
**ARTIFICIAL INTELLIGENCE AND CONSUMER PURCHASING DECISIONS
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Artificial intelligence (AI) is increasingly being integrated into e-commerce platforms, influencing how consumers search for products, evaluate alternatives, and complete online purchases. As digital commerce continues to expand, AI-based technologies have become important tools for improving customer experiences and supporting business performance. AI-powered technologies, including recommendation systems, chatbots, predictive analytics, and personalized marketing tools, have become essential components of modern digital commerce. This study aims to examine the impact of artificial intelligence on consumer purchasing decisions in e-commerce by analyzing recent global market trends and empirical findings from contemporary research reports and industry statistics. This study adopts a qualitative approach and synthesizes evidence from academic publications, international reports, and recent industry statistics to examine the relationship between AI technologies and consumer purchasing behavior. The analysis of recent industry reports and academic studies shows that AI technologies increasingly influence how consumers interact with online shopping platforms. Personalized recommendations, intelligent chatbots,

and predictive analytics help consumers identify relevant products more efficiently and support purchasing decisions. The reviewed evidence also suggests that businesses implementing AI-based personalization strategies often experience improvements in customer engagement, conversion performance, and retention outcomes. However, challenges related to data privacy, algorithmic bias, transparency, and consumer trust remain critical concerns that may affect the long-term acceptance of AI technologies. The findings suggest that AI technologies are becoming increasingly important in digital commerce, affecting both consumer decision-making processes and business strategies. Their role is expected to expand further as e-commerce platforms continue to adopt more advanced data-driven solutions. The findings provide valuable insights for researchers, policymakers, and business practitioners seeking to understand the evolving relationship between AI technologies and consumer behavior.

The study contributes to the growing literature on AI-driven consumer behavior and provides practical implications for e-commerce businesses seeking to improve customer engagement and market competitiveness.

Introduction

Over the past decade, the expansion of digital technologies has significantly changed the way commercial activities are conducted worldwide. Among these technologies, artificial intelligence has attracted considerable attention from both researchers and business practitioners due to its growing role in improving online retail operations and customer interactions. E-commerce platforms increasingly rely on AI-based tools to analyze consumer preferences, automate services, and deliver personalized shopping experiences. AI technologies have revolutionized the way online retailers interact with customers, optimize

business operations, and deliver personalized shopping experiences. Through applications such as recommendation systems, intelligent chatbots, predictive analytics, dynamic pricing, and automated customer support, AI has become an essential component of modern digital marketplaces.

The global e-commerce industry has experienced substantial growth over the last decade, reaching an estimated value of approximately USD 5.9 trillion. Simultaneously, investments in AI-powered e-commerce solutions have increased significantly as businesses seek to improve customer engagement, enhance operational efficiency, and strengthen their competitive advantage. Recent market analyses indicate that the global AI-powered e-commerce market is expected to continue expanding rapidly, driven by increasing consumer demand for personalized and seamless digital shopping experiences. (UNCTAD, 2023; VML, 2025) The growing integration of AI technologies has transformed online shopping from a transactional process into a highly interactive and data-driven consumer experience.

Consumer purchasing behavior has also undergone significant changes as a result of digital transformation. Traditional purchasing decisions were largely influenced by factors such as price, product quality, and brand reputation. However, in contemporary digital markets, consumers increasingly rely on AI-generated recommendations, personalized advertisements, virtual assistants, and automated product suggestions when making purchasing decisions. (Davtyan, 2024; Allahverdiyev & Năstase, 2025) These technological tools help consumers identify products more efficiently, compare alternatives, and receive customized recommendations based on their preferences, browsing history, and previous purchases. (Huang & Rust, 2021; Chatterjee et al., 2021)

Recent global studies highlight the growing influence of AI on consumer decision-making processes. Research indicates that a substantial proportion of consumers prefer brands that provide personalized recommendations and tailored shopping experiences. Furthermore, personalized recommendation systems have been shown to improve conversion rates, customer retention, and average order values. (VML, 2025; Lumina Datamatics, 2025) Large e-commerce platforms such as Amazon, Alibaba, and other digital marketplaces increasingly utilize AI algorithms to analyze consumer behavior and predict purchasing intentions. Consequently, AI-driven personalization has become a strategic factor influencing consumer satisfaction and purchasing outcomes. (Shankar, 2018; Libai et al., 2020)

Despite these benefits, the adoption of AI in e-commerce also presents several challenges. Concerns regarding data privacy, cybersecurity, algorithmic bias, transparency, and ethical use of consumer information continue to attract attention from researchers, policymakers, and

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consumers. (Dwivedi et al., 2021; Kaplan & Haenlein, 2019) While many consumers appreciate the convenience and efficiency provided by AI technologies, others remain cautious about how personal data are collected, processed, and utilized by digital platforms. (Gefen et al., 2003; Dwivedi et al., 2021) Therefore, understanding the relationship between AI technologies and consumer purchasing behavior requires a balanced examination of both opportunities and challenges associated with AI implementation.

The increasing importance of AI in digital commerce has generated substantial academic interest. Existing studies have explored various aspects of AI applications in e-commerce, including personalized marketing, recommendation systems, customer relationship management, and consumer trust. However, the rapid evolution of AI technologies and changing consumer expectations create a need for updated research that examines recent global market trends and their implications for purchasing behavior. Moreover, much of the existing literature focuses on specific technologies or individual markets, while comprehensive assessments of AI's overall influence on consumer purchasing decisions remain relatively limited.

Against this background, the present study aims to investigate the impact of artificial intelligence on consumer purchasing decisions in e-commerce by examining recent global market trends, industry reports, and contemporary research findings. The study seeks to identify the key AI technologies influencing consumer behavior, evaluate their effects on purchasing decisions, and analyze the opportunities and challenges associated with AI-driven personalization in digital commerce.

The research is guided by the following questions: (1) How does artificial intelligence influence consumer purchasing decisions in e-commerce environments? (2) Which AI technologies have the greatest impact on consumer behavior and shopping experiences? (3) What benefits and challenges emerge from the increasing adoption of AI-driven personalization in digital markets? Addressing these questions contributes to a better understanding of the evolving relationship between artificial intelligence and consumer behavior while providing valuable insights for businesses, researchers, and policymakers involved in the development of future e-commerce strategies.

The findings of this study are expected to contribute to the growing body of knowledge on digital commerce and consumer behavior by highlighting the strategic role of artificial intelligence in shaping modern purchasing decisions. As AI technologies continue to evolve and become more deeply integrated into online retail ecosystems, understanding their

influence on consumer behavior will remain critical for ensuring sustainable growth, customer satisfaction, and competitive advantage in the digital economy.

Literature Review

Artificial Intelligence (AI) has become one of the most transformative technologies in the digital economy, significantly influencing the development of e-commerce platforms and online consumer interactions. Artificial intelligence is commonly described as a set of computational technologies designed to imitate specific aspects of human cognitive processes, such as learning from data, recognizing patterns, and supporting decision-making activities. In the context of e-commerce, AI technologies are widely applied through recommendation systems, chatbots, predictive analytics, dynamic pricing, customer segmentation, and personalized marketing strategies.

Recent studies suggest that AI has fundamentally changed how consumers interact with online marketplaces. According to Davtyan (2024), AI-driven digital marketing tools enable firms to better understand consumer preferences and deliver highly personalized content, thereby improving customer engagement and purchasing outcomes. The author argues that machine learning algorithms and predictive analytics allow businesses to process large volumes of consumer data and generate more effective marketing strategies.

Similarly, Allahverdiyev and Năstase (2025) examined the influence of artificial intelligence on consumer behavior in online shopping environments and found that AI-powered recommendation systems, virtual assistants, and chatbots positively affect consumers' purchase intentions. Their findings indicate that consumers perceive AI technologies as useful tools that simplify decision-making and improve shopping convenience.

The growing role of AI in e-commerce is also reflected in industry reports. Recent global market analyses demonstrate that AI-powered recommendation systems contribute significantly to revenue growth, customer retention, and conversion rates. These findings suggest that AI is no longer merely a technological innovation but has become a strategic business asset in digital commerce. (Envive, 2025; VML, 2025)

Consumer purchasing behavior refers to the process through which individuals identify needs, search for information, evaluate alternatives, make purchasing decisions, and assess post-purchase satisfaction. Traditional consumer behavior theories emphasize the influence of price, quality, brand reputation, social factors, and perceived value on purchasing decisions. However, the rapid digitalization of commerce has introduced new determinants that shape consumer behavior in online environments.

According to Technology Acceptance Model (TAM), proposed by Davis (1989), consumers are more likely to adopt technological systems when they perceive them as useful and easy to use. This theory has been widely applied in studies examining AI adoption in e-commerce. AI technologies improve perceived usefulness by providing personalized recommendations, automated assistance, and efficient search capabilities. Consequently, consumers often experience reduced search costs and improved shopping convenience.

Another important theoretical perspective is Rogers' Diffusion of Innovation Theory (2003), which explains how technological innovations spread among users over time. From this perspective, AI applications in e-commerce represent innovations that are increasingly adopted because they offer observable advantages such as convenience, personalization, and efficiency. As AI becomes more integrated into online shopping platforms, consumer acceptance is expected to increase further.

Recent empirical studies show that consumers increasingly value personalized experiences. Research indicates that consumers are more likely to engage with brands that provide customized product recommendations and tailored shopping experiences. These findings support the argument that personalization has become a critical factor influencing modern purchasing behavior. (Lumina Datamatics, 2025; Allahverdiyev & Năstase, 2025)

One of the most significant applications of AI in e-commerce is personalization. AI-powered personalization enables firms to analyze consumer preferences, browsing behavior, purchase history, and demographic information to deliver customized recommendations and targeted marketing messages.

Existing research consistently demonstrates that personalization positively affects consumer purchasing decisions. Recommendation systems help consumers discover relevant products more efficiently, thereby reducing information overload and increasing purchase likelihood. Furthermore, personalized offers create a sense of relevance and value, which strengthens customer satisfaction and brand loyalty. (Hariguna & Ruangkanjanases, 2024; Chatterjee et al., 2021)

Several studies have found that AI-powered recommendation engines significantly improve conversion rates and average order values. Consumers who receive personalized product suggestions are more likely to complete purchases and return to the same platform for future transactions. Consequently, personalization has emerged as a major competitive advantage in digital commerce. (Hariguna & Ruangkanjanases, 2024; Envive, 2025)

Nevertheless, some scholars argue that excessive personalization may generate concerns regarding privacy and consumer autonomy. When consumers perceive that firms collect

excessive personal data or use intrusive targeting techniques, trust may decline. Therefore, businesses must balance personalization benefits with ethical considerations and data protection requirements.

Another important area of research concerns AI-powered chatbots and virtual assistants. Chatbots are increasingly used in e-commerce to provide customer support, answer inquiries, recommend products, and facilitate transactions. These technologies offer continuous service availability and improve communication efficiency.

Research suggests that AI chatbots enhance customer satisfaction by providing immediate responses and reducing waiting times. Consumers appreciate the convenience of obtaining information instantly without interacting with human representatives. Moreover, AI assistants can guide consumers throughout the purchasing journey, helping them compare products and make informed decisions. (Davtyan, 2024; Dwivedi et al., 2021)

However, the effectiveness of chatbots depends on their ability to understand natural language and provide accurate responses. Poorly designed AI systems may lead to customer frustration and negatively affect purchase intentions. Therefore, technological sophistication and user-centered design remain critical factors for successful chatbot implementation.

Despite extensive research on AI applications in e-commerce, existing studies primarily focus on specific technologies such as recommendation systems, chatbots, or personalized marketing. Limited attention has been given to the integrated influence of multiple AI technologies on consumer purchasing decisions using recent global market evidence. Furthermore, the rapid evolution of generative AI and AI-powered personalization has created new consumer experiences that remain insufficiently explored in the current literature. Therefore, this study contributes to the literature by providing a comprehensive assessment of AI-driven consumer purchasing behavior based on recent global market trends and industry evidence.

Methodology

This study employs a qualitative research design based on a systematic literature review and secondary data analysis approach. The purpose of the research is to examine the impact of artificial intelligence (AI) on consumer purchasing decisions in e-commerce by synthesizing findings from recent academic studies, industry reports, and global market statistics. A qualitative approach was considered appropriate because it enables a comprehensive understanding of the relationships between AI technologies and consumer behavior in digital marketplaces.

The study utilizes secondary data collected from various academic and professional sources published between 2020 and 2025. These sources include peer-reviewed journal articles, international reports, market research publications, and industry analyses related to artificial intelligence, e-commerce, and consumer behavior.

A total of 27 sources were analyzed in this study, including peer-reviewed journal articles, international reports, market research publications, and industry analyses related to artificial intelligence, e-commerce, and consumer behavior. The selected sources were obtained from academic databases, international organizations, and reputable industry reports published between 2020 and 2025.

The primary data sources include:

- Recent academic studies examining AI-driven consumer behavior and online purchasing decisions;
- Industry reports on artificial intelligence applications in e-commerce;
- Global market trend reports, including *The Future Shopper Report 2025*;
- International e-commerce and digital commerce reports published by recognized organizations;
- Statistical reports focusing on AI-powered recommendation systems, personalization, and customer experience management.

These sources were selected due to their relevance, credibility, and recent publication dates, ensuring that the analysis reflects current developments in digital commerce.

The literature selection process followed a structured review approach. Relevant publications were identified using keywords such as “Artificial Intelligence,” “E-commerce,” “Consumer Behavior,” “Consumer Purchasing Decisions,” “Recommendation Systems,” “Personalization,” “Digital Marketing,” and “AI Chatbots.”

The inclusion criteria were:

1. Primarily publications released between 2020 and 2025, supplemented by foundational studies relevant to AI adoption and consumer behavior theories;
2. Studies focusing on AI applications in e-commerce;
3. Research examining consumer purchasing behavior or decision-making;
4. Reports providing quantitative evidence regarding AI adoption and consumer responses;
5. Sources published by reputable academic institutions, research organizations, or recognized industry analysts.

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Sources that lacked sufficient methodological transparency or were not directly related to the research objectives were excluded from the analysis.

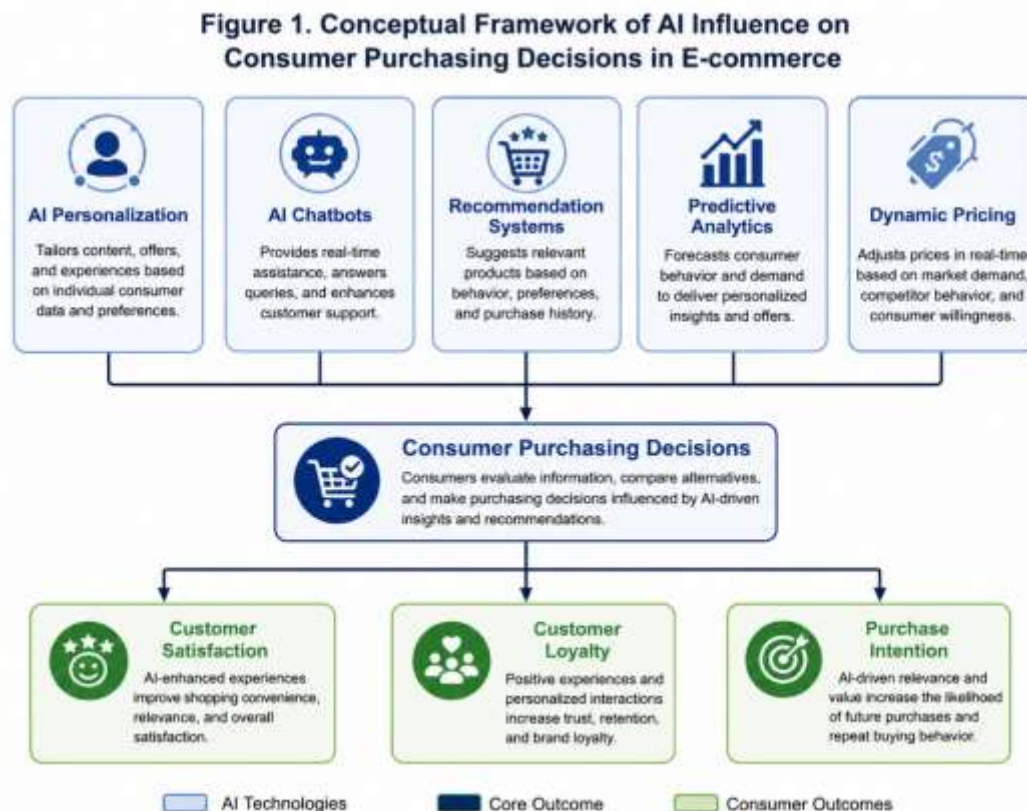
The collected data were analyzed using thematic analysis and comparative analysis techniques.

Thematic analysis was employed to identify recurring themes related to the influence of AI on consumer purchasing decisions. The major themes identified include:

- AI-driven personalization;
- Recommendation systems;
- AI chatbots and virtual assistants;
- Consumer trust and privacy concerns;
- Customer experience enhancement;
- Purchase intention and conversion behavior.

Comparative analysis was used to evaluate similarities and differences among findings reported in various studies and industry reports. This approach allowed the identification of common patterns regarding the effectiveness of AI technologies in influencing consumer behavior across different digital market environments.

The conceptual framework of this study is based on the assumption that AI technologies act as independent variables influencing consumer purchasing behavior, which serves as the dependent variable.



Source: Developed by the author based on Davis (1989), Rogers (2003), Allahverdiyev and Năstase (2025), and recent AI-driven e-commerce studies.

Figure 1. Conceptual Framework of AI Influence on Consumer Purchasing Decisions in E-Commerce

The framework assumes that AI technologies improve consumer experiences, increase perceived usefulness, reduce search costs, and enhance purchase intentions, ultimately affecting online purchasing decisions.

To enhance reliability and validity, the study relies on multiple data sources and cross-references findings from academic research with industry statistics and global reports. Triangulation of evidence from different sources helps reduce bias and improve the credibility of conclusions. Furthermore, the use of recent publications ensures that the findings reflect current technological developments and contemporary consumer behavior trends.

The study is limited by its reliance on secondary data and published sources. Since no primary survey or experimental data were collected, the findings depend on the quality and scope of existing research. Additionally, consumer attitudes toward AI may evolve rapidly as

technology advances, which may affect the long-term generalizability of current findings. Despite these limitations, the study provides valuable insights into the growing role of artificial intelligence in shaping consumer purchasing decisions within e-commerce environments.

Results and Discussion

The analysis of recent studies and industry reports indicates that artificial intelligence has become a key factor influencing consumer purchasing decisions in e-commerce environments. One of the most significant applications of AI is personalization, which enables online retailers to provide customized recommendations, targeted promotions, and individualized shopping experiences.

Recent global statistics reveal that 76% of consumers are more likely to purchase from brands that provide personalized experiences, while 91% are more likely to shop with brands offering personalized recommendations. Furthermore, 71% of consumers report frustration when digital platforms fail to provide personalized content. These findings demonstrate that personalization has become a critical determinant of consumer satisfaction and purchase intention.

Consumer Responses to AI-Driven Personalization

Table 1.

No	Indicator	Percentage (%)
1	Consumers likely to purchase from personalized brands	76
2	Consumers preferring personalized recommendations	91
3	Consumers frustrated by lack of personalization	71
4	Consumers influenced by AI recommendations in purchasing decisions	63

Source: Compiled by the author based on Lumina Datamatics (2025) and VML (2025).

The findings suggest that consumers increasingly expect personalized interactions during their shopping journey. AI technologies reduce information overload by filtering relevant products and presenting recommendations based on consumer preferences and previous

behavior. As a result, consumers experience greater convenience and confidence during the decision-making process. (Lumina Datamatics, 2025; VML, 2025)

These results are consistent with the findings of Allahverdiyev and Năstase (2025), who concluded that AI-powered recommendation systems positively influence consumer decision-making and overall shopping experiences.

Recommendation systems represent one of the most influential AI applications in digital commerce. By analyzing browsing history, purchase records, demographic information, and behavioral patterns, recommendation algorithms can predict consumer preferences with a high degree of accuracy.

The collected evidence indicates that AI-powered recommendation systems generate substantial business benefits. Product recommendations can increase revenue by up to 300%, improve conversion rates by 150%, and increase average order values by 50%.

Impact of AI Recommendation Systems on E-Commerce Performance

Table 2.

No.	Performance Indicator	Improvement (%)
1	Revenue Growth	300
2	Conversion Rate	150
3	Average Order Value	50
4	Customer Retention	38
5	Customer Lifetime Value	73

Source: Compiled by the author based on Envive (2025).

The results demonstrate that AI-powered recommendation systems generate substantial economic value for e-commerce businesses. The significant increases in revenue, conversion rates, and average order value indicate that AI technologies influence not only consumer purchasing decisions but also overall business performance. These findings suggest that recommendation systems have evolved into strategic tools that enhance customer engagement and support sustainable growth in digital commerce. (Envive, 2025; Chatterjee et al., 2021)

The observed results suggest that recommendation systems play an important role in connecting consumers with products that match their interests and purchasing patterns. This not only supports immediate sales growth but may also strengthen long-term customer relationships. Personalized recommendations not only encourage immediate purchases but also strengthen long-term customer loyalty. The significant increase in customer lifetime value suggests that AI contributes to sustainable business growth rather than merely short-term sales improvements.

A practical example is Amazon, where AI-powered recommendation engines are estimated to generate approximately 35% of total company sales. (Shankar, 2018; Envive, 2025) This demonstrates the growing reliance of major e-commerce platforms on AI technologies to drive consumer engagement and purchasing activity.

Another important finding concerns the growing role of AI chatbots and virtual assistants. Chatbots have transformed customer service by providing instant responses, personalized assistance, and continuous support throughout the shopping process.

Industry reports indicate that AI-driven chatbots currently manage a substantial proportion of customer interactions. By 2025, AI technologies are expected to support up to 95% of customer interactions, while chatbot systems already handle approximately 70% of online customer conversations.

Impact of AI Chatbots on Customer Service

Table 3.

No.	Indicator	Result
1	Customer interactions managed by AI (2025 forecast)	95%
2	Online conversations handled by chatbots	70%
3	Reduction in customer service costs	Up to 80%
4	Reduction in response time	From 38 hours to 5.4 minutes

Source: Compiled by the author based on Davtyan (2024) and industry reports.

The findings indicate that AI chatbots significantly improve operational efficiency and customer service quality. Faster response times and continuous service availability reduce customer frustration and increase the likelihood of purchase completion. Therefore, AI-powered customer support systems have become an important factor influencing consumer trust and purchasing behavior in e-commerce environments. (Davtyan, 2024; Dwivedi et al., 2021)

The data demonstrate that AI chatbots improve customer experiences by reducing waiting times and increasing service availability. Faster responses contribute to greater customer satisfaction and positively influence purchasing decisions. Consumers are more likely to complete transactions when assistance is available immediately and efficiently.

However, the effectiveness of chatbots depends on the quality of natural language processing capabilities. Poorly designed systems may negatively affect customer perceptions and reduce trust in digital platforms.

The Future Shopper 2025 report provides additional insights into consumer attitudes toward AI-powered retail experiences. The report reveals that 68% of consumers have used AI tools such as ChatGPT or similar technologies. Additionally, 47% of consumers express positive attitudes toward the growing use of AI by retailers, while 63% state that personalized recommendations help them discover new products more effectively.

At the same time, approximately 45% of consumers believe that many companies still perform poorly in delivering meaningful personalization. This finding suggests that although AI adoption is increasing rapidly, many businesses have not yet fully optimized their AI capabilities.

These results indicate that consumer acceptance of AI technologies is growing, but expectations are rising simultaneously. Retailers that successfully combine personalization, transparency, and user-friendly experiences are more likely to gain competitive advantages in digital markets.

Discussion

The findings of this study demonstrate that artificial intelligence significantly influences consumer purchasing decisions in e-commerce. AI-driven personalization, recommendation systems, and chatbot technologies improve customer experiences, simplify decision-making processes, and increase purchase intentions.

The results support the Technology Acceptance Model (TAM), which suggests that consumers adopt technologies they perceive as useful and easy to use. AI applications enhance both perceived usefulness and convenience by delivering relevant recommendations, instant assistance, and customized shopping experiences.

Furthermore, the findings align with the Diffusion of Innovation Theory, which explains how innovative technologies gain acceptance when they provide clear advantages over existing alternatives. AI technologies offer measurable benefits to both consumers and businesses, thereby accelerating their adoption across digital marketplaces.

Despite these positive outcomes, concerns regarding data privacy, algorithmic transparency, and ethical AI implementation remain significant challenges. Consumers increasingly expect personalized experiences but simultaneously demand greater control over their personal information. Consequently, businesses must balance personalization strategies with responsible data management practices.

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Taken together, the reviewed evidence indicates that artificial intelligence is becoming increasingly integrated into everyday online shopping activities. Rather than serving only as an auxiliary technology, AI now influences several stages of the consumer decision-making process, including product discovery, evaluation, and purchase completion. As AI capabilities continue to advance, their influence on purchasing decisions is expected to become even more significant in the future.

Conclusion

The rapid advancement of artificial intelligence has significantly transformed the e-commerce landscape and reshaped consumer purchasing behavior. This study examined the influence of AI technologies on consumer purchasing decisions by analyzing recent academic research, industry reports, and global market trends. The findings demonstrate that artificial intelligence has become a critical component of modern e-commerce, enabling businesses to provide personalized experiences, improve customer engagement, and enhance overall shopping efficiency.

The results indicate that AI-driven personalization plays a central role in influencing consumer behavior. Personalized product recommendations, targeted marketing strategies, and predictive analytics help consumers identify products that match their preferences and needs, thereby increasing purchase intentions and improving customer satisfaction. The analysis further revealed that consumers are increasingly willing to engage with brands that provide customized experiences and relevant recommendations throughout the purchasing journey.

The study also found that recommendation systems represent one of the most effective AI applications in e-commerce. These systems contribute to higher conversion rates, increased average order values, stronger customer retention, and improved long-term customer loyalty. Similarly, AI-powered chatbots and virtual assistants have enhanced customer service quality by providing immediate assistance, reducing response times, and supporting consumers throughout the decision-making process.

In addition, the findings suggest that consumer acceptance of AI technologies continues to grow as digital platforms become more sophisticated and user-oriented. However, despite the substantial benefits associated with AI adoption, challenges related to data privacy, algorithmic bias, transparency, and ethical use of consumer information remain significant concerns. These issues highlight the importance of responsible AI implementation and the need for businesses to maintain consumer trust while utilizing advanced personalization technologies.

The findings of this study indicate that artificial intelligence has become an important element of contemporary e-commerce environments. AI-based technologies increasingly influence how consumers search for information, evaluate alternatives, interact with online retailers, and complete online transactions. As digital markets continue to evolve, the role of artificial intelligence is expected to become even more prominent in shaping consumer behavior and competitive business strategies.

From a practical perspective, businesses should invest in AI-powered personalization tools, recommendation systems, and intelligent customer service solutions to improve customer experiences and strengthen market competitiveness. At the same time, organizations should prioritize transparency, data protection, and ethical AI practices to ensure sustainable consumer trust and long-term business success.

Future research may focus on empirical investigations involving primary consumer data, cross-country comparisons, and the examination of emerging AI technologies such as generative AI, virtual shopping assistants, and immersive retail experiences. Such studies would provide deeper insights into the evolving relationship between artificial intelligence and consumer purchasing behavior in digital commerce.

Policymakers should promote responsible AI adoption through clear regulatory frameworks and consumer data protection policies. E-commerce companies should invest in transparent AI systems that balance personalization with privacy protection to ensure sustainable consumer trust.

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