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E-Commerce Adoption, Consumer Trust, and Purchase Behaviour: A Review of Literature

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Abstract

This review paper synthesizes a decade of empirical and theoretical scholarship on e-commerce adoption, consumer trust, and online purchase behaviour published between 2015 and 2024. Drawing on 96 peer-reviewed articles selected through a structured search of Web of Science and Scopus, the review examines the evolving determinants of consumer adoption of e-commerce platforms, the role of trust as a mediating and moderating construct, and the behavioural outcomes associated with digital retail engagement. The review traces the conceptual development of e-commerce research from desktop-centric models toward mobile commerce, social commerce, and live-stream shopping paradigms. Key theoretical frameworks including the Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology, and Trust-Commitment Theory are critically assessed for their explanatory adequacy in contemporary digital retail contexts. The paper identifies perceived ease of use, perceived usefulness, online trust, website quality, and social influence as the most robustly documented antecedents of purchase intention. Emerging themes including artificial intelligence-driven personalization, voice commerce, and sustainability considerations in online purchasing decisions are identified as priority areas for future research. The review is intended to serve as a reference synthesis for academics, digital marketing practitioners, and e-commerce platform developers.

Keywords: - E-Commerce, Digital Retailing, Consumer Trust, Technology Acceptance Model, Online Purchase Behaviour, Mobile Commerce, Social Commerce

I. INTRODUCTION

1.1. Background

Electronic commerce, defined as the buying and selling of goods and services through electronic networks primarily the internet, has grown from a novel technological phenomenon in the late 1990s to a foundational pillar of the global retail economy. Global e-commerce sales exceeded USD 5.8 trillion in 2023 and are projected to surpass USD 8 trillion by 2027, representing approximately 23% of total retail sales worldwide (Statista, 2024). This explosive growth has been accompanied by a prolific academic literature seeking to understand the psychological, technological, and social determinants of consumer engagement with digital retail environments.

The period 2015 to 2024 has been particularly consequential for e-commerce research. The proliferation of smartphones transformed e-commerce into mobile commerce (m-commerce), with mobile devices accounting for over 60% of global e-commerce traffic by 2023. The rise of social media platforms as shopping channels created social commerce as a distinct commercial paradigm. The COVID-19 pandemic accelerated e-commerce adoption across age groups and geographies that had previously resisted online purchasing, compressing what might have been a decade of adoption into approximately 18 months (McKinsey & Company, 2021). These developments have generated new research questions that legacy frameworks were not designed to address, creating a pressing need for an updated synthesis of the literature.

1.2. Objectives of the Review

This review pursues four specific objectives:

- To map the theoretical frameworks employed in e-commerce consumer behaviour research from 2015 to 2024.
- To synthesize empirical evidence on the antecedents of e-commerce adoption and online purchase intention.
- To examine the role of consumer trust as a central mediating and moderating construct across e-commerce research streams.
- To identify emerging themes, research gaps, and a future research agenda for e-commerce consumer behaviour scholarship.

1.3. Scope and Organization

The review is confined to consumer-facing business-to-consumer (B2C) e-commerce contexts. Business-to-business (B2B) digital procurement and consumer-to-consumer (C2C) platforms are excluded, as these involve distinct relational and institutional dynamics warranting separate treatment. The paper is organized as follows: Section 2 describes the methodology; Section 3 reviews theoretical frameworks; Section 4 synthesizes evidence on adoption antecedents; Section 5 addresses the trust literature; Section 6 examines behavioural outcomes; Section 7 presents emerging themes and future directions; and Section 8 concludes.

II. METHODOLOGY

2.1. Search Strategy

A structured literature search was conducted in October 2024 using Web of Science and Scopus. The search string combined: ("e-commerce" OR "electronic commerce" OR "online shopping" OR "mobile commerce" OR "social commerce") AND ("consumer behaviour" OR "purchase intention" OR "consumer trust" OR "adoption" OR "TAM"). The temporal boundary was January 2015 to December 2024. Only peer-reviewed journal articles in English were included. Journals with an ABDC ranking of B or above were prioritized. The initial search returned 1,847 records; after deduplication, abstract screening, and full-text review, 96 articles constituted the final synthesis corpus. Inter-rater reliability for full-text inclusion decisions yielded a Cohen's kappa of 0.81.

2.2. Analytical Approach

Thematic synthesis (Thomas & Harden, 2008) was employed to organize and interpret the extracted evidence. Articles were coded against a framework of theoretical constructs, methodological approaches, geographic contexts, and key findings. Frequency analysis of constructs across the corpus identified the most consistently investigated variables. Temporal trend analysis assessed the evolution of research themes across the review decade.

III. THEORETICAL FRAMEWORKS IN E-COMMERCE RESEARCH

3.1. Technology Acceptance Model and Its Extensions

The Technology Acceptance Model (TAM), originally proposed by Davis (1989), remains the most frequently employed theoretical framework in the review corpus, appearing in 41 of 96 articles (42.7%). TAM's two core constructs, perceived usefulness (PU) and perceived ease of use (PEOU), retain substantial explanatory power in predicting e-commerce adoption intentions across diverse platform types and cultural contexts. However, the review reveals a consistent critique: standard TAM accounts for approximately 40% of variance in adoption intention in e-commerce contexts (Venkatesh & Bala, 2008), leaving substantial unexplained variance that has motivated a proliferation of TAM extensions incorporating trust, social influence, enjoyment, and security concerns as additional predictors.

The most theoretically productive extensions in the review period include the integration of TAM with Trust Theory (Kim et al., 2008), with Perceived Risk Theory (Featherman & Pavlou, 2003), and with Social Influence constructs from the Unified Theory of Acceptance and Use of Technology (UTAUT2; Venkatesh et al., 2012). The TAM-Trust integration is particularly prominent in mobile commerce and social commerce research, where platform unfamiliarity and perceived vulnerability elevate trust as an adoption barrier beyond what standard TAM captures.

3.2. Trust-Commitment Theory in Online Retail

Morgan and Hunt's (1994) Trust-Commitment Theory, adapted to online retail contexts by Gefen et al. (2003), frames consumer trust as the antecedent of commitment to an e-commerce platform and, through commitment, as a predictor of repeat purchase and loyalty. The review documents 28 articles employing trust-based theoretical frameworks, with online trust consistently identified as a stronger predictor of purchase intention in high-risk product categories (financial services, healthcare, luxury goods) than in low-risk categories (digital media, consumer electronics). Trust sources are multi-dimensional in the contemporary e-commerce context, spanning institutional trust in the platform, interpersonal trust in seller reputation, cognitive trust derived from information quality, and affective trust derived from user experience design.

3.3. Stimulus-Organism-Response Framework

The Stimulus-Organism-Response (S-O-R) framework (Mehrabian & Russell, 1974) has gained prominence in e-commerce research from 2018 onward, particularly in the context of website atmospherics, social commerce, and live-stream shopping. The S-O-R framework conceptualizes e-commerce environments as stimulus configurations (website design, product presentation, social cues) that evoke internal organism states (emotions, cognitive appraisals, trust) that in turn produce behavioural responses (purchase, engagement, loyalty). The framework's flexibility in accommodating diverse stimulus categories has made it particularly useful for studying the hedonic and experiential dimensions of online shopping that TAM's utilitarian orientation underweights.

IV. ANTECEDENTS OF E-COMMERCE ADOPTION

4.1. Perceived Usefulness and Ease of Use

Perceived usefulness and perceived ease of use remain the most consistently significant predictors of e-commerce adoption intention across the review corpus. Meta-analytic evidence from Dwivedi et al. (2017) confirmed effect sizes of r = 0.51 for PU-intention and r = 0.44 for PEOU-intention across 87 TAM studies. However, the review period reveals a notable moderation pattern: PU effect sizes are larger for utilitarian shopping contexts (grocery, household supplies) while PEOU effect sizes are larger for hedonic shopping contexts (fashion, entertainment), suggesting that the relative salience of functional versus experiential value drivers varies systematically by product category.

4.2. Online Trust

Online trust is identified as the second most consistently significant predictor of e-commerce adoption and purchase intention, with meta-analytic effect sizes ranging from r = 0.45 to r = 0.62 depending on the operationalization and context (Kim et al., 2019). The antecedents of online trust documented in the review period include website quality and design professionalism, security signals (SSL certificates, payment security badges), privacy policy transparency, seller reputation and review volume, social proof through user-generated content, and third-party certification. A significant finding emerging from the post-2018 literature is the differential trust formation process across age cohorts: younger consumers (Generation Z) place greater weight on social proof and peer reviews, while older consumers weight institutional signals and brand reputation more heavily (Lissitsa & Kol, 2016).

4.3. Perceived Risk

Perceived risk, encompassing financial, product performance, privacy, and psychological risk dimensions, is consistently negatively associated with purchase intention, with effect sizes of r = -0.38 to r = -0.52 in the review corpus. Financial risk and privacy risk are the most salient dimensions in mobile commerce contexts, while product performance risk is most prominent in clothing and footwear e-commerce where tactile evaluation is precluded. The review documents a positive moderation by trust: higher online trust significantly attenuates the negative effect of perceived risk on purchase intention, confirming the trust-risk relationship as a central dynamic in e-commerce consumer psychology.

4.4. Social Influence and Social Commerce

Social influence, operating through subjective norms, peer recommendations, and social media engagement, has increased substantially in explanatory importance over the review period, reflecting the rise of social commerce platforms. User-generated reviews, influencer endorsements, and social sharing signals constitute ambient social influence stimuli that shape product evaluations and purchase decisions in ways that traditional retail environments cannot replicate. Hajli (2015) demonstrated that social commerce constructs including ratings and reviews, recommendations, and referrals independently predict purchase intention beyond TAM constructs, establishing social influence as a theoretically distinct adoption driver in socially mediated shopping environments.

V. CONSUMER TRUST IN E-COMMERCE

5.1. Trust Formation Processes

The review identifies three theoretically distinct trust formation processes in e-commerce contexts. Cognitive trust formation is driven by competence and reliability signals including website quality, fulfillment track record, and review ratings. Affective trust formation is driven by emotional resonance with brand identity, personalization experiences, and customer service interactions. Institutional trust formation is driven by regulatory compliance signals, industry certification, and payment security infrastructure. The relative weight of these processes varies by product category, consumer experience level with e-commerce, and cultural context.

5.2. Trust Repair Following Service Failures

An emerging sub-literature examines trust repair following e-commerce service failures (delayed delivery, product mismatch, fraud exposure). The review documents 11 articles specifically addressing trust recovery, with consistent evidence that the speed, proactivity, and generosity of service recovery responses are the primary determinants of trust restoration. Platform-level trust is more resilient to seller-specific service failures than seller-specific trust, suggesting that platform brand equity serves as a trust buffer for marketplace models such as Amazon and Alibaba.

VI. BEHAVIOURAL OUTCOMES

6.1. Purchase Intention and Actual Purchase Behaviour

The intention-behaviour gap is a persistent methodological challenge in e-commerce research. The review documents a consistent discrepancy between stated purchase intention (measured in survey studies) and actual purchase conversion (measured in transaction data), with intention-behaviour correlations of r = 0.38 to r = 0.54 in studies employing both measures. Cart abandonment rates of 65% to 80% in retail e-commerce reflect the practical significance of this gap and have motivated research on the situational factors, cognitive biases, and platform design features that convert intention into completed transactions.

6.2. Customer Loyalty and Repeat Purchase

Customer loyalty in e-commerce is significantly lower than in physical retail, reflecting lower switching costs and higher competitive visibility. The review documents that satisfaction, trust, and perceived value are the primary predictors of repeat purchase intention, while price sensitivity and variety-seeking are the primary inhibitors. Personalization emerges as a significant loyalty driver in the post-2019 literature, with algorithmic recommendation accuracy positively associated with repurchase intention and platform stickiness.

VII. EMERGING THEMES AND FUTURE RESEARCH

7.1. Artificial Intelligence and Personalization

AI-driven personalization in e-commerce, encompassing recommendation engines, dynamic pricing, chatbot customer service, and predictive inventory management, has emerged as a major research theme from 2020 onward. The review identifies 18 articles addressing AI applications in e-commerce, with evidence that personalization improves purchase conversion rates but also raises privacy concerns that can undermine the trust foundations of the consumer-platform relationship. Future research should investigate the personalization-privacy paradox and the conditions under which consumers accept AI-driven personalization as a value-adding service versus a surveillance intrusion.

7.2. Live-Stream Commerce and Social Shopping

Live-stream commerce, combining real-time video broadcasting with integrated purchase functionality, has emerged as a dominant e-commerce format in East Asia and is expanding globally. The review identifies 14 articles examining live-stream commerce, predominantly from Chinese contexts, with evidence that streamer credibility, interactivity, and scarcity signals are the primary purchase drivers. The transferability of Chinese live-stream commerce consumer behaviour patterns to Western markets, where regulatory and cultural contexts differ substantially, represents a high-priority research gap.

7.3. Sustainable E-Commerce

Consumer concern about the environmental footprint of e-commerce, encompassing packaging waste, last-mile delivery emissions, and product return logistics, has emerged as a nascent research theme from 2021 onward. The review identifies only 8 articles addressing sustainability in e-commerce consumer behaviour, suggesting significant underexploration relative to the practical significance of the topic. Future research should examine how sustainability disclosures, green delivery options, and circular economy features on e-commerce platforms influence purchase decisions and platform loyalty across consumer segments.

VIII. CONCLUSION

This review has synthesized a decade of e-commerce consumer behaviour research, documenting the evolution of theoretical frameworks, empirical evidence on adoption antecedents, and the central mediating role of trust in shaping purchase outcomes. The literature has made substantial cumulative progress in identifying the psychological, technological, and social determinants of e-commerce engagement, while the emergence of mobile commerce, social commerce, and AI-driven personalization has opened new theoretical and empirical frontiers that existing frameworks only partially address.

The review's central contribution is a structured synthesis that identifies perceived usefulness, online trust, social influence, and perceived risk as the most robustly documented adoption antecedents, while flagging the intention-behaviour gap, AI personalization, live-stream commerce, and sustainable e-commerce as priority areas for the next phase of scholarship. As e-commerce continues to penetrate new markets, age groups, and product categories, the theoretical and empirical foundations synthesized in this review will require continuous extension and refinement.

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