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ONLINE SHOPPING CART ABANDONMENT: A COMPREHENSIVE REVIEW OF DETERMINANTS, CONSUMER PROCESSES AND FUTURE RESEARCH DIRECTIONS

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ABSTRACT

Online shopping cart abandonment (OSCA) has emerged as a significant challenge for e-commerce retailers, as consumers increasingly add products to their carts but discontinue the purchase before completing the transaction. Although a considerable body of research has examined this behaviour, the existing literature remains fragmented across economic, technological, psychological, product-related and situational explanations. This review combines these perspectives to provide an in-depth understanding of the determinants of online shopping cart abandonment. The paper reviews the main drivers of OSCA research from more than 40 research articles including seminal empirical research, systematic reviews and recent meta-analytic research articles. The review indicates that transaction inconvenience, perceived risk, price and perceived cost, website usability, information overload, consumer confusion, trust, psychological conflict, product characteristics, mobile shopping conditions and situational factors are all contributors to abandonment, but that the extent of the influence of these factors varies among consumers and shopping contexts. Recent research also shows that abandonment is not always a failed purchase as consumers may intentionally hold off on purchasing, compare options, wait for better prices or use carts as temporary storage. Based on the synthesis, an integrated conceptual framework is proposed that links the digital and retail stimuli with consumer evaluations, psychological states, and purchase decisions, while acknowledging the moderating effect of individual and situational factors. The review closes with highlighting important areas for future work, in particular, related to behavioral data, cross-cultural contexts, Gen Z consumers, AI, sustainable consumption and strategic postponement vs. genuine abandonment.

KEYWORDS: Online Shopping Cart Abandonment; Perceived Risk; Consumer Confusion; Purchase Hesitation; E-commerce Consumer Behaviour

1. INTRODUCTION

Online shopping cart abandonment (OSCA) has become one of the most enduring and theoretically

interesting issues in electronic retailing. Consumers can browse for products, compare alternatives, read reviews, add products to a cart, and even reach the checkout stage but opt not to complete the purchase. This behaviour results in a visible gap between expressed interest to purchase and actual transaction completion. It is not as simple as a failure of conversion. According to Kukar-Kinney and Close (2010), consumers use online shopping carts for various reasons, such as organising alternatives, storing products, and delaying a decision. So an abandoned cart can be a sign that the customer is unsure, comparing options, waiting strategically, put off or has genuinely decided not to buy. Research gradually evolved from early explanations based on perceived risk, waiting time and transaction inconvenience to consumer confusion, cognitive conflict, mobile shopping, retargeting, clickstream prediction, social commerce and contextual heterogeneity. This movement is reinforced by recent systematic reviews and meta-analyses. Wang, Cheah and Lim (2023) reviewed 52 research articles systematically on online shopping cart abandonment. Chopra et al. (2024) reviewed the electronic shopping cart abandonment literature. Jain et al. (2026) conducted a meta-analysis of 72 studies within a cognitive-affective-conative framework and Wang and Zhang (2026) aggregated 153 effect sizes from 60 independent studies published in 49 empirical articles to explore the contextual heterogeneity of perceived risk in shopping cart abandonment. The present review is structured following the logic of a broad review-paper, organised around the concept and evolution of OSCA, review of major studies, classification of determinants, foundations of theory, synthesis, an integrated conceptual framework, propositions, research gaps, managerial implications and conclusion.

1.1 Objectives of the Review

1. To trace the conceptual and empirical development of online shopping cart abandonment research.
2. To classify the major determinants of abandonment into meaningful conceptual groups.
3. To examine the evolution of OSCA research across desktop, mobile, social and increasingly AI-mediated environments.
4. To identify theoretical and methodological gaps in the area of Online Shopping Cart Abandonment.
5. To develop an integrated framework and future research agenda for Online Shopping Cart Abandonment behaviour of Consumer.

2. LITERATURE REVIEW

2.1 Concept and Nature of Online Shopping Cart Abandonment

Online shopping cart abandonment refers to a consumer adding one or more products to an electronic shopping cart but leaving the purchase process without completing the intended transaction. It is different from ordinary website exit because cart creation indicates a more advanced level of engagement. It is also different from checkout abandonment, item removal and deliberate cart storage. This distinction is important because the behavioural meaning of a cart varies across consumers and situations. Cho, Kang and Cheon (2006) positioned online shopping hesitation as an important

interruption in the purchase process. Rajamma, Paswan and Hossain (2009) then identified perceived transaction inconvenience, perceived risk and waiting time as important explanations. Kukar-Kinney and Close (2010) broadened the perspective by demonstrating that cart use itself has several motivations. The field therefore developed from a conversion-oriented view toward a consumer-decision-process view.

2.2 Evolution of OSCA Research

The following table provides a brief overview of how research on e-commerce shopping cart abandonment has developed over time. It shows how the focus of researchers has gradually moved from basic behavioural explanations, such as hesitation, perceived risk, and transaction inconvenience, towards more complex psychological, technological, and contextual explanations. The progression also reflects the growing importance of mobile commerce, data-driven prediction, consumer interventions, and differences across consumer groups. Thus, the table helps place the present study within the broader development of research on shopping cart abandonment and highlights the changing directions of scholarly attention over the years.

Table 1: Evolution of Research on Online Shopping Cart Abandonment: Major Research Orientations and Developments (2006–2026)

Period	Dominant research orientation	Representative studies	Key development
2006–2010	Foundational behavioural explanations	Cho et al. (2006); Rajamma et al. (2009); Kukar-Kinney & Close (2010)	Hesitation, risk, waiting time and transaction inconvenience
2011–2015	Decision and uncertainty perspectives	Katawetawarakas & Wang (2011); Kim et al. (2012); Xu & Huang (2015)	Price, trust, information and purchase-process factors
2016–2020	Psychological, product and mobile expansion	Tan et al. (2016); Garaus (2018); Huang et al. (2018); Song (2019); Luo et al. (2019)	Confusion, mobile hesitation, product category and recovery interventions
2021–2023	Data, interventions and systematic synthesis	Kapoor & Vij (2021); Li et al. (2021); Kukar-Kinney et al. (2022);	Mobile commerce, retargeting, clickstream, ML

		Rausch et al. (2022); Wang et al. (2023)	prediction and SLRs
2024–2026	Meta-analysis and contextual heterogeneity	Chopra et al. (2024); Jain et al. (2026); Wang & Zhang (2026); Neha et al. (2026); Wolny et al. (2026)	Confusion, cognition- affect-conation, risk heterogeneity, Gen Z and sustainability

2.3 Review of Major Studies on Online Shopping Cart Abandonment

Table 2 presents a broad synthesis of the literature. The review deliberately includes direct OSCA studies, systematic reviews and closely related online-consumer-behaviour studies where the findings explain an important mechanism in the abandonment process.

Table 2: Summary of Previous Research on Online Shopping Cart Abandonment

Study	Main focus	Key finding	Contribution to OSCA literature
Cho et al. (2006)	Online shopping hesitation	Hesitation can interrupt the online purchase process.	Provides an early behavioural foundation for understanding abandonment.
Rajamma et al. (2009)	Transaction inconvenience; risk; waiting time	Transaction inconvenience was particularly important.	Established checkout friction as a core OSCA determinant.
Kukar-Kinney & Close (2010)	Cart abandonment determinants	Cart use has multiple motives beyond immediate purchase.	Warns against treating every abandoned cart as a failed sale.
Close & Kukar-Kinney (2010)	Motives for cart use	Consumers use carts for storage, organization and future consideration.	Explains intentional or temporary cart holding.
Katawetawaraks & Wang (2011)	Online shopping decision factors	Convenience, information and perceived benefits shape decisions.	Supports a multi-factor decision perspective.
Kim et al. (2012)	Price and trust	Consumers balance economic	Shows that low price cannot fully

		attractiveness against seller confidence.	compensate for weak trust.
See-To et al. (2014)	Payment-method preference	Payment preferences differ across consumers and income levels.	Highlights payment as a late-stage conversion issue.
Shukla (2014)	Organizational efforts	Retailer actions influence consumer concerns online.	Shows that firms can reduce uncertainty through service efforts.
Xu & Huang (2015)	Cart abandonment factors	Multiple purchase-process factors influence abandonment.	Reinforces the multi-dimensional nature of OSCA.
Lee & Lin (2005)	E-service quality	Perceived service quality affects online shopping evaluations.	Provides the service-quality foundation for website-related explanations.
Tan et al. (2016)	Electronic service failure	Service failures can weaken consumer responses.	Connects technical/service problems with transaction interruption.
Polites et al. (2018)	Intention-behaviour misalignment	Intentions do not always translate into website behaviour.	Explains why high interest may still end in non-completion.
Garaus (2018)	Consumer confusion	Complexity and excessive information can create confusion.	Supports confusion as a psychological mechanism of abandonment.
Huang et al. (2018)	Mobile cart abandonment	Conflict, ambivalence and hesitation are important in mobile contexts.	Shows that mobile abandonment requires specific treatment.
Tang & Lin (2019)	Uncertainty reduction	Information can reduce uncertainty in C2C shopping.	Emphasizes credible information and uncertainty reduction.
Song (2019)	Product category	Abandonment varies	Shows that product

		across product categories.	characteristics condition OSCA.
Luo et al. (2019)	Cart targeting	Scarcity and price incentives have context-dependent effects.	Shows that recovery interventions depend on timing and conditions.
Kwon et al. (2020)	Personalization	Personalization changes consumer responses to e-commerce stimuli.	Shows both opportunity and possible surveillance concerns.
Rubin et al. (2020)	Consumer mindset	Mindset influences cart behaviour.	Supports a psychological rather than purely technical explanation.
Wang & Bae (2020)	Free shipping and information	Information interaction can shape responses to shipping offers.	Shows that shipping policies influence perceived value.
Jiang et al. (2021)	Cart item sorting	Item arrangement can influence abandonment.	Demonstrates the importance of micro-level interface design.
Kapoor & Vij (2021)	Mobile cart-checkout abandonment	Mobile-specific conditions shape checkout abandonment.	Strengthens the mobile-commerce research stream.
Li et al. (2021)	Cart retargeting	Retargeting can have positive and negative effects depending on timing.	Shows that recovery can backfire if used too early.
Mir (2021)	Self-escapism and cart use	Online shopping may fulfil emotional or escapist motives.	Shows that cart use is not always purely utilitarian.
Mishra et al. (2021)	Value consciousness and cognitive conflict	Cognitive conflict changes the effect of value consciousness.	Explains hesitation through competing evaluations.
Padigela & Suguna (2021)	Segmentation and pricing	User segments differ in abandonment and price response.	Supports customer-level prediction and intervention.

Wang et al. (2021)	In-store preference	Some consumers prefer physical stores despite online availability.	Highlights experiential and sensory advantages of offline shopping.
Yeh & Kuo (2019)	Post-abandonment advocacy	Messages after abandonment can influence subsequent responses.	Extends research to post-abandonment recovery.
Zhao et al. (2021)	Cart warning pop-ups	Warning messages can polarize liking and purchase intention.	Shows that prevention interventions may themselves create resistance.
Wang et al. (2022)	Fear appeal	Contextual emotions can alter abandonment decisions.	Demonstrates situational and emotional effects.
Khan et al. (2022)	Social commerce advertising avoidance	Several unfavourable conditions can combine to produce abandonment.	Shows configurational rather than purely additive causation.
Kukar-Kinney et al. (2022)	Clickstream evidence	Actual e-tail behaviour can predict abandonment.	Moves OSCA research toward behavioural data.
Rausch & Brand (2022)	New vs existing customers	Customer relationship stage changes abandonment behaviour.	Shows the importance of prior retailer experience.
Rausch et al. (2022)	Machine learning	ML can predict likely cart abandonment.	Opens an operational prediction stream.
Mittal (2022)	Measurement and critique	Measurement inconsistencies can weaken OSCA research.	Calls for clearer conceptualization and scales.
Wang et al. (2023)	Systematic review	52 studies reveal concentration around S-O-R and buyer behaviour.	Provides a major synthesis and research agenda.
Chopra et al. (2024)	Systematic review	49 high-quality articles emphasize customer	Integrates research and organizational

		and website antecedents.	dimensions.
Akhtar et al. (2024)	Psychological distress	Internal psychological states can contribute to abandonment.	Extends OSCA beyond conventional risk and price variables.
Roy, R., & Shaikh, A. (2024)	Online review confusion	Overload, similarity and ambiguity confusion can affect OSCA through perceived risk.	Adds a nuanced information-processing mechanism.
Jain et al. (2026)	Meta-analysis; cognition-affect-conation	Cognitive evaluations, risk, cost and inconvenience jointly explain OSCA.	Provides strong evidence for a process-based model.
Wang & Zhang (2026)	Meta-analysis; perceived risk	Risk positively relates to OSCA, but effects vary by context.	Establishes contextual heterogeneity in risk effects.
Changani, S., Sahu, S., & Kumar, R. (2026)	Choice and information overload	Overload increases confusion, which increases OSCA.	Important evidence from the Indian e-commerce context.
Neha et al. (2026)	Gen Z and psychological ownership	Cart-based psychological ownership offers a new explanation.	Introduces an emerging consumer-psychology mechanism.
Wolny et al. (2026)	Sustainable consumption	Risk, cost and inconvenience operate differently among young e-consumers.	Adds sustainability and generational context.

3. Factors Influencing Online Shopping Cart Abandonment

Online shopping cart abandonment is influenced by a combination of consumer motivations, perceptions, and decision-related factors. Understanding these factors helps explain why consumers may hesitate, delay, or ultimately leave their carts without completing the purchase. Following are the main factors that influence online shopping cart abandonment behaviour of a consumer:

3.1 Economic and Transaction-Related Factors: Price is important, but the literature suggests that consumers evaluate the total sacrifice associated with a transaction rather than the product price alone.

Shipping charges, taxes, payment fees, perceived cost and the possibility of a better future offer can all change perceived value. Rajamma et al. (2009) and recent meta-analytic evidence by Jain et al. (2026) support the importance of transaction-related barriers.

3.2 Website, Technology and Information Factors: Website design determines how much cognitive and behavioural effort consumers must invest. Poor navigation, unclear information, excessive steps and difficult mobile interfaces can turn interest into hesitation. Garaus (2018) and recent confusion research show that more information is not automatically better; information must be organized so that consumers can understand and compare alternatives.

3.3 Psychological and Consumer-Internal Factors: The psychological literature shows that consumers may be simultaneously attracted to a product and uncertain about purchasing it. Hesitation, ambivalence, cognitive conflict and confusion are therefore central mechanisms. The recent focus on psychological ownership among Gen Z is particularly promising because the cart may provide a feeling of temporary possession without creating a final commitment.

3.4 Product, Service and Situational Factors: Product category matters because consumers differ in their need to inspect, compare, touch or test products. Situational factors also change decisions. A consumer shopping for immediate need may behave differently from someone monitoring prices or collecting products for future purchase. Consequently, abandonment should be treated as context-dependent.

3.5 Social, Mobile and Emerging Digital Factors: Social commerce and mobile shopping have widened the decision environment. Consumers may move between social platforms, marketplaces and retailer websites before returning to the cart. Retargeting, reviews and social advertising can reduce uncertainty but can also create pressure or information overload. These developments make OSCA a cross-platform behavioural phenomenon rather than a website-only event.

Table 3: Major Studies on Factors Influencing Online Shopping Cart Abandonment

Factor category	Major variables	Representative studies	Overall interpretation
Economic/transaction	Price, perceived cost, shipping, payment, waiting time, transaction inconvenience	Rajamma et al. (2009); Kim et al. (2012); See-To et al. (2014); Jain et al. (2026)	Consumers abandon when total sacrifice becomes greater than perceived benefit.

Website/technology	Usability, navigation, information quality, service quality, personalization, mobile design	Lee & Lin (2005); Garaus (2018); Kwon et al. (2020); Kapoor & Vij (2021)	Digital friction and complexity can interrupt purchase completion.
Psychological	Hesitation, confusion, ambivalence, cognitive conflict, anxiety, psychological ownership	Cho et al. (2006); Huang et al. (2018); Mishra et al. (2021); Neha et al. (2026)	Internal states translate external stimuli into abandonment decisions.
Risk/trust	Financial, privacy, product, delivery, seller and transaction risk; trust	Rajamma et al. (2009); Tang & Lin (2019); Wang & Zhang (2026)	Uncertainty makes commitment more difficult.
Product/service	Product category, involvement, product information, availability, returns	Xu & Huang (2015); Song (2019); Gallino & Moreno (2014)	The nature of the product changes uncertainty and the need for evaluation.
Situational	Time pressure, shopping purpose, timing, future discounts, device, customer status	Luo et al. (2019); Li et al. (2021); Rausch & Brand (2022)	The same consumer can behave differently across shopping episodes.
Social/digital	Advertising avoidance, reviews, social influence, retargeting	Khan et al. (2022); review-confusion study (2024); Yeh & Kuo (2019)	Social information can reduce uncertainty or create overload/pressure.
Demographic/contextual	Age, income, culture, digital experience, sustainability orientation	See-To et al. (2014); Wang et al. (2023); Wolny et al. (2026)	Consumer and cultural characteristics moderate relationships.

4. THEORETICAL FOUNDATIONS

Theoretical foundations provide a framework for understanding why consumers may hesitate or discontinue an online purchase. The following table brings together major theories and perspectives used to explain shopping cart abandonment, covering behavioural responses, psychological conflict, perceived value, uncertainty, confusion, and the relationship between consumer evaluation and final

purchase behaviour.

Table 4: Theoretical Foundations for Understanding Online Shopping Cart Abandonment

Theory/perspective	Core idea	Application to OSCA	Key literature
Stimulus–Organism–Response (S-O-R)	External stimuli influence internal states, which generate behaviour.	Website, price, social and promotional stimuli affect risk, trust, confusion and hesitation, leading to completion or abandonment.	Wang et al. (2023); Kwon et al. (2020)
Cognitive dissonance/conflict	Competing cognitions create psychological tension.	Price comparisons, alternative products and uncertainty create conflict and postponement.	Mishra et al. (2021)
Theory of Planned Behaviour / reasoned action	Attitudes, norms and control shape behaviour.	Explains the gap between purchase intention and actual completion.	Polites et al. (2018)
Perceived value/sacrifice	Consumers compare benefits with monetary and non-monetary costs.	Transaction inconvenience and waiting time operate as perceived sacrifices.	Rajamma et al. (2009); Jain et al. (2026)
Uncertainty reduction	Consumers seek information to reduce uncertainty.	Reviews, seller information, policies and inventory information can support completion.	Tang & Lin (2019); Gallino & Moreno (2014)
Consumer confusion	Overload, similarity and ambiguity impair decisions.	Information/choice overload increases confusion and hesitation.	Garaus (2018); 2024/2026 confusion studies
Cognition–Affect–Conation	Cognitive evaluations influence affective states and conative	Website effectiveness, risk and cost can shape affective hesitation and	Jain et al. (2026)

	outcomes.	final abandonment.	
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5. SYNTHESIS OF LITERATURE AND RESEARCH GAPS

Across the literature, OSCA appears to be the result of an interaction rather than a single cause. Consumers enter the cart with some level of interest, but the final decision is shaped by what they learn, what they feel and what it costs them to proceed. This explains why the same website or promotion may produce purchase completion for one consumer and abandonment for another.

Table 5: Synthesis of Existing Research Gaps and Future Research Agenda

Synthesis dimension	What the literature shows	Remaining issue
Consumer	Risk, trust, value, confusion and psychological states matter.	Need better differentiation between genuine rejection and strategic postponement.
Website	Usability, information quality and service quality affect completion.	Need more experimental and field evidence on micro-design features.
Transaction	Cost, shipping, payment and inconvenience are repeatedly important.	Need total-cost and dynamic-price models.
Product	Category and involvement condition risk and uncertainty.	Need more comparative category studies.
Context	Device, purpose, timing and customer status change effects.	Need longitudinal and cross-context research.
Intervention	Retargeting, scarcity, incentives and warnings can recover or worsen abandonment.	Need ethical and consumer-welfare evaluation.
Data	Clickstream and ML improve prediction.	Need models that combine behavioural traces with psychological constructs.
Geography	Research is concentrated in a limited set of markets.	Need cross-cultural evidence, especially from emerging economies.

6. RESEARCH FRAMEWORK AND FUTURE RESEARCH

6.1 Integrated Conceptual Framework

Based on the reviewed literature, an integrated framework is proposed in which external digital and

retail stimuli influence consumer evaluations; these evaluations shape psychological states; psychological states influence the final decision; and situational and individual factors moderate the process.

Table 6: Conceptual Framework of Consumer Decision Processes Leading to Online Shopping Cart Abandonment

Stage	Constructs	Expected role
External stimuli	Price; website design; information; reviews; payment; delivery; personalization; advertising	Create convenience, value or friction.
Consumer evaluation	Trust; perceived risk; perceived value; perceived cost; product confidence; effort	Determines whether continuing the transaction is worthwhile.
Psychological state	Hesitation; confusion; ambivalence; cognitive conflict; anxiety; temporary ownership	Explains why intention may not become action.
Decision outcome	Complete purchase; postpone; remove items; abandon cart	Represents the observable behavioural response.
Moderators	Device; product category; shopping purpose; customer status; culture; age; income; sustainability orientation	Change the strength of relationships.

Conceptually, the framework can be read as: External stimuli → Consumer evaluation → Psychological state → Purchase decision, with situational and individual characteristics operating as moderators. This process-based approach accommodates the evidence that abandonment is dynamic and context-dependent

6.2 Research Propositions

P1: Greater perceived transaction inconvenience increases online shopping cart abandonment.

P2: Perceived risk increases OSCA, but the strength of the relationship varies by risk source, product category and shopping purpose.

P3: Relevant, credible and well-organized website information reduces OSCA by lowering uncertainty and hesitation.

P4: Consumer confusion mediates the relationship between choice/information overload and OSCA.

P5: Hesitation, ambivalence and cognitive conflict mediate the relationship between external shopping stimuli and abandonment.

P6: The effectiveness of retargeting, scarcity and price incentives depends on intervention timing and consumer context.

P7: Mobile shopping conditions strengthen the importance of usability, convenience and transaction friction.

P8: Prior online-shopping experience, demographic characteristics and culture moderate the effects of perceived barriers.

P9: Sustainability motives influence OSCA indirectly through perceptions of cost, risk and transaction inconvenience.

P10: Actual clickstream behaviour and self-reported abandonment intention represent complementary but non-identical dimensions of OSCA.

6.3 Future Research Agenda

The table 7 highlights key areas that can guide future research on online shopping cart abandonment. It identifies emerging issues and suggests suitable research approaches for developing a deeper understanding of consumer behaviour across technological, psychological, cultural, and sustainability contexts.

Table 7: Future Research Directions in Online Shopping Cart Abandonment

Future direction	Suggested research approach	Expected contribution
Strategic postponement vs genuine abandonment	Longitudinal tracking and post-session surveys	Improves conceptual precision.
Behavioural + psychological data	Merge clickstream logs with survey/experiment data	Connects actual behaviour with underlying mechanisms.
Cross-cultural OSCA	Multi-country comparative SEM/experiments	Tests universality and cultural contingency.
AI-mediated shopping	Experiments with AI assistants, recommendations and dynamic pricing	Explains new forms of digital persuasion and uncertainty reduction.
Gen Z	Segmented and longitudinal studies	Clarifies changing expectations and psychological ownership.
Sustainable e-commerce	Examine delivery, packaging, returns and ethical information	Extends OSCA into responsible consumption.
Ethical recovery	Test scarcity, retargeting and warning interventions for	Balances conversion with consumer protection.

	welfare and trust	
Product-category effects	Multi-category experiments	Identifies where risk and information matter most.

7. MANAGERIAL IMPLICATIONS

1. Less checkout friction such as Guest checkout, fewer fields, transparent charges and familiar payment methods.
2. Specific risk factors must be addressed such as safe payment methods, trustworthy reviews, clear return policies and transparent delivery.
3. Organize information, don't just dump it on people; use comparison tools and short product descriptions.
4. Test mobile checkout separately from desktop and treat it as a different experience.
5. Use cart abandonment interventions with caution. Timing, customer history and likely shopping purpose need to be considered in retargeting.
6. A high likelihood of abandonment doesn't mean dissatisfaction with predictive analytics and psychological insight.
7. Avoid manipulative scarcity and over aggressive tracking and high-pressure messaging. Use ethical design principles.

8. CONCLUSION

The literature demonstrates that online shopping cart abandonment is not a single-variable problem. It is a behavioural outcome created through the interaction of transaction conditions, digital interface characteristics, consumer evaluations, psychological states, product characteristics and situational context. Foundational studies identified inconvenience, waiting time and risk, while subsequent research added confusion, cognitive conflict, mobile behaviour, retargeting and behavioural prediction. The latest literature strengthens this process perspective. Recent systematic reviews and meta-analyses show that perceived risk, perceived cost and transaction inconvenience remain important, but their effects vary across contexts. Emerging work on consumer confusion, Gen Z, sustainability and AI-enabled shopping suggests that OSCA research is entering a new phase in which the meaning of the cart itself and the broader digital journey deserve greater attention. Future research should therefore move beyond the assumption that every abandoned cart is a lost sale. Some carts represent deliberate postponement, comparison or future planning. A more precise understanding of these behaviours will help researchers develop stronger theory and help retailers improve conversion without compromising consumer autonomy and trust.

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