

INFLUENCE OF ARTIFICIAL INTELLIGENCE ON FMCG CONSUMER DECISION-MAKING: AN ANALYSIS OF PRODUCT SELECTION, IMPULSE BUYING, AND CUSTOMER LOYALTY

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ABSTRACT

Artificial Intelligence (AI) is transforming the landscape of consumer engagement in the Fast-Moving Consumer Goods (FMCG) sector by redefining how consumers make decisions. This review paper explores the impact of AI-driven tools—such as personalised recommendations, predictive analytics, dynamic pricing, and virtual assistants—on three critical aspects of consumer behaviour: product selection, impulse buying, and customer loyalty. The paper synthesises findings from recent academic research to understand how AI influences consumer cognition, emotional triggers, and decision speed. In product selection, AI enhances relevance and convenience through data-driven personalisation. In the context of impulse buying, AI intensifies micro-targeting and real-time offers that exploit behavioural nudges. Concerning loyalty, AI enables brands to maintain continuous consumer engagement through customised communication and loyalty programs.

The paper also highlights challenges such as data privacy concerns, algorithmic bias, and ethical boundaries that affect long-term consumer trust. The paper concludes by offering guidance for marketers and policymakers on how to responsibly harness AI while preserving consumer autonomy and brand credibility in the rapidly evolving FMCG ecosystem.

Keywords: Artificial Intelligence, FMCG, Consumer Decision-Making, Product Selection, Impulse Buying, Customer Loyalty, Personalisation, Predictive Analytics, AI Marketing, Consumer Trust

INTRODUCTION

India is leading the way in this digital revolution, as artificial intelligence (AI) rapidly transforms the global fast-moving consumer goods (FMCG) landscape. With a compound annual growth rate (CAGR) of over 40% since 2020, the Indian AI market is projected to reach USD 8 billion by 2025 (Wikipedia, 2024a). According to a recent survey, 48% of Indian companies in key industries have adopted AI, with 43% doing so primarily in retail and FMCG (Economic Times, 2024). Furthermore, because of the extensive integration of intelligent systems into marketing and decision-making processes, 73% of Indian businesses plan to increase their use of AI shortly.

At the same time, India's booming e-commerce provides an ideal environment for AI to impact consumer behaviour. The Indian digital commerce market was valued at USD 147 billion as of 2024, and forecasts suggest that it will continue to grow at an exponential rate (Wikipedia, 2024b). This increase has been facilitated by the growing availability of digital payment methods and the internet. Over INR 125 trillion in transactions were made in FY

2022–2023, thanks to platforms like UPI, which made online shopping easy, especially for FMCG goods (Wikipedia, 2024c). More than 56% of online shoppers currently shop in Tier-II and Tier-III cities (GrabOn, 2024). Quick commerce—encompassing 90-minute delivery for groceries and personal care products—represents almost 20% of digital retail, with an annual growth rate exceeding 50% (Wikipedia, 2024b).

AI-driven technologies, including conversational agents, dynamic pricing engines, personalised recommendations, and predictive analytics, are significantly influencing consumer decision-making during this technological and retail revolution. Sixty-two per cent of Indian consumers have made purchases based on AI-generated recommendations, which is almost twice the global average, according to a 2024 EY report (EY, 2024). The growing psychological influence of AI on planned and impulsive purchases is demonstrated by the fact that it influenced 84% of buyer decisions during significant festive shopping periods (DQIndia, 2024). The role of AI has been studied by academic marketing researchers from both theoretical and empirical angles. Zhu et al. (2016) demonstrated how AI-enabled recommendation agents enhance impulse buying by increasing perceived relevance and reducing decision anxiety, utilising the Stimulus–Organism–Response framework. Using real-time consumer data, Khamoushi (2024) highlighted how AI transforms food marketing from broad targeting to precise micro-segmentation. These advancements align with theories of persuasion like the Elaboration Likelihood Model (Petty & Cacioppo, 1986), which explains how AI's personalised content can activate both central and peripheral channels of influence.

The complicated effects of AI on three important consumer behaviours in the FMCG industry—product selection, impulsive buying, and customer loyalty—are examined in this paper. Emerging topics, such as algorithmic bias, data privacy, and the importance of ethical AI marketing, are also addressed. The paper provides insights for marketers and policymakers seeking to leverage AI effectively while preserving consumer autonomy and trust by integrating recent academic research with Indian market trends.

LITERATURE REVIEW

The steady advancement of academic research has revealed a complex interplay of psychological, technological, and marketing factors over the past decade in the relationship between artificial intelligence (AI) and consumer behaviour in the FMCG sector. Starting with product selection, researchers are examining how AI tools radically alter the consumer's path to purchase. By identifying complementary and substitute products, early models like the SHOPPER algorithm, developed by Ruiz, Athey, and Blei (2017), demonstrated that AI can detect patterns in consumer behaviour and help brands improve their assortment strategies to suit the needs of their target audience better. Similarly, by optimising product displays based on customer movement and preference data, Jenkins et al. (2024) deployed EdgeRec3D, an AI system that combines visual recognition with Bayesian logic, resulting in a 27–35% increase in FMCG beverage sales. These technologies reduce decision fatigue by customising the visual environment of the shopper. Ren et al. (2022) also examined this effect and found that AI-generated product summaries derived from extensive review data enhanced buyer confidence and improved selection clarity. Waqas et al. (2024) also noted this behaviour in the South Asian context, where Pakistani consumers were able to filter irrelevant information and navigate product categories more efficiently with the aid of AI-enhanced online interfaces, increasing cognitive satisfaction. All these studies demonstrate that AI does

more than simplify product discovery; it also subtly influences how consumers perceive value and make decisions.

AI's impact increases as the consumer moves from consideration to action, especially when it comes to impulsive purchases. Early evidence that AI recommendation agents lower the psychological barrier for impulsive purchases by fostering a sense of immediacy and relevance was presented by Zhu et al. (2016) using the Stimulus–Organism–Response framework. Building on this, Jain and Gandhi (2021) found that, particularly among younger digital natives, AI-generated nudges timed precisely during online browsing sessions could encourage impulsive fashion purchases. The Technology Acceptance Model was extended in the study by Trivedi et al. (2022) to demonstrate that consumers' willingness to make rash decisions in digital marketplaces is significantly increased by their perception of the novelty and utility of AI tools. The argument made by Werner et al. (2024) that conversational AI tools, such as chatbots, can subtly influence preferences—raising significant ethical concerns about manipulation and consent—adds a layer of complexity to this discussion. These results are consistent with the Elaboration Likelihood Model (Petty & Cacioppo, 1986), which describes how AI utilises peripheral cues (such as emotion and familiarity) and central routes (logical content relevance) to drive impulsive, occasionally subconscious purchases.

However, the problem of customer loyalty persists after the transaction, a domain where AI's potential is both intriguing and contentious. According to Lemon and Verhoef (2016), when AI personalises every phase of the customer journey, it fosters emotional connections and lowers friction, strengthening brand relationships. In their empirical study on AI-powered loyalty programs in Indian FMCG markets, Yuvika and Khan (2024) extended this claim by showing that contextual recommendations, dynamic rewards, and chatbot interactions promote greater retention and satisfaction. However, Farooq et al. (2024) noted that trust is essential: to promote long-term commitment, AI communication needs to be both intelligent and transparent. However, M G (2024) discovered that although AI tools increase engagement, they may not result in loyalty unless the customer believes that their data is being used ethically and continuously. This conflict is also evident in Jain and Gandhi's (2020) previous research, which cautioned that if AI-driven communications become unduly transactional, quick-commerce platforms may produce satisfaction without evoking emotional attachment.

The recurring ethical dilemma is present in all these threads. Concerns about privacy, bias, and transparency must be addressed immediately as AI becomes increasingly sophisticated and more challenging to detect. The results of Werner et al.'s (2024) study on "invisible steering" in AI-generated dialogue demonstrate how easily customers can be directed without their knowledge or consent. According to studies on algorithm aversion (Logg et al., 2019; Jussupow et al., 2020), consumers frequently mistrust AI recommendations, even when they are accurate, because they feel as though they are losing control or agency. Tiutiui&Dabija (2023) and Trivedi et al. (2022) stress that ethical protections must be balanced with personalisation; otherwise, the same systems that offer convenience run the risk of undermining autonomy.

RESEARCH METHODOLOGY

To investigate the impact of artificial intelligence (AI) on consumer decision-making in the FMCG industry, this paper uses a qualitative narrative review methodology, synthesising market research reports, industry insights, and existing academic literature. Using search terms such as AI in consumer behaviour, FMCG personalisation, AI and impulse buying, AI-

driven loyalty programs, and digital marketing ethics, pertinent academic articles were gathered from databases including Scopus, Web of Science, Google Scholar, and arXiv. A total of more than 40 industry reports and peer-reviewed papers from 2015 to 2024 were examined. Three major behavioural domains—product selection, impulsive purchasing, and customer loyalty—are thematically covered in this review. Every theme is examined using well-known theoretical frameworks, including the Elaboration Likelihood Model (ELM), the Technology Acceptance Model (TAM), and the Stimulus–Organism–Response (S-O-R) framework. The goal is to understand how AI tools, such as virtual agents, predictive analytics, and personalised recommendations, influence emotional and cognitive cues in decision-making.

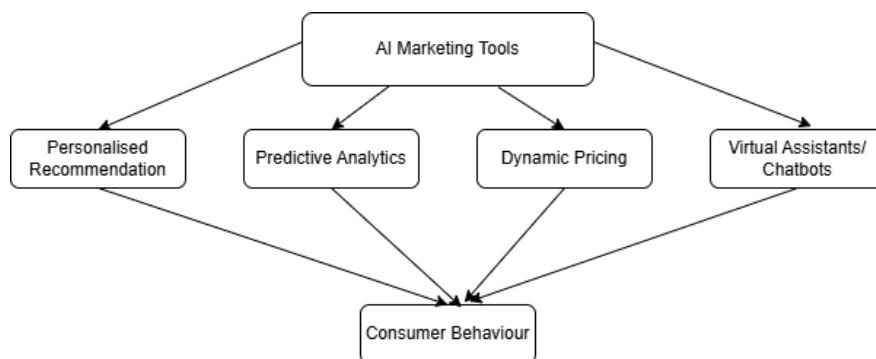
THEORETICAL FRAMEWORK

The S-O-R framework (Mehrabian & Russell, 1974) explains how external stimuli impact internal emotional or cognitive states, which in turn impact behaviour. Recommendation systems and other AI-driven FMCG marketing tools act as stimuli, generating psychological reactions (such as excitement and trust) that lead to actions like impulsive purchases. This model was used by Zhu et al. (2016) to demonstrate how AI agents can encourage impulsivity and reduce anxiety associated with decision-making. Similar outcomes were noted by Waqas et al. (2024) in South Asian retail, who connected personalisation to increased engagement. This model is suitable for examining the nuanced ways in which AI affects the emotions and decisions of consumers.

Technology Acceptance Model: According to Davis's (1989) TAM, attitudes and behavioural intentions regarding technology are influenced by perceived utility and usability. Trivedi et al. (2022) discovered that these elements influence impulsive purchases in online retail in AI contexts. Tiutiu and Dabija (2023) showed that acceptance is also impacted by transparency and trust. TAM helps explain how customers use AI tools to choose products and make snap decisions.

Elaboration Likelihood Model: According to Petty and Cacioppo (1986), the ELM describes how people interpret persuasive messages using either central (rational) or peripheral (emotional) pathways. Personalisation in AI marketing may appeal to reason or feeling. Deeper engagement is encouraged by message-value alignment, as demonstrated by Khamoushi (2024). Werner et al. (2024) discovered that conversational AI influences decisions by triggering peripheral cues. ELM facilitates the analysis of both emotionally motivated impulsive purchasing and logical product evaluation.

CONCEPTUAL FRAMEWORK



By incorporating ideas from three fundamental theories—the Stimulus–Organism–Response (S-O-R) framework, the Technology Acceptance Model (TAM), and the Elaboration Likelihood Model (ELM)—the conceptual framework created in this study depicts the connection between AI marketing tools and consumer decision-making in the FMCG industry. Four essential AI marketing tools—predictive analytics, dynamic pricing, personalised recommendations, and chatbots or virtual assistants—that act as external stimuli are at the centre of this framework. Customers' cognitive and emotional reactions—such as heightened trust, decreased cognitive load, or emotional arousal—are triggered by these tools, and these reactions in turn affect behaviours. Three dimensions—product selection, impulsive purchases, and customer loyalty—are used to classify the results of consumer behaviour. AI improves product selection by providing convenience and relevance; it encourages impulsive purchases by using emotionally charged, real-time nudges; and it maintains loyalty through customised engagement and reward programs.

Thematic Analysis:

Theme	Key Finding	Supporting Studies
Product Selection	AI tools enhance relevance, alleviate decision fatigue, and expedite evaluation.	Ruiz et al. (2017); Jenkins et al. (2024); Ren et al. (2022); Waqas et al. (2024)
Impulse Buying	Real-time recommendations and emotional cues from AI agents trigger unplanned purchases.	Zhu et al. (2016); Jain & Gandhi (2021); Trivedi et al. (2022); Werner et al. (2024)
Customer Loyalty	Personalised engagement and dynamic rewards enhance retention, but trust and ethics are critical.	Lemon & Verhoef (2016); Khan & Yuvika (2024); Farooq et al. (2024); M G (2024); Jain & Gandhi (2020)

Three main areas where AI has a significant impact on FMCG consumer behaviour are product selection, impulsive purchases, and customer loyalty, according to a thematic analysis of the literature. AI tools that enhance decision relevance, reduce information overload, and expedite evaluation processes are beneficial for product selection (Ruiz et al., 2017; Jenkins et al., 2024; Ren et al., 2022; Waqas et al., 2024). Research indicates that emotionally charged artificial intelligence nudges, whether they are delivered through chatbots, dynamic pricing, or flash offers, can successfully elicit impulsive purchases by appealing to consumers' urgency and peripheral cues (Zhu et al., 2016; Jain & Gandhi, 2021; Trivedi et al., 2022; Werner et al., 2024). Last but not least, although researchers warn that trust, data ethics, and algorithmic transparency remain crucial for long-term loyalty, AI helps brands to sustain engagement in the area of customer loyalty through personalised communication and customised rewards (Lemon & Verhoef, 2016; Khan & Yuvika, 2024; Farooq et al., 2024; M G, 2024; Jain & Gandhi, 2020). Together, these results demonstrate how AI influences consumer behaviour in various ways, including cognitive and affective ones.

DISCUSSION

This review examines how AI marketing tools are increasingly influencing consumer behaviour in the FMCG sector, particularly in India's online marketplace. It is evident from the analysis and synthesis of theoretical and empirical research that artificial intelligence (AI) not only facilitates product selection but also alters the emotional and cognitive connections that consumers have with brands. Predictive analytics and personalised recommendations are two examples of AI technologies that have altered how customers evaluate products. According to studies by Zhu et al. (2016) and Trivedi et al. (2022), these tools enhance relevance and reduce information overload, facilitating faster and more confident decision-making. This is especially important in the FMCG industry, where low-commitment purchases and choice fatigue are prevalent. AI-driven customisation is crucial for product discovery and selection in India, given the country's rapid digitalisation of commerce and mobile-centric shopping.

AI affects consumers psychologically when it comes to impulsive purchases through dynamic pricing, real-time offers, and behavioural nudges that focus on urgency and emotional triggers. Given that consumers are frequently driven by convenience and instant gratification to respond via peripheral processing, this is consistent with the S-O-R framework and ELM (Khamoushi, 2024; Werner et al., 2024). This is further enhanced by Indian quick-commerce platforms, which lower the barriers between desire and purchase.

AI-driven loyalty programs and engagement tactics are increasingly managing customer loyalty, which was once established through a consistent product experience. According to research by Khan and Yuvika (2024) and Jain and Gandhi (2020), individualised interactions—such as behaviour-based content and customised discounts—can significantly increase brand affinity and retention. However, given that different consumer groups have varying degrees of trust in digital platforms, this hyper-personalisation raises questions regarding data privacy, algorithmic bias, and consumer autonomy.

It is essential to recognise that the impact of AI varies from person to person and is shaped by factors such as consumer trust, perceived utility, and technological familiarity. According to Tiutiui and Dabija (2023), while tech-savvy consumers might find AI convenient, others might find it unsettling or untrustworthy, especially in semi-urban or low-literacy markets. To prevent alienation, this emphasises the necessity of moral AI procedures and open communication. Additionally, theoretical models like S-O-R, TAM, and ELM demonstrate how AI affects both emotional and logical decision-making. While S-O-R and ELM demonstrate how AI impacts emotional and persuasive aspects, TAM explains how consumers adopt AI. Future studies should look into the interactions between these models in omnichannel, multi-device retail environments.

LIMITATIONS

It is essential to acknowledge several limitations, despite this review providing a comprehensive synthesis of how artificial intelligence (AI) influences consumer behaviour in the FMCG industry. Firstly, the study is dependent mainly on secondary data, which, although insightful, lacks the specificity and immediacy that primary, empirical evidence could provide. According to Trivedi et al. (2022), it can be challenging to fully capture consumer reactions to AI technologies through literature reviews alone because they depend on contextual and situational factors.

Second, most of the studies in this review are geared towards urban, tech-savvy consumers, particularly in Tier I and Tier II cities. As a result, they do not adequately represent the behaviour of consumers in semi-urban or rural India, where digital adoption is slower and AI trust is still low (Tiutiu&Dabija, 2023). This urban bias restricts the applicability of the findings to India's heterogeneous socioeconomic landscape.

Third, although theoretically based on models such as S-O-R, TAM, and ELM, the proposed conceptual framework has not been empirically verified within the parameters of this work. The direction and strength of the suggested connections between AI tools and behavioural outcomes are purely theoretical in the absence of quantitative testing (Zhu et al., 2016; Petty & Cacioppo, 1986). Furthermore, the study may underrepresent studies that report negative or neutral effects of AI on consumer decision-making, as the narrative nature of this review makes it vulnerable to selection bias.

FUTURE SCOPE

Future studies should focus on empirical validation rather than just conceptual exploration. The impact of AI tools—such as chatbots, dynamic pricing algorithms, or recommendation engines—on product selection, impulsive purchases, and customer loyalty in real-world contexts can be examined through survey-based research, experiments, or longitudinal studies. Werner et al. (2024), for instance, have demonstrated how conversational AI can influence choices without the user's awareness, a phenomenon that warrants further investigation through carefully designed experiments.

Furthermore, it would be beneficial to investigate how demographic factors, including age, income, education, and familiarity with digital platforms, influence consumers' reactions to AI. AI adoption is strongly influenced by consumer innovativeness and trust in digital systems, according to Trivedi et al. (2022) and Farooq et al. (2024), underscoring the need for segmented analysis. Comparative research between Gen Z, millennials, and older age groups, or between urban and rural divides, may show distinct behavioural patterns. Future studies should also examine the moral implications of utilising AI in FMCG advertising. Growing personalisation raises issues with data privacy, algorithmic bias, and transparency, all of which hurt long-term customer trust and brand credibility, as M G (2024) and Tiutiu&Dabija (2023) contend.

Finally, since AI is increasingly playing a crucial role as a conduit between businesses and customers, this framework can be modified and tested in other industries, such as healthcare, education, and financial services. Policy-level decisions regarding the ethical deployment of AI in consumer-facing industries would be informed by cross-sectoral studies, which would help identify the effects of AI on consumer behaviour that are industry-specific versus universal.

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