al., 2025). One of their key advantages is the ability to reduce uncertainty during the decision-making process. Consumers often seek additional information before making a purchase, particularly for complex or high-value products. By delivering instant responses and round-the-clock assistance, chatbots can enhance convenience and

improve the overall shopping experience. Studies have shown that timely and relevant interactions can increase consumer satisfaction, engagement, and purchase intention (Yu et al., 2025). However, the effectiveness of chatbots largely depends on the quality of their interactions. While advanced AI-powered assistants can provide human-like conversations, many systems still struggle to understand complex queries, emotional cues, or context-specific needs. Poorly designed chatbot experiences may lead to frustration, reduced trust, and abandonment of the purchasing process. Therefore, convenience alone does not guarantee positive consumer outcomes (Saviano et al., 2025).

Trust also plays a critical role in chatbot adoption. Consumers are generally more receptive to AI assistance when responses are accurate, transparent, and perceived as unbiased. Conversely, concerns about automated decision-making, privacy, and the authenticity of AI-generated interactions can limit consumer acceptance. As chatbots become more sophisticated through generative AI, the distinction between human and machine communication is increasingly blurred, raising important questions about transparency and ethical disclosure (Galindez-Acosta & Giraldo-Huertas, 2026). Overall, chatbots and virtual assistants have enhanced consumer access to information and streamlined the purchasing process. Nevertheless, their long-term success will depend on balancing efficiency with trust, transparency, and meaningful human-centered interactions.

Generative AI and Personalized Marketing

Generative AI has emerged as a transformative tool in digital marketing, enabling brands to create highly personalized content, product recommendations, and customer interactions at an unprecedented scale. Unlike traditional AI systems that primarily analyze and predict consumer behavior, generative AI can produce human-like text, images, videos, and conversational responses tailored to individual consumer preferences (Wessel et al., 2025). The growing adoption of generative AI has significantly enhanced personalized marketing strategies. By leveraging consumer data, these systems can generate customized advertisements, product descriptions, email campaigns, and shopping recommendations that align with individual interests and purchasing histories. Such personalized experiences can increase consumer engagement, perceived relevance, and purchase intention, making marketing communications more effective than generic promotional approaches (Hardcastle et al., 2025).

Despite these advantages, the increasing use of generative AI raises important concerns. Hyper-personalized content may blur the line between consumer assistance and behavioral manipulation, potentially influencing purchasing decisions in ways that consumers may not fully recognize. Furthermore, AI-generated content is not always accurate and may occasionally produce misleading information, affecting consumer trust and decision quality. The use of personal data to generate tailored marketing messages also intensifies privacy concerns, particularly when consumers are unaware of how their information is being collected and utilized (Estevez et al., 2025). Another emerging challenge relates to authenticity.

While generative AI can create highly engaging, human-like interactions, consumers may become skeptical if they perceive the content as artificial or deceptive. Studies suggest that transparency regarding AI-generated communications can play a crucial role in maintaining trust and fostering positive consumer attitudes. Consequently, organizations must balance personalization with ethical considerations, transparency, and responsible data practices (Belanche et al., 2025; Nguyen et al., 2026). Overall, generative AI is redefining personalized marketing by enabling more dynamic, interactive, and consumer-centric experiences. However, its long-term impact on consumer purchase decisions will depend on how effectively businesses address concerns about trust, privacy, authenticity, and the ethical use of AI-generated content.

Impact of AI on Consumer Purchase Decisions

Information Search and Product Discovery

Information search and product discovery represent critical stages of the consumer decision-making process, as consumers seek relevant information to reduce uncertainty and evaluate available alternatives. The emergence of AI has fundamentally transformed these stages by enabling faster, more personalized, and context-aware access to product information. Unlike traditional search systems that rely primarily on keyword matching, AI-driven technologies leverage machine learning, natural language processing, and predictive analytics to understand consumer intent and deliver highly relevant results (Davenport et al., 2020). A growing body of research suggests that AI significantly improves the efficiency of information search by reducing information overload, a common challenge in digital marketplaces with vast product assortments. AI-powered recommendation engines, intelligent search algorithms, and conversational assistants can filter large volumes of information and prioritize products that align with individual preferences and behavioral patterns. This personalized approach simplifies the search process and enables consumers to identify suitable products more quickly, thereby enhancing decision quality and reducing cognitive effort (M.-H. Huang & Rust, 2021).

Recent studies further indicate that AI-driven product discovery extends beyond merely matching products to consumer preferences. Advanced algorithms can identify latent needs and introduce consumers to products they may not have actively searched for, thereby facilitating serendipitous discovery and increasing purchase opportunities. For example, recommendation systems integrated into e-commerce platforms analyze browsing history, purchase records, and real-time interactions to generate personalized suggestions that influence product consideration sets and shape subsequent purchasing decisions (Puntoni et al., 2021). The emergence of generative AI and conversational commerce has further transformed information search behavior. AI-powered conversational agents can now provide detailed product explanations, compare alternatives, summarize customer reviews, and answer complex consumer queries in natural language. Such interactive capabilities create a more

engaging and intuitive search experience compared with conventional search interfaces. Evidence suggests that consumers often perceive conversational AI as a useful decision-support tool, particularly when purchasing unfamiliar or complex products (Dwivedi et al., 2023).

Despite these advantages, the growing reliance on AI-mediated search raises several concerns. Personalized search algorithms may prioritize relevance over diversity, potentially limiting consumers' exposure to alternative products and viewpoints. This can narrow choice options, where consumers repeatedly encounter products similar to their previous interests. Moreover, the opacity of many AI algorithms makes it difficult for consumers to understand how search results are generated, potentially affecting trust and perceived fairness (Bawack et al., 2022). Overall, the literature indicates that AI has substantially enhanced information search and product discovery by improving relevance, efficiency, and personalization. However, future research should examine how AI-driven search systems can balance personalization with transparency, diversity, and consumer autonomy to ensure that enhanced convenience does not come at the expense of informed decision-making.

Personalization and Purchase Intention

Personalization is widely recognized as one of the most significant mechanisms through which AI influences consumer purchase decisions. By analyzing consumer data such as browsing behavior, purchase history, search patterns, and demographic characteristics, AI systems can deliver tailored recommendations, advertisements, and shopping experiences that align with individual preferences. This shift from mass marketing to personalized engagement has fundamentally changed how consumers interact with brands and evaluate products (Bawack et al., 2022). The literature consistently reports a positive relationship between AI-driven personalization and purchase intention. Personalized recommendations enhance the relevance of product information, reducing the effort required to identify suitable alternatives and increasing the likelihood of purchase. Consumers generally perceive personalized content as more useful and valuable because it reflects their specific needs and interests. Consequently, personalized experiences often improve consumer satisfaction, engagement, and conversion rates, making personalization a key driver of purchasing behavior (M.-H. Huang & Rust, 2021). However, the effectiveness of personalization is not solely determined by recommendation accuracy. Several studies suggest that consumers respond positively to personalization only when it provides genuine value without appearing overly intrusive. Moderate levels of personalization can enhance perceived convenience and decision quality, whereas excessive personalization may trigger discomfort and concerns regarding surveillance. This phenomenon, often described as the “personalization–privacy paradox,” highlights the tension between consumers’ desire for customized experiences and their concerns about the collection and use of personal data (Weidig & Kuehn, 2023).

Another important consideration is the role of perceived control. Consumers are more likely to trust personalized

recommendations when they feel they have control over their data and understand how recommendations are generated. Conversely, opaque personalization practices can create skepticism and reduce purchase intention, even when recommendations are highly relevant. Therefore, transparency and explainability have become increasingly important factors influencing consumer acceptance of AI-driven personalization (Jasim et al., 2026). Recent developments in generative AI have further expanded the scope of personalization. AI systems can now create individualized product descriptions, marketing messages, and interactive shopping experiences in real time. While these capabilities can strengthen consumer engagement and brand relationships, they also raise concerns about manipulation and the ethical boundaries of personalized persuasion. As AI becomes increasingly capable of predicting and influencing consumer preferences, the distinction between assisting and steering consumer decisions becomes less clear (Panda et al., 2025; Rahman et al., 2026).

Overall, existing research indicates that personalization positively influences purchase intention by enhancing relevance, convenience, and decision confidence. Nevertheless, its effectiveness depends on maintaining an appropriate balance between customization, transparency, and consumer privacy. Future research should focus on understanding how consumers perceive increasingly sophisticated forms of AI-driven personalization and whether these technologies ultimately empower consumers or constrain independent decision-making.

Consumer Trust and Decision Confidence

Consumer trust is a critical determinant of the effectiveness of AI-driven technologies in influencing purchase decisions. While AI systems can enhance convenience, personalization, and decision efficiency, their impact ultimately depends on whether consumers perceive them as reliable, transparent, and beneficial. Trust becomes particularly important in digital environments where consumers increasingly rely on algorithmic recommendations, chatbots, and personalized marketing messages to guide their purchasing choices (Chakraborty et al., 2024). The existing research suggests that AI can strengthen decision confidence by reducing information asymmetry and providing consumers with timely, relevant, and personalized information. Recommendation systems, intelligent search tools, and conversational agents help consumers evaluate alternatives more efficiently, thereby reducing uncertainty during the decision-making process. When AI-generated recommendations are perceived as accurate and useful, consumers are more likely to trust the information provided and feel confident about their purchase decisions (Puntoni et al., 2021). However, trust in AI is not automatic. Consumers often evaluate AI systems differently from human advisors, particularly when decisions involve uncertainty, risk, or emotional considerations. While AI is generally viewed as objective and data-driven, concerns about algorithmic errors, hidden biases, and a lack of human judgment can undermine consumer confidence. Research indicates that consumers are less likely to trust AI recommendations when they do not understand how decisions are generated

or when recommendations appear inconsistent with their expectations (M.-H. Huang & Rust, 2021).

Transparency has emerged as a key factor influencing trust and decision confidence. Explainable AI systems that provide clear justifications for recommendations can increase perceived fairness and credibility. In contrast, "black-box" algorithms may create skepticism, particularly when consumers feel that their choices are being influenced without adequate explanation. Consequently, scholars increasingly argue that explainability should be considered a core component of consumer-facing AI applications rather than a purely technical feature (Wanner et al., 2022). Privacy concerns further complicate trust formation. AI-driven personalization often requires extensive collection and analysis of consumer data. Although consumers appreciate relevant recommendations, they may become reluctant to engage with AI systems if they perceive excessive monitoring or misuse of personal information. This tension highlights the importance of balancing personalization benefits with responsible data governance and transparent privacy practices (An & Ngo, 2025).

Recent advances in generative AI have introduced additional challenges. Human-like conversational systems can enhance engagement and create perceptions of personalized support, but they may also blur the distinction between authentic assistance and persuasive influence. As AI-generated interactions become increasingly sophisticated, maintaining consumer trust will require clear disclosure of AI involvement, accurate information delivery, and ethical implementation practices (Israfilzade, 2025). Overall, the literature suggests that consumer trust serves as a bridge between AI capabilities and purchasing outcomes. AI technologies can enhance decision confidence by improving information quality, reducing uncertainty, and facilitating informed choices. Nevertheless, sustained consumer trust depends on transparency, explainability, fairness, and responsible data use. Future research should explore how evolving AI technologies influence trust dynamics and whether increasing algorithmic sophistication strengthens or undermines consumer confidence in purchase decisions.

Impulse Buying and Consumer Engagement

AI has significantly reshaped consumer engagement strategies, creating highly interactive and personalized shopping experiences that can influence spontaneous purchasing behavior. Through recommendation systems, targeted advertising, conversational agents, and personalized content delivery, AI continuously engages consumers throughout their online journey, increasing exposure to products and purchase opportunities. As a result, AI not only supports rational decision-making but can also stimulate impulse buying by reducing the time between product discovery and purchase (Beyari & Hashem, 2025). Several studies suggest that AI-driven personalization enhances consumer engagement by delivering relevant content at the right time and through appropriate channels. Personalized product

recommendations, dynamic promotions, and real-time notifications increase consumers' attention and interaction with brands, strengthening emotional and cognitive engagement. Higher engagement levels are often associated with greater purchase intentions, longer platform usage, and increased spending behavior (An & Ngo, 2025; Sidra & Wagan, 2025). AI therefore serves as a powerful mechanism for maintaining consumer interest and facilitating continuous interaction with digital retail platforms.

The relationship between AI and impulse buying is particularly evident in personalized recommendation environments. By analyzing behavioral data and predicting consumer preferences, AI systems can present highly relevant products that trigger immediate purchase decisions. Features such as "frequently bought together," personalized discounts, and limited-time offers can create a sense of urgency and reduce deliberation, encouraging unplanned purchases. While these strategies can enhance consumer convenience and satisfaction, they may also exploit cognitive biases and emotional responses that contribute to impulsive buying behavior (Suzuki & Goto, 2024). However, the influence of AI on impulse purchasing remains a subject of debate. Some scholars argue that personalized recommendations improve decision quality by helping consumers identify products that genuinely match their needs. Others contend that continuous algorithmic stimulation may weaken consumer self-control by encouraging frequent exposure to persuasive marketing cues. This concern is particularly relevant in the era of generative AI, where highly tailored content can adapt in real time to consumer preferences, emotions, and behavioral patterns (Bai et al., 2026).

Consumer engagement generated through AI is also closely linked to perceptions of trust and authenticity. Personalized interactions can strengthen consumer-brand relationships when recommendations are viewed as helpful and relevant. Conversely, excessive targeting or repetitive promotional messages may create a sense of manipulation, reducing engagement and negatively affecting brand perception. Therefore, the effectiveness of AI-driven engagement strategies depends on achieving a balance between personalization and consumer autonomy (Jasim et al., 2026). Overall, AI has emerged as a powerful driver of consumer engagement and impulse buying by creating personalized, interactive, and seamless shopping experiences. While these technologies can enhance customer satisfaction and commercial performance, their increasing ability to influence spontaneous purchasing behavior raises important ethical questions regarding consumer welfare, informed choice, and responsible marketing practices.

Collectively, the literature indicates that AI influences consumer purchase decisions through multiple pathways, including information search, personalization, trust formation, and engagement. The major impacts, benefits, and associated concerns identified across these dimensions are summarized in Table 1.

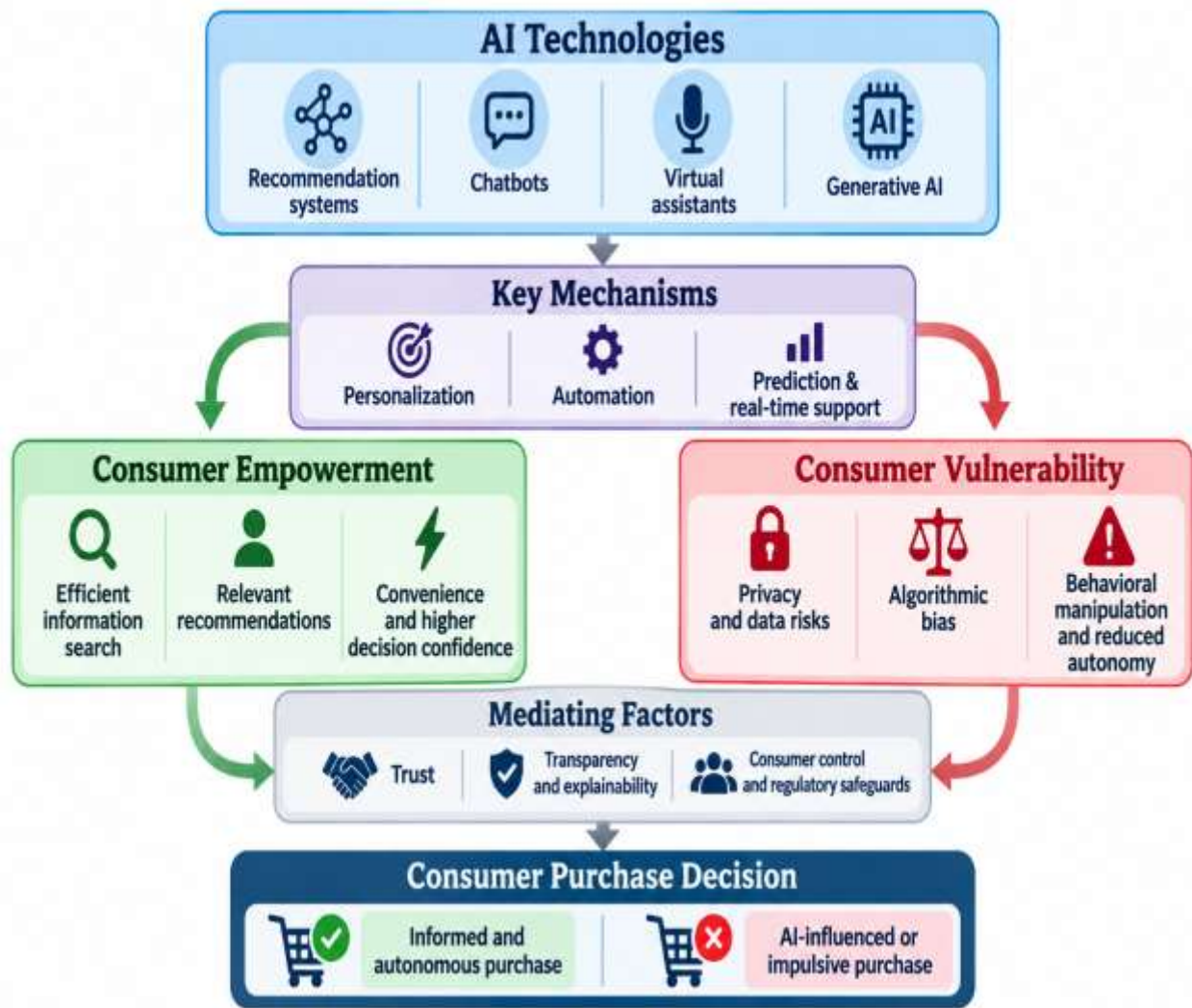


Figure 1. The AI-mediated consumer decision paradox: balancing consumer empowerment and algorithmic influence in purchase decision-making.

Table 1. Impact of AI technologies on consumer purchase decision-making.

Dimension	AI Mechanism	Positive Outcomes	Major Concerns	References
Information Search & Product Discovery	Recommendation engines, AI search, conversational assistants	Reduced information overload, improved product discovery, enhanced decision efficiency	Filter bubbles, limited diversity of choices	Davenport et al. (2020); Huang & Rust (2021); Puntoni et al. (2021)
Personalization & Purchase Intention	Personalized recommendations, targeted advertising, predictive analytics	Increased relevance, purchase intention, satisfaction, and conversion rates	Privacy concerns, over-personalization, perceived intrusiveness	Huang & Rust (2021); Weidig & Kuehnl (2023); Panda et al. (2025)
Consumer Trust & Decision Confidence	Explainable recommendations, AI assistants, intelligent customer support	Reduced uncertainty, improved confidence, stronger trust in decisions	Algorithm opacity, perceived bias, privacy risks	Puntoni et al. (2021); Wanner et al. (2022); Chakraborty et al. (2024)
Impulse Buying & Consumer Engagement	Personalized promotions, dynamic offers, real-time engagement tools	Higher engagement, stronger brand interaction, increased sales	Manipulation concerns, reduced self-control, impulsive purchases	Suzuki & Goto (2024); Beyari & Hashem (2025); Bai et al. (2026)

hallenges and Ethical Considerations

Despite the benefits of AI-driven personalization and decision support, several ethical and governance concerns have emerged regarding its influence on consumer behavior. The most prominent challenges include privacy

and data security, algorithmic bias, transparency, authenticity, and consumer autonomy. A summary of these challenges, their implications for consumer decision-making, and representative studies is presented in Table 2.

Table 2. Ethical challenges of AI in consumer purchase decisions.

Ethical Challenge	Major Concern	Consumer Impact	References
Privacy and Data Security	Extensive collection and processing of personal data	Reduced trust, privacy concerns, reluctance to share information	Martin & Murphy (2017); Dwivedi et al. (2021); Buckley et al. (2024)
Algorithmic Bias	Biased recommendations, targeting, and pricing decisions	Distorted product exposure, unfair treatment, reduced marketplace fairness	Ntoutsis et al. (2020); Alvarez et al. (2024); Yin et al. (2025)
Consumer Autonomy	Behavioral nudging, hyper-personalization, and algorithmic dependency	Reduced independent decision-making and increased susceptibility to persuasion	Karami et al. (2024); Kumar et al. (2024); Shabankareh et al. (2025)
Transparency and Explainability	Black-box AI systems and opaque decision-making processes	Lower trust and reduced decision confidence	Huang & Rust (2021); Wanner et al. (2022); Akorli & Enyejo (2025)
Authenticity and Trust	AI-generated content and human-like interactions	Difficulty distinguishing authentic from AI-generated information	Belanche et al. (2025); Israfilzade (2025); Nguyen et al. (2026)

Privacy and Data Security

Privacy and data security have emerged as some of the most critical challenges associated with the use of AI in consumer markets. AI-driven personalization relies heavily on the continuous collection and analysis of consumer data, including browsing histories, purchase records, location information, social media activities, and real-time behavioral interactions. While such data enable firms to deliver highly relevant recommendations and personalized experiences, they also raise concerns about consumer surveillance, data misuse, and loss of privacy (Raju et al., 2025). The literature suggests that consumers often face a trade-off between personalization benefits and privacy concerns. AI systems can improve convenience and decision quality by tailoring recommendations to individual preferences; however, these benefits depend on extensive access to personal information. This tension is commonly described as the privacy paradox, whereby consumers value personalized services but remain apprehensive about how their data are collected, stored, and utilized (Utami & Aimin, 2026). As AI technologies become increasingly sophisticated, concerns regarding excessive data collection and behavioral tracking have intensified, particularly when consumers lack awareness of the extent to which their information is being processed (Srivastava & Gurme, 2026). Beyond privacy concerns, data security has

become a major determinant of consumer trust in AI-enabled platforms. The growing volume of consumer data collected by organizations increases vulnerability to cyberattacks, unauthorized access, and data breaches. Research consistently shows that perceived security risks can reduce consumers' willingness to disclose personal information and engage with digital services. Consequently, data protection is no longer viewed solely as a technical issue but as a strategic factor influencing consumer confidence and long-term relationships with brands (Salih et al., 2025).

A recurring theme in recent scholarship is transparency. Many AI systems operate through complex algorithms that consumers neither understand nor directly control. This lack of visibility creates concerns about how personal information influences recommendations, pricing strategies, and targeted advertisements. Scholars argue that transparency regarding data collection practices and algorithmic decision-making is essential for maintaining consumer trust. Explainable AI and informed consent mechanisms are increasingly recommended as means of improving accountability and empowering consumers to make informed choices about their data (Akorli & Enyejo, 2025). The regulatory landscape has also evolved in response to these concerns. Regulations such as the General Data Protection Regulation (GDPR) have

strengthened requirements for consent, data minimization, transparency, and consumer rights. However, the rapid advancement of AI technologies continues to challenge existing regulatory frameworks, particularly in areas involving automated profiling and predictive consumer analytics. As a result, researchers increasingly advocate for privacy-by-design approaches that integrate ethical and security considerations into AI systems from the earliest stages of development (Buckley et al., 2024). Overall, the evidence suggests that privacy and data security are not merely operational concerns but fundamental determinants of consumer acceptance of AI-driven technologies. While access to consumer data enables greater personalization and marketing effectiveness, sustainable adoption of AI will depend on organizations' ability to balance innovation with transparency, security, and respect for consumer privacy.

Algorithmic Bias

Algorithmic bias has emerged as a major ethical challenge in AI-driven consumer environments. Although AI systems are often perceived as objective and data-driven, their outputs are heavily influenced by the quality and representativeness of the data on which they are trained. When historical datasets contain societal, demographic, or behavioral biases, AI models can inadvertently reproduce and even amplify these patterns, leading to unfair outcomes in product recommendations, targeted advertising, pricing strategies, and customer segmentation (Ntoutsis et al., 2020). In consumer markets, algorithmic bias can shape what products consumers see, which advertisements they receive, and how offers are personalized. Because recommendation and targeting algorithms are typically optimized for engagement and conversion rather than fairness, they may repeatedly favor specific products, brands, or consumer groups. Such practices can restrict consumer exposure to diverse alternatives and reinforce existing consumption patterns. Recent studies suggest that these biased recommendation pathways may limit consumer autonomy by subtly steering purchasing decisions toward commercially preferred outcomes rather than objectively relevant choices (Yin et al., 2025). The growing adoption of generative AI has further complicated concerns surrounding algorithmic bias. Large language models and AI-powered marketing systems learn from vast online datasets that may contain cultural stereotypes, demographic imbalances, and misinformation. Consequently, AI-generated content can unintentionally reflect biased assumptions or produce unequal representations of consumers and products. In marketing contexts, such biases may influence consumer perceptions, brand evaluations, and purchase intentions, raising concerns regarding fairness and inclusivity (Y. Huang et al., 2026).

Another challenge is the limited transparency of many AI systems. Consumers often have little understanding of why certain products are recommended or why specific advertisements are displayed. This lack of explainability makes it difficult to identify biased outcomes and can undermine trust in AI-enabled platforms. Recent research highlights that consumers are more likely to accept AI-driven recommendations when decision-making

processes are transparent and accompanied by clear explanations. Thus, explainable AI is increasingly viewed as an essential mechanism for reducing bias and enhancing accountability (M.-H. Huang & Rust, 2021). Addressing algorithmic bias requires a multidisciplinary approach that extends beyond technical optimization. Scholars increasingly advocate for diverse training datasets, continuous bias auditing, fairness-aware algorithm design, and stronger governance frameworks. Regulatory initiatives such as the European Union AI Act have also emphasized the need for transparency, risk assessment, and human oversight in high-impact AI systems. These developments reflect a broader shift toward responsible AI practices that prioritize fairness alongside efficiency and personalization (Alvarez et al., 2024). Overall, algorithmic bias represents a critical barrier to the ethical deployment of AI in consumer markets. While AI technologies offer substantial benefits for personalization and decision support, biased algorithms can distort consumer choices, reduce market fairness, and weaken trust in digital platforms.

Consumer Autonomy

Consumer autonomy has become one of the most contested issues in AI-enabled marketing. Proponents argue that AI enhances autonomy by reducing information overload, improving product discovery, and helping consumers make more informed decisions. Through personalized recommendations, intelligent search tools, and conversational assistants, AI can simplify complex purchasing environments and increase decision efficiency. From this perspective, AI acts as a decision-support mechanism that empowers consumers to identify products that better match their needs and preferences (Han & Ko, 2025). However, critics challenge the assumption that greater personalization necessarily translates into greater autonomy. AI systems are designed not only to predict consumer preferences but also to influence behavior. Recommendation algorithms, targeted advertisements, and generative AI assistants continuously shape the information consumers encounter, thereby influencing the set of options they consider. Consequently, consumer choices may be guided by algorithmic priorities rather than entirely self-directed preferences. This raises concerns that AI may gradually shift consumers from active decision-makers to passive recipients of algorithmically curated choices (Karami et al., 2024).

A central debate concerns the distinction between decision support and behavioral manipulation. While firms often present AI-driven personalization as a means of improving consumer experiences, these technologies are frequently optimized for engagement, conversion, and revenue generation. Generative AI further intensifies this concern by enabling highly persuasive and individualized interactions. Unlike traditional advertising, AI can adapt messages in real time based on consumer behavior, preferences, and emotional responses. Such capabilities blur the boundary between assisting consumers and strategically influencing their decisions, raising questions about whether consumers remain fully autonomous in AI-mediated environments (Shabankareh et al., 2025). Another concern is the emergence of algorithmic

dependency. As AI systems become increasingly accurate and convenient, consumers may rely excessively on automated recommendations rather than conducting independent evaluations. Although this reliance can reduce cognitive effort, it may also weaken critical thinking and limit consumers' willingness to explore alternatives. Over time, repeated exposure to algorithmically selected products can reinforce existing preferences and narrow consumer choice sets, potentially reducing diversity in decision-making and restricting genuine freedom of choice (M.-H. Huang & Rust, 2021).

The issue is further complicated by the information asymmetry between firms and consumers. Organizations possess sophisticated AI systems capable of analyzing vast quantities of behavioral data, whereas consumers typically have limited knowledge of how these systems operate. This imbalance creates an environment in which consumers may be unaware of the extent to which their decisions are being influenced. Scholars increasingly argue that such opacity undermines informed consent and challenges traditional notions of consumer sovereignty in digital marketplaces (Menard & Bott, 2025). Despite these concerns, completely rejecting AI-driven personalization is neither realistic nor desirable. The challenge lies in balancing personalization benefits with safeguards that preserve consumer agency. Recent literature therefore advocates for explainable AI, transparent recommendation mechanisms, user-controlled personalization settings, and ethical governance frameworks that prioritize consumer welfare alongside commercial objectives. Such measures can help ensure that AI remains a tool for empowerment rather than a mechanism for subtle behavioral control (Kumar et al., 2024). Overall, the relationship between AI and consumer autonomy remains inherently paradoxical. While AI can enhance decision quality and convenience, its growing ability to predict, personalize, and influence behavior raises important questions about the independence of consumer choice.

Future Perspectives

The future of AI in consumer decision-making is likely to be shaped by advances in generative AI, predictive analytics, and increasingly sophisticated personalization technologies. Rather than functioning solely as recommendation tools, future AI systems are expected to become intelligent decision-support agents capable of understanding consumer preferences, contextual factors, and real-time behavioral signals. This evolution may enable more seamless, interactive, and personalized shopping experiences across digital and omnichannel environments. A key research direction involves developing explainable and trustworthy AI. As consumers become increasingly dependent on AI-generated recommendations, transparency in how decisions are made will be essential to maintaining trust and ensuring informed decision-making. Future AI systems should therefore prioritize explainability, fairness, and accountability alongside predictive performance.

The rapid growth of generative AI is also expected to transform consumer-brand interactions. Conversational shopping assistants, AI-generated product content, and

hyper-personalised marketing communications may enhance consumer engagement and the purchasing experience. However, these advances will require careful consideration of ethical issues surrounding manipulation, authenticity, and consumer autonomy. Future research should examine the long-term psychological and behavioural effects of AI-mediated persuasion, particularly in highly personalised marketing environments. Another important area of investigation concerns the relationship between AI and consumer well-being. While existing studies have primarily focused on business outcomes such as engagement, conversion, and sales, limited attention has been given to how AI affects consumer welfare, decision quality, and long-term satisfaction. Future research should therefore move beyond firm-centric metrics and assess whether AI genuinely empowers consumers or merely optimises commercial performance.

From a regulatory perspective, the increasing use of AI in consumer markets will require stronger governance frameworks to address privacy protection, algorithmic bias, and responsible data use. Emerging regulations, such as the European Union AI Act, indicate a growing emphasis on transparency, risk management, and human oversight. Consequently, organizations will need to adopt responsible AI practices that balance innovation with ethical and societal considerations. Overall, the future impact of AI on consumer purchase decisions will depend not only on technological advancements but also on the ability of businesses, researchers, and policymakers to develop AI systems that are transparent, fair, and aligned with consumer interests. Achieving this balance will be critical to ensuring that AI enhances consumer empowerment, trust, and well-being in increasingly digital marketplaces.

Conclusion

AI has emerged as a powerful force reshaping consumer purchase decisions by transforming how consumers search for information, evaluate alternatives, and engage with brands. AI technologies such as recommendation systems, chatbots, virtual assistants, and generative AI enhance personalization, improve decision efficiency, and facilitate more interactive consumer experiences. Consequently, AI has become a key driver of purchase intention, consumer engagement, and decision confidence in digital marketplaces. Despite these benefits, the increasing integration of AI into consumer environments raises important ethical and societal concerns. Issues related to privacy, data security, algorithmic bias, and consumer autonomy highlight the potential risks associated with excessive algorithmic influence on purchasing behavior. The growing capabilities of generative AI further intensify concerns regarding transparency, fairness, and the balance between consumer assistance and behavioral manipulation. Overall, the literature suggests that the impact of AI on consumer purchase decisions is both transformative and complex. While AI offers significant opportunities to enhance consumer experiences and marketing effectiveness, its long-term success will depend on the development of transparent, trustworthy, and ethically responsible AI systems. Future efforts should focus on ensuring that AI

not only improves commercial outcomes but also promotes consumer welfare, informed decision-making, and autonomy in an increasingly digital marketplace.

Declaration

The authors declare that they used Grammarly Premium to enhance the linguistic clarity and readability of this manuscript. They carefully reviewed and edited all generated text to ensure accuracy and alignment with the research's intended meaning.

Consent to Participate

Informed consent was obtained from all the authors involved in the study.

Consent to Publish

Informed consent was obtained from all the authors involved in this paper.

Availability of Supporting Data

All data referenced and analyzed in this review are derived from previously published literature and are publicly available in cited journals, databases, and repositories. No original datasets were generated for this work.

Competing Interests

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this review.

Acknowledgement

The authors sincerely acknowledge the University Grants Commission (UGC), New Delhi, India, for providing financial support to Sushmita through the Junior Research Fellowship (JRF) under NTA Reference No. 190520245204.

Funding

Not applicable..

REFERENCES

1. Agapitou, C., Sabazioti, A., Bouchoris, P., Folina, M.-T., Folinas, D., & Tsaramiadis, G. (2025). How Can Chatbots Help Companies to Improve the Customer Experience Offered to Their End Users/Customers in the Tourism Industry? In *Tourism and Hospitality* (Vol. 6, Issue 4, p. 207). <https://doi.org/10.3390/tourhosp6040207>
2. Akorli, K. Y., & Enyejo, J. O. (2025). AI Powered Retail Pricing Transparency Effects on Consumer Trust and Purchase Intentions in US Algorithmic Pricing Systems. *International Journal of Scientific Research and Modern Technology*, 4, 261. <https://doi.org/10.38124/ijrsmt.v4i10.1289>
3. Alvarez, J. M., Colmenarejo, A. B., Elobaid, A., Fabbriizzi, S., Fahimi, M., Ferrara, A., Ghodsi, S., Mougan, C., Papageorgiou, I., Reyero, P., Russo, M., Scott, K. M., State, L., Zhao, X., & Ruggieri, S. (2024). Policy advice and best practices on bias and fairness in AI. *Ethics and Information Technology*, 26(2), 31. <https://doi.org/10.1007/s10676-024-09746-w>
4. An, G. K., & Ngo, T. T. A. (2025). AI-powered personalized advertising and purchase intention in Vietnam's digital landscape: The role of trust, relevance, and usefulness. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(3), 100580. <https://doi.org/https://doi.org/10.1016/j.joitmc.2025.100580>
5. Aydin, S. (2026). Brand Trust in AI-Driven E-Commerce Personalization: The Well-Being–Privacy Trade-Off. In *Sustainability* (Vol. 18, Issue 2, p. 1073). <https://doi.org/10.3390/su18021073>
6. Bai, J., Liang, J., Gao, Y., & Feng, X. (2026). AI-based virtual try-on technology and the activation of green psychological mechanisms: evidence from a digital consumer environment. *Frontiers in Psychology*, 17(March). <https://doi.org/10.3389/fpsyg.2026.1750808>
7. Bawack, R. E., Wamba, S. F., Carillo, K. D. A., & Akter, S. (2022). Artificial intelligence in E-Commerce: a bibliometric study and literature review. *Electronic Markets*, 32(1), 297–338. <https://doi.org/10.1007/s12525-022-00537-z>
8. Belanche, D., Ibáñez-Sánchez, S., Jordán, P., & Matas, S. (2025). Customer reactions to generative AI vs. real images in high-involvement and hedonic services. *International Journal of Information Management*, 85, 102954. <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2025.102954>
9. Beyari, H., & Hashem, T. (2025). The Role of Artificial Intelligence in Personalizing Social Media Marketing Strategies for Enhanced Customer Experience. In *Behavioral Sciences* (Vol. 15, Issue 5, p. 700). <https://doi.org/10.3390/bs15050700>
10. Buckley, G., Caulfield, T., & Becker, I. (2024). How might the GDPR evolve? A question of politics, pace and punishment. *Computer Law & Security Review*, 54, 106033. <https://doi.org/https://doi.org/10.1016/j.clsr.2024.106033>
11. Chakraborty, D., Kumar Kar, A., Patre, S., & Gupta, S. (2024). Enhancing trust in online grocery shopping through generative AI chatbots. *Journal of Business Research*, 180, 114737. <https://doi.org/https://doi.org/10.1016/j.jbusres.2024.114737>
12. Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). 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>
13. Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). Opinion Paper: “So what if ChatGPT wrote it?” Multidisciplinary perspectives on opportunities, challenges and implications of generative

conversational AI for research, practice and policy. *International Journal of Information Management*, 71, 102642.
<https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2023.102642>

14. Estevez, M., Ballestar, M. T., & Sainz, J. (2025). Market research and knowledge using Generative AI: the power of Large Language Models. *Journal of Innovation & Knowledge*, 10(5), 100796.
<https://doi.org/https://doi.org/10.1016/j.jik.2025.100796>

15. Galindez-Acosta, J. S., & Giraldo-Huertas, J. J. (2026). Trust behavior in AI emerges from distrust in humans: A machine learning study on decision-making guidance. *Computers in Human Behavior Reports*, 22, 101024.
<https://doi.org/https://doi.org/10.1016/j.chbr.2026.101024>

16. Han, J., & Ko, D. (2025). Consumer Autonomy in Generative AI Services: The Role of Task Difficulty and AI Design Elements in Enhancing Trust, Satisfaction, and Usage Intention. In *Behavioral Sciences* (Vol. 15, Issue 4, p. 534). <https://doi.org/10.3390/bs15040534>

17. Haque, A., Akther, N., Khan, I., Agarwal, K., & Uddin, N. (2024). Artificial Intelligence in Retail Marketing: Research Agenda Based on Bibliometric Reflection and Content Analysis (2000–2023). *Informatics*, 11(4), 74.
<https://doi.org/10.3390/informatics11040074>

18. Hardcastle, K., Vorster, L., & Brown, D. M. (2025). Understanding Customer Responses to AI-Driven Personalized Journeys: Impacts on the Customer Experience. *Journal of Advertising*, 54(2), 176–195.
<https://doi.org/10.1080/00913367.2025.2460985>

19. Huang, M.-H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49(1), 30–50.
<https://doi.org/10.1007/s11747-020-00749-9>

20. Huang, Y., Arora, C., Huong, W. C., Kanij, T., Madugalla, A., & Grundy, J. (2026). Ethical concerns of generative AI and mitigation strategies: A systematic mapping study. *Applied Soft Computing*, 193, 114789.
<https://doi.org/https://doi.org/10.1016/j.asoc.2026.114789>

21. Israfilzade, K. (2025). Perspective Chapter: The Impact of Generative AI in Shaping Customer Engagement – Humanising Conversational Marketing.
<https://doi.org/10.5772/intechopen.1010894>

22. Jasim, K. M., Puthineedi, V. B., & Jha, A. K. (2026). AI-powered personalization in online fashion stores: Exploring the impact on shoppers' perceived risk and intention to buy and recommend. *Information & Management*, 63(4), 104347.
<https://doi.org/https://doi.org/10.1016/j.im.2026.104347>

23. Karami, A., Shemshaki, M., & Ghazanfar, M. ali. (2024). Exploring the Ethical Implications of AI-Powered Personalization in Digital Marketing. *Data Intelligence*, 7,

1035–1084. <https://doi.org/10.3724/2096-7004.di.2024.0055>

24. Kumar, V., Ashraf, A. R., & Nadeem, W. (2024). AI-powered marketing: What, where, and how? *International Journal of Information Management*, 77, 102783.
<https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2024.102783>

25. Mathews, R., Malhotra, A., & Kaur, H. (2025). The Dark Side of Personalisation. In *Diversity and Inclusion-Driven Marketing for Multicultural Marketplaces* (pp. 369–394). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3373-2111-0.ch015>

26. Menard, P., & Bott, G. J. (2025). Artificial intelligence misuse and concern for information privacy: New construct validation and future directions. *Information Systems Journal*, 35(1), 322–367.
<https://doi.org/https://doi.org/10.1111/isj.12544>

27. Mohd Amin, M. R., Asbi, A., Sivakumaran, V. M., Kim, J., & Septiarini, E. (2025). Artificial Intelligence (AI) adoption in marketing strategies: Navigating the present and shaping the future business landscape. *Social Sciences & Humanities Open*, 12, 102048.
<https://doi.org/https://doi.org/10.1016/j.ssaho.2025.102048>

28. Nguyen, K. M., Phan, T. M., Tran, Y. N. N., Nguyen, A. T., Nguyen, T. L. N., Hoang, G. H., Tran, T. T., & Nguyen, N. T. (2026). Evaluating the efficacy of AI-Generated advertising: A cross-national analysis of customer responses on brand perceptions and customer engagement with evidence from Vietnam and Australia. *Journal of Global Scholars of Marketing Science*, 36(2), 293–341.
<https://doi.org/10.1080/21639159.2026.2617659>

29. Ntoutsis, E., Fafalios, P., Gadiraju, U., Iosifidis, V., Nejdil, W., Vidal, M.-E., Ruggieri, S., Turini, F., Papadopoulos, S., Krasanakis, E., Kompatsiaris, I., Kinder-Kurlanda, K., Wagner, C., Karimi, F., Fernandez, M., Alani, H., Berendt, B., Kruegel, T., Heinze, C., ... Staab, S. (2020). Bias in data-driven artificial intelligence systems—An introductory survey. *WIREs Data Mining and Knowledge Discovery*, 10(3), e1356.
<https://doi.org/https://doi.org/10.1002/widm.1356>

30. Panda, M., Singh, K., Raj, A., & Puri, R. (2025). Understanding the interplay between generative artificial intelligence and consumer behaviour through a systematic literature review. *Discover Artificial Intelligence*, 6(1), 11. <https://doi.org/10.1007/s44163-025-00730-x>

31. Puntoni, Stefano, Reczek, Rebecca Walker, Giesler, Markus, & Botti, Simona. (2021). Consumers and Artificial Intelligence: An Experiential Perspective. *Journal of Marketing*, 85(1), 131–151.
<https://doi.org/10.1177/0022242920953847>

32. Rahman, A., Khan, M. D. A., Mahmud, F. U., Bishnu, K. K., Rahman, A., Mridha, M. F., & Hossen, M. J. (2026). A Systematic Literature Review on the Impact

- of Generative AI in Digital Marketing: Advancements, Opportunities, and Challenges. *Computers, Materials and Continua*, 87(3). <https://doi.org/https://doi.org/10.32604/cmc.2026.071029>
33. Raju, V., Ramachandran, K. K., Chenxi, W., Mangairkarasi, V., & Konecna, Z. (2025). AI in Data-driven Marketing: Decoding Consumer Choices and Behaviours. In B. Balusamy, V. Grover, M. K. Nallakuruppan, V. A. Rajasekaran, & M. Milanova (Eds.), *Data Engineering for Data-driven Marketing* (p. 0). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83662-326-720251005>
34. Salih, L., Tarhini, A., & Acikgoz, F. (2025). AI-Enabled Service Continuance: Roles of Trust and Privacy Risk. *Journal of Computer Information Systems*, 1–16. <https://doi.org/10.1080/08874417.2025.2452544>
35. Saviano, M., Thomas, A., Del Prete, M., Verderese, D., & Sasso, P. (2025). The impact of new generative AI chatbots on the switch point (SP): toward an artificial emotional awareness (AEA). *European Journal of Innovation Management*, 28(5), 2029–2053. <https://doi.org/10.1108/EJIM-05-2024-0520>
36. Shabankareh, M., Kalantari Daronkola, H., Sarhadi, A., Thaichon, P., & Nazarian, A. (2025). The influence of artificial intelligence quality on business-to-business relationships on E-commerce platforms: unveiling the nexus. *International Journal of Advertising*, 44(8), 1483–1522. <https://doi.org/10.1080/02650487.2025.2557053>
37. Sidra, S., & Wagan, S. M. (2025). How artificial intelligence enabled marketing activities will change consumer behavior. *Discover Artificial Intelligence*, 6(1), 17. <https://doi.org/10.1007/s44163-025-00735-6>
38. Srivastava, R. K., & Gurme, V. (2026). Artificial intelligence and consumer behaviour on social media: A study of personalization, trust, and privacy. *Measurement: Digitalization*, 5, 100021. <https://doi.org/https://doi.org/10.1016/j.meadij.2025.100021>
39. Suzuki, T., & Goto, Y. (2024). Development of a Product Recommendation Method for the Real-Time Cart Context in Supermarkets by Integrating Cooking Recipes and Purchase Co-occurrences. *The Review of Socionetwork Strategies*, 18(2), 279–301. <https://doi.org/10.1007/s12626-024-00171-5>
40. Tarnanidis, T., Owusu-Frimpong, N., Sousa, B. B., Manda, V. K., & Vlachopoulou, M. (2025). Purchasing Decisions with Reference Points and Prospect Theory in the Metaverse. In *Administrative Sciences* (Vol. 15, Issue 8, p. 287). <https://doi.org/10.3390/admsci15080287>
41. Utami, R. D., & Aimin, W. (2026). Balancing Personalization, Privacy, and Value: A Systematic Literature Review of AI-Enabled Customer Experience Management. In *Information* (Vol. 17, Issue 2, p. 115). <https://doi.org/10.3390/info17020115>
42. Wanner, J., Herm, L.-V., Heinrich, K., & Janiesch, C. (2022). The effect of transparency and trust on intelligent system acceptance: Evidence from a user-based study. *Electronic Markets*, 32(4), 2079–2102. <https://doi.org/10.1007/s12525-022-00593-5>
43. Weidig, J., & Kuehn, C. (2023). Improving the effectiveness of personalized recommendations through attributional cues. *Psychology & Marketing*, 40(12), 2559–2575. <https://doi.org/https://doi.org/10.1002/mar.21914>
44. Wessel, M., Adam, M., Benlian, A., Majchrzak, A., & Thies, F. (2025). Generative AI and its Transformative Value for Digital Platforms. *Journal of Management Information Systems*, 42(2), 346–369. <https://doi.org/10.1080/07421222.2025.2487315>
45. Wieringa, J., Kannan, P. K., Ma, X., Reutterer, T., Risselada, H., & Skiera, B. (2021). Data analytics in a privacy-concerned world. *Journal of Business Research*, 122, 915–925. <https://doi.org/https://doi.org/10.1016/j.jbusres.2019.05.005>
46. Xu, Y., & Chen, L. (2025). Personalized recommendations and consumer trust: The role of perceived control and locus of control. *Acta Psychologica*, 261, 105936. <https://doi.org/https://doi.org/10.1016/j.actpsy.2025.105936>
47. Yin, J., Qiu, X., & Wang, Y. (2025). The Impact of AI-Personalized Recommendations on Clicking Intentions: Evidence from Chinese E-Commerce. In *Journal of Theoretical and Applied Electronic Commerce Research* (Vol. 20, Issue 1, p. 21). <https://doi.org/10.3390/jtaer20010021>
48. Yu, X., Li, Y., Huang, H., & Bogicevic, V. (2025). How recommendation conciseness shapes customers' attitudes toward the AI chatbot. *International Journal of Contemporary Hospitality Management*, 37(10), 3559–3577. <https://doi.org/10.1108/IJCHM-12-2024-1968>