International Platform of Registered Systematic Review and Meta-analysis Protocols

INPLASY

What Makes Consumers Buy from AI? A Mechanism-Based Systematic Review of Purchase Intention

INPLASY202650136
doi: 10.37766/inplasy2026.5.0136
Received: 26 May 2026
Published: 26 May 2026

Corresponding author:
Abdullah Algarni

ammqarni@uqu.edu.sa

Author Affiliation:
Umm Al-Qura University.

Algarni, A.

ADMINISTRATIVE INFORMATION

Support - This research received no external funding. The systematic review was conducted independently by the author.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - The author declares no conflicts of interest in relation to this systematic review. No funding was received from commercial entities that could be perceived as influencing the design, conduct, or reporting of the review. The author has no financial relationship with any AI company or platform examined in the included studies.

INPLASY registration number: INPLASY202650136

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 May 2026 and was last updated on 7 June 2026.

INTRODUCTION

Review question / Objective The research questions were refined from five to four to sharpen the mechanism-based focus and foreground the inhibitory pathway. Final questions: RQ1 — which psychological mechanisms underlie the AI–purchase intention relationship; RQ2 — whether mechanism patterns differ across AI modalities or operate consistently regardless of AI type; RQ3 — which counter-mechanisms inhibit the relationship and how they interact with positive pathways; RQ4 — which moderating variables shape its strength and direction. The former RQ4 (theoretical frameworks) is now addressed within the conceptual background rather than as a standalone question, and the former RQ5 (overall direction/strength) is incorporated into RQ1 and the synthesis.

RQ5: What is the overall direction and strength of the AI–purchase intention relationship across the empirical literature?

The primary objective is to synthesize the empirical literature using a mechanism-based framework — identifying the common psychological pathways (trust, perceived value, enjoyment, social presence, privacy concern, and others) through which diverse AI applications influence consumers' willingness to buy. The review produces an evidence-driven conceptual framework mapping the mechanism architecture of the AI–purchase intention relationship.

Rationale Artificial intelligence (AI) is increasingly embedded in consumer-facing retail and marketing contexts. Applications range from product recommendation systems and conversational chatbots to virtual influencers, generative AI tools, and AI-powered personalization engines. As AI

adoption accelerates, understanding its influence on consumers' purchase decisions has become a critical research priority.

Despite growing empirical attention, the AI and purchase intention literature remains theoretically fragmented. Studies tend to focus on specific AI modalities in isolation, making it difficult to identify psychological processes common across AI types. This modality-specific fragmentation limits both theoretical integration and practical application: it is unclear whether trust, perceived value, social presence, or other mechanisms represent technology-specific effects or universal pathways applicable to AI in general.

A mechanism-based systematic review is therefore needed for three reasons. First, it enables cross-modality synthesis by identifying common psychological processes rather than cataloguing technology-specific effects. Second, it identifies which mechanisms have been consistently confirmed, which are understudied, and where contradictory findings exist. Third, it offers actionable guidance for practitioners designing AI-driven consumer experiences, as mechanisms — unlike modalities — can be directly targeted through interface design, communication strategy, and disclosure policy.

No prior systematic review has adopted an explicit mechanism-based framing of the AI–purchase intention literature. Existing reviews are either technology-specific, broader in scope, or focused on related but distinct outcomes. A systematic, PRISMA 2020-compliant review centered on purchase intention and organized by psychological mechanism fills this gap.

Condition being studied Note: This field is adapted for a non-health behavioral science context.

The phenomenon of interest is consumer purchase intention in AI-mediated commercial contexts. Purchase intention refers to a consumer's self-reported willingness or likelihood to purchase a product or service following exposure to, or interaction with, an AI-driven stimulus or system. It is conceptually defined as a motivational state capturing the consumer's plan or intention to engage in purchase behavior (cf. Fishbein & Ajzen, 1975; Venkatesh et al., 2003).

Purchase intention is the dominant outcome variable in consumer behavior and marketing research, as it reliably predicts actual purchase behavior. It is typically measured using validated multi-item Likert-type scales assessing likelihood, willingness, and intention to buy.

The AI applications examined as antecedents include: product recommender systems, chatbots and conversational agents, generative AI tools, virtual influencers and AI avatars, AI-powered personalization systems, service robots, and general AI-enabled consumer applications. The review boundary is purchase intention specifically, excluding broader constructs such as adoption intention, technology acceptance, or continued use intention.

METHODS

Search strategy The review was based on the two registered databases (Web of Science Core Collection, primary; ScienceDirect, supplementary). The supplementary backward citation searching and forward (Google Scholar) citation searching described in the protocol were not conducted, to maintain a transparent, reproducible, database-defined search frame.

Participant or population Adult consumers (aged 18 and above) interacting with, or exposed to, AI-powered systems or applications in commercial or retail contexts. Participants may be drawn from online retail platforms, social media environments, laboratory experiments, or AI-enabled service settings. Both student and non-student samples are included, provided sample characteristics are reported.

Intervention Exposure to or interaction with an AI-powered consumer-facing system or application. AI modalities included: (1) product recommender systems; (2) chatbots and conversational agents; (3) generative AI tools and AI-generated content; (4) virtual influencers and AI avatars; (5) AI-powered personalization systems; (6) service robots; (7) general AI-enabled consumer applications. The AI application must be the focal independent variable or stimulus in the study.

Comparator No specific comparator is required for inclusion. Where studies include comparative conditions (e.g., AI agent vs. human agent; disclosed vs. undisclosed AI identity), these conditions are recorded and their moderating effects noted. The primary analytical focus is the psychological mechanisms mediating the AI–purchase intention relationship rather than comparative effectiveness of AI vs. non-AI conditions.

Study designs to be included Empirical studies employing quantitative (cross-sectional survey, online experiment, laboratory experiment, quasi-experiment), qualitative (interview, focus group), and mixed-method designs. Excluded: purely conceptual papers, editorials, opinion pieces, book chapters, conference abstracts, dissertations, and non-peer-reviewed publications.

Eligibility criteria INCLUSION (all five must be met):

FT1 — Empirical: Primary data collected using quantitative, qualitative, or mixed-method design.

FT2 — AI consumer-facing stimulus: An AI-powered application, system, or tool is the independent variable or focal stimulus in a consumer context.

FT3 — Purchase intention as measured outcome: Purchase intention (or equivalent: buying intention, willingness to buy) is a measured dependent variable.

FT4 — Psychological mechanism tested: At least one psychological mechanism (mediator) between AI and purchase intention is proposed and empirically tested.

FT5 — Peer-reviewed journal article: Published in a peer-reviewed academic journal.

EXCLUSION:
— Purely conceptual or theoretical papers with no primary data
— Technical AI papers with no consumer behavioral outcome
— Papers measuring only actual purchase behavior (not intention)
— Conference papers, book chapters, dissertations, grey literature
— Papers not retrievable in full text after two retrieval attempts.

Information sources 1. Web of Science Core Collection (primary): Covers leading journals in marketing, consumer behavior, business, information systems, and management.

2. ScienceDirect (supplementary): Covers Elsevier journals in business, psychology, and computer science.

3. Backward citation searching: Reference lists of all 76 included studies manually reviewed for additional eligible papers.

Main outcome(s) Primary outcome: Purchase intention — consumers' self-reported willingness or likelihood to purchase a product or service following exposure to an AI-driven stimulus. Measured via validated multi-item Likert-type scales in quantitative studies; assessed thematically in qualitative studies.

Extracted for each study:
— Direction of AI→PI effect (positive, negative, mixed, null)
— Magnitude where reported (standardized path coefficient β or correlation r)
— Whether mediation is formally confirmed (yes/no)
— Which psychological mechanisms are confirmed as mediators
— Effect sizes for mechanism pathways where reported.

Additional outcome(s) Secondary outcomes captured during data extraction (not primary synthesis targets):
— Attitude toward AI, brand, or product (where serving as a downstream mediator)
— Repurchase intention (where reported alongside initial purchase intention)
— Willingness to pay premium (where reported as a related behavioral outcome)
— Engagement and interaction quality (where tested as intermediate variables)

These are recorded to support interpretation of the main AI→PI pathway and contribute to subgroup and sensitivity analyses.

Data management A structured 28-field data extraction matrix was developed in Microsoft Excel prior to extraction. Fields capture: bibliographic details, study design, sample characteristics (size, type, country), AI modality, AI platform/context, theoretical framework(s), core mechanisms (mediators), counter-mechanisms, moderators, purchase intention type, statistical method, AI→PI direction, mediation and moderation confirmation, key findings, quality score, and coder notes.

All screening and eligibility decisions are documented with explicit rationale. Borderline inclusion/exclusion decisions are flagged and recorded separately. The PRISMA 2020 flow diagram is maintained throughout. The completed matrix will be provided as a supplementary file upon publication.

Quality assessment / Risk of bias analysis Two clarifications: (1) the intra-rater reliability procedure was revised — a random ~6% of screened title/

abstract records (30 records) was re-screened after a two-week interval as a stability check; a formal Cohen's kappa on a 20% subsample was not computed. (2) The "high quality" band used in reporting is ≥9/10 (53 studies, 72.6%; mean 9.07/10); no study scored below 6/10.

Strategy of data synthesis The affective–social mechanism cluster, termed "experiential mechanisms" in the protocol, is reported in the manuscript as "supporting mechanisms" (a functional descriptor of its amplifying role); cluster membership is unchanged (social presence, enjoyment, engagement, credibility, anthropomorphism). The narrative four-stage synthesis is retained.

Subgroup analysis Given substantial heterogeneity and the narrative (non-meta-analytic) synthesis, the five planned subgroup analyses were not conducted as discrete analyses; moderating conditions (product type/involvement, age, AI identity disclosure, cultural orientation, AI knowledge) are reported qualitatively within the synthesis.

Sensitivity analysis The five planned sensitivity analyses were not conducted, for the same reason (heterogeneity; narrative, non-meta-analytic synthesis).

Language restriction English language only. All included studies are published in English. No non-English databases were searched.

Country(ies) involved Saudi Arabia. This systematic review is conducted by a single researcher based in Saudi Arabia.

Other relevant information Final included-study set and PRISMA flow updated: on full-text retrieval and final eligibility verification during data extraction, the included set was reconciled from 76 to 73 studies. Updated PRISMA 2020 flow: 552 identified → 539 after duplicate removal → 292 sought → 189 not retrieved → 103 assessed → 30 excluded at full text (13 FT2; 5 FT3; 12 FT1/FT4) → 73 included. Consistent with the 73-study set, trust is the most prevalent mechanism, appearing in 26 of 73 studies (35.6%) across all six AI modality categories (previously n=29, 38%).

Keywords consumer behavior; purchase intention; perceived value; personalization; trust; psychological mechanisms; artificial intelligence; chatbot; virtual influencer; recommender system; generative AI; systematic.

Dissemination plans The findings will be submitted for publication in a peer-reviewed journal in consumer behavior, marketing, or business. The INPLASY registration number will be cited in the methodology section of the manuscript. The data extraction matrix and quality scores will be provided as supplementary materials upon acceptance.

Contributions of each author

Author 1 - Abdullah Algarni - The sole author conceived the review, conducted all searches, screening, data extraction, quality assessment, synthesis, and manuscript preparation.
Email: ammqarni@uqu.edu.sa