

## Protocol for a Systematic Review: How Artificial Intelligence Influences Purchase Intention Through Psychological Mechanisms

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 26 May 2026.

### INTRODUCTION

**Review question / Objective** This systematic review addresses five research questions:

RQ1: What psychological mechanisms mediate the relationship between artificial intelligence (AI) and consumer purchase intention?

RQ2: Which AI modalities are most frequently studied in relation to purchase intention, and do mechanism patterns differ across modalities?

RQ3: What moderating variables shape the strength or direction of the AI-purchase intention relationship?

RQ4: What theoretical frameworks have been applied to explain AI's influence on purchase intention?

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** Primary database: Web of Science Core Collection

Search string applied:

TS=("artificial intelligence" OR "AI" OR "machine learning" OR "chatbot\*" OR "conversational agent\*" OR "virtual assistant\*" OR "recommender system\*" OR "recommendation system\*" OR "virtual influencer\*" OR "AI influencer\*" OR "generative AI" OR "large language model\*" OR "ChatGPT" OR "GPT" OR "personal\*ation" OR "algorithmic recommendation\*" OR "service robot\*" OR "social robot\*" OR "AI avatar\*" OR "virtual human\*") AND TS=("purchase intention\*" OR "buying intention\*" OR "purchase behavior\*" OR "buying behavior\*" OR "willingness to buy" OR "consumer intention\*" OR "repurchase intention\*")

Filters: Article type = Article; Language = English

Secondary database: ScienceDirect

Keyword combinations: "artificial intelligence" AND "purchase intention"; "chatbot" AND "purchase intention"; "recommender system" AND "purchase intention"; "virtual influencer" AND "purchase intention"; "generative AI" AND "purchase intention"

Supplementary: Backward citation searching of all included studies; forward citation searching via Google Scholar for high-impact included papers.

Search period: No formal date restriction; retrieved studies span 2019–2026.

Total identified: 552 records (539 after deduplication).

**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  $\beta$  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** A purpose-built 10-point quality assessment rubric was applied to all 76 included studies across five dimensions (2 points per dimension):

D1 – Sample adequacy: (a) sample size  $\geq 200$  for survey/SEM or  $\geq 100$  for experiment; (b) non-student or justified student sample.

D2 – Measurement quality: (a) purchase intention measured with validated scale; (b) mechanisms measured with validated scales and reliability reported.

D3 – Analytical rigor: (a) appropriate statistical method; (b) mediation formally tested via bootstrapping or equivalent.

D4 – Theoretical grounding: (a) named framework explicitly applied; (b) hypotheses derived from theory.

D5 – Mechanism reporting: (a) at least one mediator confirmed; (b) path coefficients or effect sizes reported.

Score interpretation: 9–10 = high quality; 7–8 = moderate-high;  $\leq 6$  = moderate. A 0.5 bonus (capped at 10) is awarded for multi-study designs.

As this review is conducted by a single researcher, intra-rater reliability is assessed by re-coding a random 20% subsample after a minimum two-week interval. Cohen's kappa is computed and reported in the published manuscript.

**Strategy of data synthesis** A narrative synthesis approach is employed following PRISMA 2020 guidelines. Meta-analytic pooling is not conducted due to substantial heterogeneity in AI modalities, measurement instruments, sample characteristics, and analytical approaches.

The synthesis proceeds in four stages:

Stage 1 – Descriptive overview: Frequency tables for study characteristics (year, country, design, AI modality, theory, statistical method).

Stage 2 – Mechanism frequency analysis: All psychological mechanisms reported as mediators are coded into four functional clusters: (a) core positive mechanisms (rational–evaluative pathway); (b) experiential mechanisms (affective–social pathway); (c) counter-mechanisms (inhibitory pathway); (d) governance mechanisms (regulatory pathway). Frequency counts and percentages are computed for each mechanism across all 76 studies.

Stage 3 – AI modality  $\times$  mechanism cross-tabulation: A matrix showing mechanism frequency by AI modality category identifies modality-specific patterns and cross-modality universals.

Stage 4 – Evidence-driven conceptual framework: Synthesis findings are used to develop Figure 1 – a conceptual framework mapping the mechanism architecture of the AI–purchase intention relationship.

**Subgroup analysis** Subgroup analyses are conducted based on:

1. AI modality (6 groups): Chatbot/conversational agent; virtual influencer/avatar; generative AI/LLM; recommender system; personalization/AI targeting; general AI application. Mechanism patterns compared across groups.

2. Study design (2 groups): Survey/cross-sectional versus experimental. Mechanism confirmation rates compared.

3. Geographic region: East Asian samples (China, South Korea, Japan, Vietnam) versus Middle Eastern samples (Saudi Arabia, UAE) versus Western samples (USA, Spain, Portugal, Germany). Differences in mechanism prevalence and AI→PI direction noted.

4. Product type: Hedonic versus utilitarian product contexts (where reported). Experiential mechanisms (enjoyment, social presence)

predicted to be stronger for hedonic; rational mechanisms (usefulness, value) stronger for utilitarian.

5. Publication year: Pre-2022 versus 2022–2026, to examine whether the emergence of generative AI has shifted the mechanism landscape.

**Sensitivity analysis** Five sensitivity analyses are conducted:

1. Quality restriction: Mechanism frequency analysis repeated for high-quality studies only (quality score  $\geq 8/10$ ,  $n \approx 59$ ) to confirm findings hold for the strongest evidence.

2. Primary outcome restriction: Studies where purchase intention is secondary rather than primary are excluded and the mechanism table recomputed.

3. General AI modality exclusion: The heterogeneous "general AI application" category ( $n=22$ , 29%) is excluded and the cross-tabulation rerun to assess robustness.

4. Single-country exclusion: Given Chinese-sample dominance ( $n=13$ , 17%), the mechanism frequency analysis is repeated excluding Chinese-sample studies.

5. Intra-rater reliability check: Core conclusions (trust as dominant mechanism; dual-pathway structure) are assessed against the 20% re-coded subsample to confirm decision consistency.

**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** SOLO RESEARCHER – BIAS MITIGATION STRATEGY

This systematic review is conducted by a single researcher. The following measures are implemented to ensure methodological rigor in the absence of a second independent reviewer:

(1) Pre-specified decision rules: Operationalized criteria for all five inclusion/exclusion criteria (FT1–FT5) were documented prior to screening, each with a borderline case definition to ensure rule-governed rather than discretionary decisions.

(2) Intra-rater reliability: A random 20% subsample of title/abstract screening decisions will be re-screened after a minimum two-week interval, blind to original decisions. Cohen's kappa will be computed and reported in the published manuscript. The same procedure will be applied to a 20% subsample of data extraction records.

(3) PRISMA 2020 compliance: The full PRISMA 2020 checklist is followed, including transparent search strings, database rationale, exclusion reasons at full-text stage, and flow diagram.

(4) Pre-specified quality rubric: A 10-point quality assessment instrument was developed before assessment and applied uniformly to all 76 included papers.

#### REVIEW SCOPE

PRISMA 2020 flow: 552 records identified → 539 after deduplication → 292 retrieved → 109 assessed for full-text eligibility → 76 studies included in final synthesis.

Two databases searched (Web of Science Core Collection primary; ScienceDirect supplementary)

#### THEORETICAL POSITIONING

The review adopts a mechanism-based rather than technology-centered framing. Trust — the dominant mechanism ( $n=29$ , 38% of included studies) — appears consistently across all six AI modality categories, providing the empirical basis for cross-modality synthesis.

**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