



A Study on the Influence of Artificial Intelligence on Consumer Buying Behaviour in E-Commerce in Coimbatore

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Abstract – The rapid growth of e-commerce in India has been significantly influenced by the integration of Artificial Intelligence (AI), which has transformed the way consumers interact with online platforms. This study examines the influence of AI on consumer buying behaviour in Coimbatore, a prominent tier-2 city in Tamil Nadu. The research focuses on key AI applications such as personalized recommendations, chatbots, dynamic pricing, and predictive analytics, and evaluates their impact on consumer decision-making. Primary data were collected from 130 respondents using a structured questionnaire, and statistical tools such as percentage analysis, correlation, and regression were applied. The findings reveal that a majority of consumers are aware of AI features and actively engage with them, particularly recommendation systems. AI significantly influences purchase decisions, enhances shopping convenience, and improves overall user experience. However, concerns related to trust, privacy, and chatbot effectiveness remain key challenges. The study concludes that AI plays a crucial role in shaping modern consumer behaviour in e-commerce, and businesses must focus on improving transparency, personalization, and user trust to maximize its benefits.

Keywords – Artificial Intelligence, E-Commerce, Consumer Behaviour, Personalization, Chatbots, Purchase Intention.

I. INTRODUCTION

The digital revolution has transformed global commerce, with e-commerce emerging as a dominant retail channel. In India, increasing internet penetration and smartphone usage have accelerated this transformation. Artificial Intelligence (AI) has become a critical driver of innovation in e-commerce by enabling personalized experiences, efficient customer service, and data-driven decision-making.

AI technologies such as machine learning, natural language processing, and predictive analytics help e-commerce platforms understand consumer preferences and influence buying decisions. In cities like Coimbatore, rapid digital adoption and a growing middle-class population make it an ideal setting to study AI-driven consumer behaviour.

II. STATEMENT OF THE PROBLEM

Despite the widespread adoption of AI in e-commerce, its actual impact on consumer buying behaviour in tier-2 cities remains underexplored. There is limited empirical evidence on how consumers perceive AI features, how these features influence purchase decisions, and the role of trust and demographics in shaping these behaviours. The explosive growth of e-commerce in India has been accompanied by an equally rapid deployment of Artificial Intelligence technologies across major platforms. While AI promises enhanced personalization, improved customer service, and smarter shopping experiences, the actual influence of these technologies on consumer buying behaviour - particularly in tier-2 cities such as Coimbatore - remains insufficiently studied

III. OBJECTIVES OF THE STUDY

- To examine awareness and usage of AI features among consumers
- To analyze the impact of AI recommendations on purchase decisions
- To assess consumer satisfaction with AI chatbots
- To evaluate the influence of dynamic pricing on buying behaviour
- To study demographic differences in AI adoption

IV. RESEARCH METHODOLOGY

The study adopts a descriptive and analytical research design.

1. Data Type: Primary and Secondary
2. Data Collection: Structured questionnaire
3. Sample Size: 130 respondents
4. Sampling Technique: Convenience sampling
5. Tools Used: Percentage analysis, Correlation, Regression (SPSS)

V. REVIEW OF LITERATURE

Kumar and Patel (2021) conducted a study on AI-based personalization in online retail platforms. The researchers found that recommendation engines analyse consumer browsing history, purchase records, and preferences to present relevant product suggestions. This personalization reduces consumer search time and cognitive effort during decision-making. Their findings revealed that consumers perceive AI-recommended products as more suitable and trustworthy, which increases



purchase intention and satisfaction. The study concluded that AI-driven personalization is a major determinant of online buying behaviour and customer engagement in e-commerce.

Sharma and Singh (2021) examined consumer interaction with AI Chabot's in e-commerce websites. The study highlighted that Chabot's provide instant responses, product information, and purchase assistance, thereby improving convenience and shopping efficiency. Consumers reported positive attitudes toward AI Chabot's because they offer 24/7 support and quick problem resolution. The research showed that Chabot interaction enhances consumer trust and reduces uncertainty during online purchases. The authors concluded that AI-based conversational interfaces significantly influence purchase decisions and overall shopping experience.

Verma and Gupta (2022) investigated the impact of AI recommendation systems on online consumer buying behaviour in India. The study found that personalized product suggestions based on consumer data strongly influence product evaluation and choice. Consumers tend to rely on AI recommendations because they simplify product comparison and reduce information overload. The research demonstrated that AI recommendations increase conversion rates and impulse purchases. The authors emphasized that AI-driven suggestions have become a key external stimulus affecting consumer decision-making in e-commerce environments.

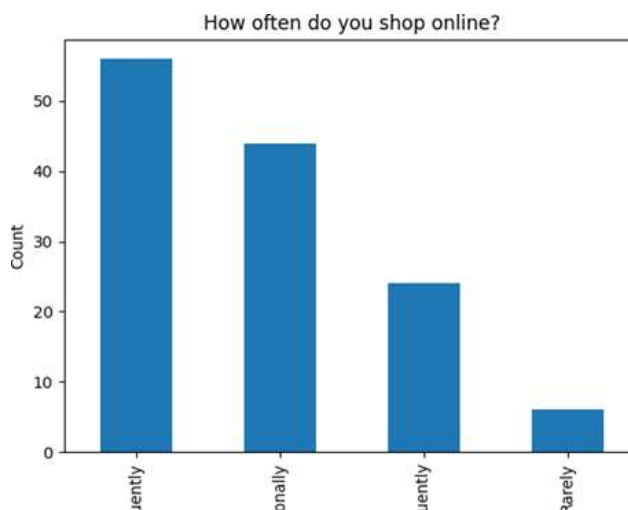
Chen et al. (2022) analysed the relationship between AI-enabled personalization and customer engagement in digital commerce platforms. The study reported that tailored recommendations, customized interfaces, and personalized promotions create a more relevant and enjoyable shopping experience. Consumers exposed to AI personalization showed higher satisfaction, emotional attachment, and loyalty toward e-commerce platforms. The researchers concluded that AI enhances long-term consumer relationships by improving perceived relevance and value of online shopping experiences.

Rao and Reddy (2023) studied the adoption of AI technologies in Indian e-commerce platforms and their influence on consumer trust and purchase behaviour. The study found that AI features such as targeted advertising, personalized recommendations, and automated assistance increase perceived reliability of platforms. Consumers believed that AI-based suggestions match their preferences, which strengthens confidence in product selection. The research concluded that trust mediates the relationship between AI features and consumer buying behaviour, indicating that reliable AI systems encourage purchase decisions.

VI. DATA ANALYSIS & INTERPRETATION

How Often Do You Shop online

Response	Frequency	Percentage
Frequently	56	43.08%
Occasionally	44	33.85%
Very Frequently	24	18.46%
Rarely	6	4.62%



Interpretation: The analysis of responses indicates that the majority of respondents (56 out of 130, 43.08%) selected 'Frequently', demonstrating a strong inclination toward this viewpoint. The second most common response was 'Occasionally' with 44 respondents (33.85%), suggesting that a significant portion of participants also share a similar perspective. Overall, the distribution of responses reflects the general attitude of consumers toward this aspect of artificial intelligence in e-commerce. The presence of neutral responses indicates that some respondents may be uncertain or indifferent, possibly due to lack of awareness or limited interaction with AI technologies.

Which platform do you mostly use?

Response	Frequency	Percentage
Flipkart	55	42.31%
Myntra	42	32.31%
Amazon	18	13.85%
Other	15	11.54%

Interpretation: The analysis of responses indicates that the majority of respondents (55 out of 130, 42.31%) selected 'Flipkart', demonstrating a strong inclination toward this viewpoint. The second most common response was 'Myntra' with 42 respondents (32.31%), suggesting that a significant portion of participants also share a similar perspective. Overall, the distribution of responses reflects the general attitude of consumers toward this aspect of artificial intelligence in e-commerce. The presence of neutral responses indicates that some respondents may be



uncertain or indifferent, possibly due to lack of awareness or limited interaction with AI technologies.

AI Awareness

- 36.92% strongly agree they are aware of AI usage
- Mixed understanding of data collection and personalization

AI Influence on Behaviour

- Personalized recommendations show moderate influence
- AI helps in saving time and improving convenience
- Chatbot satisfaction is mixed, indicating improvement needed
- Trust in AI systems remains divided among users

2. Bhatt, R., Sharma, A., & Patel, N. (2024). AI technologies and consumer purchase intention in Indian online grocery shopping. *Indian Journal of Marketing*, 54(3), 78–96.

3. Bunea, A. et al. (2024). Generation Z perceptions of AI in online shopping: Trust, personalisation, and TAM. *Journal of Consumer Technology Research*, 15(2), 189–214.

4. Chen, W. et al. (2022). AI-enabled personalisation and customer engagement in digital commerce platforms. *Computers in Human Behaviour*, 128, 107088.

5. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.

VII. KEY FINDINGS

1. AI awareness is relatively high among consumers
2. Recommendation systems are the most influential AI feature
3. Trust plays a crucial role in purchase decisions
4. Chatbots need improvement in accuracy and user experience
5. AI adoption varies across demographic groups

VIII. SUGGESTIONS

Based on the findings, it is suggested that e-commerce companies should focus on increasing consumer awareness and transparency regarding the use of Artificial Intelligence in their platforms. Businesses need to clearly communicate how customer data is collected, analyzed, and protected to build trust and reduce privacy concerns. At the same time, companies like Flipkart, Amazon, and Myntra should continue enhancing their AI-driven features such as personalized recommendations and customer support to improve user experience. Additionally, efforts must be made to educate users about the benefits of AI through awareness campaigns and user-friendly interfaces.

IX. CONCLUSION

This study provides important empirical evidence on the influence of Artificial Intelligence on consumer buying behaviour in the e-commerce sector within Coimbatore, Tamil Nadu. The findings reveal that AI technologies have meaningfully penetrated the online shopping experiences of Coimbatore consumers, particularly through recommendation systems, chatbots, personalized advertisements, and review analytics. A majority of respondents are aware of AI in e-commerce, and a significant proportion acknowledge AI's role in saving time, discovering products, and improving satisfaction particularly through AI-curated reviews and ratings.

REFERENCES

1. Arum, B., Marsally, D., & Hidayat, T. (2026). Artificial intelligence in e-commerce: A systematic review. *Journal of AI in Commerce*, 3(1), 22–45.