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The Rise of AI-Assisted Shopping: A Study of Consumer Purchase Behaviour in India

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Abstract

Artificial Intelligence (AI) has moved from a back-end retail efficiency tool to a front-facing influence on how consumers discover, evaluate, and purchase products. India, with the world's second largest base of monthly ChatGPT users and among the highest global rates of generative AI adoption for shopping, offers a distinctive setting to examine this shift. This paper reviews the current state of AI-driven consumer behaviour research in India, synthesising findings from industry surveys (Capgemini, EY, BCG, Statista) and academic literature on technology acceptance and AI-enabled personalisation. It proposes a structured framework, a set of testable hypotheses, and a questionnaire-based methodology to empirically examine how AI-enabled personalisation, perceived trust, convenience, and data-privacy concern jointly shape purchase intention across demographic segments in India, including the narrowing metro versus tier-2/tier-3 adoption gap. Findings from secondary sources indicate that a majority of Indian consumers already use or intend to use AI shopping tools that AI-driven recommendations measurably influence purchase decisions, and that trust in human support remains an important complement to AI. The paper concludes with managerial implications for Indian retailers and e-commerce platforms, along with the limitations and future research directions of the proposed study.

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1. Introduction

Artificial Intelligence (AI) refers to computer systems capable of performing tasks that traditionally required human intelligence, such as recognising patterns, making predictions, and personalising experiences. Over the last decade, AI has moved from a specialised enterprise capability into an everyday consumer-facing technology embedded in search engines, e-commerce platforms, voice assistants, and mobile applications. India's AI market itself is projected to reach roughly US\$12.02 billion in value in 2026, growing at a compound annual rate of about 11.5% through 2032, reflecting the scale of investment now flowing into AI-enabled consumer applications.

India offers a particularly compelling context in which to study this shift. The country has become the world's second-largest market for ChatGPT, with its monthly active user base growing roughly 4.5-fold in 2025 to exceed 160 million users,

and Generation Z accounting for close to a third of that base. Nine out of ten Indian internet users are reported to engage with some form of AI, whether through personalised recommendations, social media filters, or smart devices, and surveys place Indian consumers among the most active users of generative AI (GenAI) for shopping decisions worldwide. This rapid, broad-based adoption raises a central question for marketers, retailers, and policymakers: how, and to what extent, is AI reshaping the way Indian consumers search for, evaluate, and purchase products and services?

This paper examines that question by reviewing the current evidence on AI's influence on Indian consumer buying behaviour, identifying the gaps in existing research, and proposing a structured empirical study-including objectives, hypotheses, and a survey-based methodology-capable of measuring that influence directly. The study focuses specifically on four dimensions that recur throughout the

literature and industry reporting: AI-enabled personalisation, consumer trust in AI-generated recommendations, convenience and time-saving benefits, and data-privacy concern as a possible constraint on adoption.

2. Review of Literature

2.1 AI Adoption among Indian Consumers

Industry research indicates that Indian consumers are adopting AI-enabled shopping tools faster than most global markets. Capgemini Research Institute's 2026 study on evolving value perception found that 41% of Indian consumers were already using AI-based shopping tools, with a further 40% planning to adopt them—the highest combined figure among the markets surveyed. Separately, Boston Consulting Group's Global Consumer Radar reported that 64% of Indian consumers now use generative AI tools to compare products, evaluate brands, and build confidence before purchasing, with usage for shopping continuing to rise even as overall consumer GenAI use grew by roughly 50% between February and November 2025. Statista Consumer Insights and Kantar research similarly position India ahead of markets such as the United States and the United Kingdom in daily AI usage.

2.2 AI's Measurable Influence on Purchase Decisions

Beyond general adoption, several studies quantify AI's direct effect on purchasing. EY's India consumer index reports that 62% of Indian consumers have made a purchase based on an AI-generated product recommendation—more than double the 30% global average—while 82% of respondents believe AI will meaningfully improve the purchase experience going forward. At the same time, 78% of Indian consumers still prefer human customer-service support when shopping online, suggesting that AI is best understood as a complement to, rather than a wholesale replacement for, human-led service. A sector-specific study applying the Technology Acceptance Model (TAM) to India's online grocery market—valued at approximately ₹760.2 billion—found that AI-driven conveniences such as voice search and chatbot assistance meaningfully shape consumer satisfaction and adoption in that category specifically.

2.3 Theoretical Foundations

The literature draws heavily on established technology-adoption theory. The Technology Acceptance Model (TAM) explains adoption through perceived usefulness and perceived ease of use, while the Unified Theory of Acceptance and Use of Technology (UTAUT) extends this with constructs such as social influence and facilitating conditions. Work on AI specifically in retail describes an "AI-enabled value chain" spanning demand forecasting, personalised recommendation, and post-purchase service, arguing that consumer-facing AI functions as one link in a broader operational shift rather than a standalone feature. Related research on AI and repurchase intention identifies trust and perceived personalisation as mediating variables between AI exposure and continued buying behaviour, a relationship this study adapts to the first-purchase context relevant to Indian e-commerce.

2.4 Regional and Demographic Variation Within India

AI adoption in India is not uniform across geography. Industry analysis tracking AI-driven marketing and commerce reports that the adoption gap between metro and tier-2 cities narrowed from roughly 45 percentage points in 2024 to about 23 points in 2026, driven by more affordable AI tools and

growing support for regional languages, with tier-2 and tier-3 cities showing outsized growth in vernacular-language AI content consumption. This narrowing gap suggests that any study of AI's influence on Indian consumer behaviour should treat city tier, alongside age and gender, as a meaningful segmenting variable rather than assuming a single national pattern.

3. Research Gap

Existing research on AI and Indian consumer behaviour tends to fall into two categories: broad industry surveys that report high-level adoption percentages without testing underlying psychological drivers, or narrow academic studies confined to a single AI touchpoint (for example, voice search in online grocery) or a single city. Few published studies simultaneously (a) test personalisation, trust, convenience, and privacy concern as a combined framework, (b) compare responses across metro and tier-2/tier-3 respondents given the rapidly narrowing adoption gap between them, and (c) span multiple product categories rather than one vertical. This paper addresses that gap by proposing an integrated, multi-factor, multi-segment study design.

4. Objectives of the Study

To assess the current level of awareness and usage of AI-enabled shopping tools among Indian consumers.

To examine the influence of AI-driven personalisation and product recommendations on purchase intention.

To identify the key factors—including trust, convenience, and data-privacy concern—that shape consumer attitudes toward AI in the buying process.

To compare AI adoption and its influence on buying behaviour across demographic segments (age, gender, and city tier).

To offer evidence-based recommendations for Indian retailers and e-commerce platforms on deploying AI responsibly and effectively.

5. Research Hypotheses

Hypothesis	Statement
H1	AI-enabled personalisation has a significant positive effect on the purchase intention of Indian consumers.
H2	Perceived trust in AI-generated recommendations significantly influences online buying behaviour.
H3	There is a significant difference in AI adoption for shopping across age groups and city tiers (metro vs. tier-2/3).
H4	Data-privacy concern significantly moderates (weakens) the relationship between AI usage and purchase intention.

6. Research Methodology

6.1 Research Design

The study adopts a descriptive-cum-exploratory research design combining secondary data synthesis (reviewed in Section 2) with a proposed quantitative primary survey to statistically test the hypotheses in Section 5.

6.2 Sampling

Population: Indian residents aged 18 and above who have made at least one online purchase in the preceding six months. Sampling technique: stratified convenience sampling, with quotas set across metro and tier-2/tier-3 cities to reflect the demographic variation noted in Section 2.4. Proposed

sample size: 220 respondents, determined using Cochran's formula for an estimated population proportion with a 95% confidence level and a 6.5% margin of error, rounded up to allow for incomplete responses.

6.3 Data Collection Instrument

A structured questionnaire administered online, comprising four sections:

- i) Demographic profile (age, gender, city tier, monthly online spend),
- ii) Frequency and type of AI touchpoints used while shopping (recommendation engines, chatbots, voice search, price-comparison tools),
- iii) A 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree) measuring personalisation, trust, convenience, and privacy concern, and
- iv) Purchase intention and satisfaction items adapted from established TAM- and UTAUT-based scales.

7.1 Secondary Data: AI's Documented Influence in India

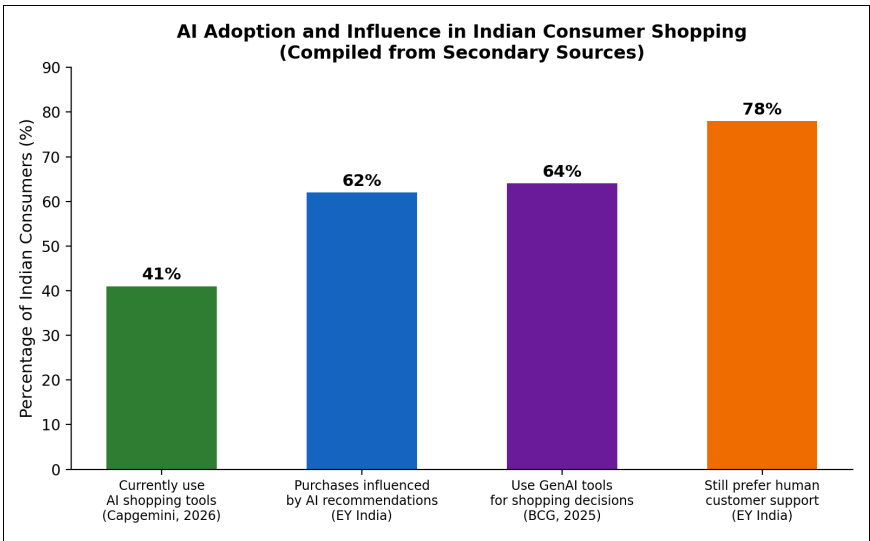


Fig 1: AI adoption and influence among Indian consumers, compiled from Capgemini (2026), EY India Consumer Index, and BCG Global Consumer Radar (2025).

7.2 Illustrative Primary Data (Template—Pending Actual Survey)

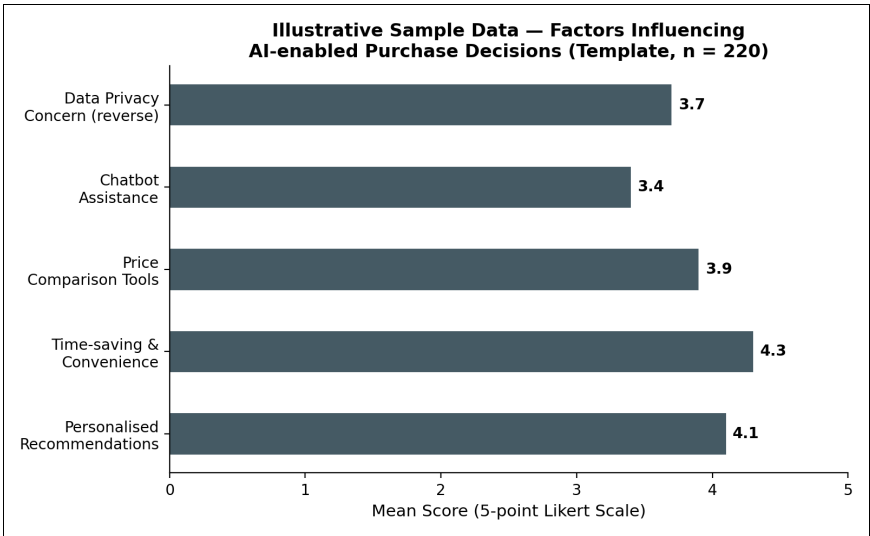


Fig 7.2: Illustrative placeholder data only—mean Likert scores for factors influencing AI-enabled purchase decisions. Replace with actual survey output before publication.

6.4 Statistical Tools

Descriptive statistics (frequency, mean, standard deviation) to profile respondents and usage patterns; Cronbach's Alpha to test scale reliability; Pearson correlation and multiple regression to test H1, H2, and H4; and an independent-samples t-test/one-way ANOVA to test H3 across age groups and city tiers. Analysis to be conducted in SPSS or an equivalent statistical package.

7. Data Analysis and Interpretation

Note: Figure 7.1 below is compiled entirely from the real, cited secondary sources reviewed in Section 2 and can be used as-is. Figure 7.2 and Table 7.1 use ILLUSTRATIVE/TEMPLATE values only, to demonstrate the intended analysis once the primary survey described in Section 6 has actually been administered.

7.3 Illustrative Demographic Template

Table 2: ILLUSTRATIVE placeholder demographic template-replace with actual respondent data.

Demographic Variable	Category	Illustrative % (n = 220)
Age	18–24 years	34%
Age	25–34 years	41%
Age	35+ years	25%
Gender	Male	52%
Gender	Female	47%
Gender	Prefer not to say	1%
City Tier	Metro	58%
City Tier	Tier-2 / Tier-3	42%

8. Key Findings (From Secondary Evidence)

AI-enabled shopping tools have reached mainstream adoption in India, with roughly four in ten consumer's already active users and a comparable share planning to adopt them shortly.

A majority of Indian consumers (62%) report having made a purchase directly influenced by an AI-generated recommendation-more than double the global average.

Confidence in AI's future role is high: 82% of Indian consumers expect AI to improve the purchase experience going forward.

Despite strong AI adoption, human customer support retains a clear role, with 78% of consumers still preferring it, indicating a hybrid rather than AI-only shopping journey.

Generative AI use for shopping-related decisions (comparing products, evaluating brands) is growing faster than other GenAI use cases in India, rising roughly 50% within a single year.

The adoption gap between metro and tier-2/tier-3 cities is narrowing sharply, implying that AI's influence on buying behaviour is becoming a national rather than purely urban phenomenon.

9. Discussion

Taken together, the secondary evidence points to AI functioning less as a novelty and more as an embedded layer of the Indian consumer's purchase journey-from initial product discovery through GenAI-assisted comparison to post-purchase support. The persistence of a strong preference for human support alongside high AI usage suggests that trust in AI is still developing unevenly: consumers appear comfortable delegating research and comparison tasks to AI but remain more cautious about AI-only resolution of problems or high-stakes decisions. This pattern is consistent with the hypothesised moderating role of trust (H2) and privacy concern (H4) proposed in Section 5, and supports treating personalisation and trust as related but distinct constructs in the proposed primary study rather than collapsing them into a single 'AI attitude' variable.

The narrowing metro–tier 2/3 adoption gap also has methodological implications: a study sampling only metro respondents, as much prior India-specific literature has done, would likely understate both the scale and the diversity of AI's current influence on Indian consumer behaviour.

10. Managerial and Practical Implications

Retailers and D2C brands should treat AI-driven personalisation as a primary, not secondary, growth lever, given its already-demonstrated effect on purchase conversion in India.

Because a large majority of consumers still value human support, platforms should design AI as an augmentation of—not a replacement for—customer service, with clear and easy escalation paths to a human agent.

Given the fast-narrowing metro/tier-2/3 gap, AI shopping tools should be localised for regional languages and lower-bandwidth conditions to capture the fastest-growing segment of adoption.

Transparent communication about how AI recommendations and data are used may help address the privacy concerns that this study hypothesises will moderate adoption.

11. Limitations of the Study

The findings in Section 8 are drawn from third-party secondary sources; figures may use differing survey methodologies, sample sizes, and time frames, limiting direct comparability. The primary survey design proposed in Section 6 has not yet been administered; Section 7's template figures are illustrative only and must be replaced with actual data before any empirical claims are published.

Convenience sampling, once the primary survey is conducted, will limit the statistical generalizability of results to the wider Indian population.

The study focuses on general e-commerce behaviour and does not disaggregate findings by specific product category (e.g., fashion vs. electronics vs. groceries), which may respond differently to AI influence.

12. Scope for Future Research

Administer the proposed survey instrument (Section 6) across a stratified national sample to empirically test H1–H4.

Extend the study longitudinally to track how trust in AI recommendations evolves as generative AI shopping assistants mature in India.

Conduct category-specific replications (e.g., fashion, electronics, groceries, travel) to test whether AI's influence on buying behaviour varies by product involvement level.

Incorporate qualitative interviews to explore the specific privacy and trust concerns that quantitative Likert items may not fully capture.

Conclusion

AI has become a measurable and growing influence on how Indian consumers discover, evaluate, and purchase products, with adoption rates among the highest in the world and clear evidence that AI-driven recommendations already shape real purchase decisions. At the same time, the continued preference for human support and the wide regional variation in adoption indicate that AI's influence on Indian consumer behaviour is neither uniform nor unconditional. The integrated framework, hypotheses, and survey methodology proposed in this paper offer a structured path to empirically quantify these dynamics—personalisation, trust, convenience, and privacy concern—across India's diverse consumer base, and to translate that understanding into practical guidance for retailers and platforms navigating the shift toward AI-enabled commerce.

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