

The Role of Information Quality in Amazon Online Purchase Intention: An S–O–R Approach

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Abstract

Amazon product detail pages present a paradox: abundant information coexists with persistently low purchase intention. This conceptual paper addresses why. Drawing on the Stimulus-Organism-Response (S-O-R) framework, it synthesizes existing literature on information quality, trust, and purchase intention. Competition on Amazon is severe, and customers rarely buy from new sellers with low trust. This study examines how information quality positively influences purchase intention through trust as a mediator. The recommendations link the dimensions of information quality—usefulness, completeness, clarity, conciseness, accuracy, and currency—to key Amazon product detail page elements, including product descriptions, bullet points, images, videos, and A+ Content. For sellers, information quality investments that fail to generate measurable trust produce no return. For researchers, empirical testing of full mediation will determine whether the framework survives falsification.

Keywords: Information Quality, Trust, Purchase Intention, S-O-R Framework, Amazon

Introduction

Online marketplaces eliminate the physical contacts that normally anchor customer trust. Buyers cannot inspect products, test functionality, or observe seller behavior before committing to a transaction. They depend entirely on digitally presented information—descriptions, specifications, images, and reviews. Amazon, as the world's largest online marketplace, hosts millions of third-party sellers listing billions of products (Bleier et al., 2019). No physical storefronts exist. No face-to-face seller interactions occur. Every purchase decision rests entirely on the quality of the Product Detail Page (PDP), including textual descriptions, bullet points, images, and videos. This dependence generates persistent information asymmetry between sellers and buyers, raises perceived transaction risk, and reduces purchase intention (Zhu et al., 2020).

Existing research has focused predominantly on how information quality affects purchase intention in contexts such as online reviews (Zhu et al., 2020), live streaming (Gao et al., 2021), social commerce (Molinillo et al., 2021). Amazon's Product Detail Page—one of the largest

and most influential e-commerce contexts—has received limited attention. Specifically, no study has examined how information quality on Amazon's PDP influences purchase intention through trust as a mediator within the S-O-R framework.

This conceptual paper addresses this gap with a parsimonious S-O-R framework specific to Amazon. Information quality serves as the stimulus. Trust functions as the sole organismic mediator. Purchase intention constitutes the response. While prior research has confirmed that information quality influences purchase intention through trust in online review contexts (Zhu et al., 2020), this paper extends that relationship to Amazon's PDP and grounds it within the S-O-R framework.

Theory Overview

Stimulus-Organism-Response (S-O-R) theory, introduced by Mehrabian and Russell (1974), explains how physical environmental cues affect behavior indirectly through an individual's internal psychological states. Stimuli (S) refer to environmental attributes such as information quality, brand, and promotion. The Organism (O) represents an individual's internal cognitive or affective states, including trust, perceived risk, or arousal. These states, in turn, generate behavioral responses (R) such as purchase intention or avoidance (Eroglu et al., 2001). Unlike basic stimulus-response models, S-O-R requires explanation of how and why an environmental feature produces a given behavior. For online retail, website characteristics influence consumer decisions only to the extent that they shape internal states such as trust (Eroglu et al., 2001). Applied to Amazon, the framework suggests that product information quality serves as the stimulus, trust operates as the organismic state, and purchase intention constitutes the response. This theoretical structure positions trust as the mechanism linking information quality to consumer behavioral outcomes (Thomas et al., 2018; Zhu et al., 2019).

Literature Review

The Stimulus (S): Information Quality

Information quality is foundational to information systems evaluation (DeLone & McLean, 1992). In e-commerce, website effectiveness depends not only on technical performance but on the quality of information presented. Liu & Arnett (2000) found information quality operates alongside system design as a driver of website success. Hsin Chang & Wen Chen (2008) emphasized key dimensions of information quality—usefulness, completeness, clarity, conciseness, accuracy, and currency—as essential for enabling effective consumer decisions.

On Amazon, physical interaction between buyers and sellers does not exist. Unlike traditional retail, where face-to-face interaction builds trust, Amazon transactions rely entirely on digitally mediated cues. This increases perceived risk—product uncertainty and payment security most acutely (Casaló et al., 2007). Trust requires willingness to accept vulnerability (Rousseau et al., 1998). Consumers depend on online information as a substitute for direct experience. High-quality product information—detailed descriptions, clear visuals, current content—signals reliability and reduces uncertainty.

Within S-O-R, information quality constitutes the stimulus (S) that activates internal psychological states. Hsin Chang & Wen Chen (2008) found website quality, including information quality, enhances consumer trust while reducing perceived risk, ultimately strengthening purchase intention. Usefulness, completeness, clarity, accuracy, and timeliness

collectively build consumer confidence. Zhao et al. (2020) extended this argument to social e-commerce, demonstrating information quality reduces psychological distance and increases purchase willingness. If information quality serves as the stimulus, trust operates as the mechanism translating that stimulus into behavioral outcomes.

The Mediating Role (O) of Trust

Trust reduces uncertainty and enables consumer participation in e-commerce. Where physical interaction is absent, consumers hesitate due to concerns about vendor opportunism and personal information misuse. McKnight et al. (2002) argue trust enables "trust-related behaviors"—sharing sensitive information, relying on vendor recommendations, and completing purchases. These behaviors are essential for e-commerce functioning.

Trust has been examined across disciplinary perspectives. Rotter (1971) conceptualized trust as a general tendency to rely on others. Mayer et al. (1995) proposed competence, benevolence, and integrity as core dimensions. Chang et al. (2013) define trust as willingness to accept vulnerability based on positive expectations of others' intentions. On Amazon, this definition is particularly relevant: consumers cannot verify seller claims before purchase.

Within S-O-R, trust represents the organism (O)—the internal state shaped by information quality stimuli. Gefen et al. (2003) demonstrate high-quality information and social presence cues significantly enhance consumer trust, which increases purchase intention. Hsin Chang & Wen Chen (2008) find trust not only directly influences purchase intention but mediates the relationship between website quality and consumer outcomes. Aljukhadar et al. (2010) show richer media formats (video, audio, interactive content) enhance perceived information richness, strengthening trust and encouraging purchase decisions. Trust is the pivotal mechanism translating online environmental cues into purchase behavior.

The Behavioral Responses (R): Purchase Intention

Purchase intention refers to a consumer's conscious plan or willingness to buy a product from an online platform (Spears & Singh, 2004). It represents the immediate antecedent of actual purchasing behavior. In e-commerce research, purchase intention is commonly operationalized through three dimensions: willingness to buy, likelihood of recommending to others, and intention to repurchase from the same seller or platform (Pavlou, 2003).

The relationship between trust and purchase intention is direct and unidirectional. Trust reduces perceived risk, increases willingness to share payment information, and encourages commitment to the transaction. Without trust, even high-quality information produces no purchase intention. With trust, purchase intention follows reliably. For new Amazon sellers with low reputation, this relationship is particularly consequential. These sellers lack accumulated trust signals such as high ratings or verified badges. Their only pathway to purchase intention is through information quality building trust, and trust then driving purchase intention. No shortcut exists.

Thus, within this framework, purchase intention functions as the terminal response (R). It is the behavioral outcome that information quality (S) ultimately produces, but only through the complete mediation of trust (O).

Discussion

This study is situated within Amazon's highly competitive marketplace, where consumers encounter multiple sellers offering similar products. In this environment, customers remain cautious toward new or unfamiliar sellers due to perceived risks related to product quality, delivery reliability, and after-sales service. Trust therefore becomes a critical precondition for purchase intention (Gefen & Straub, 2004; Ha et al., 2021; Miao et al., 2022).

The Stimulus-Organism-Response (S-O-R) framework explains this process. Information quality acts as the external stimulus (S), reflected in product descriptions, bullet points, A+ Content, images, and videos on Amazon listings. When information is incomplete or unclear, consumers face higher uncertainty and cannot properly evaluate the product or seller. This strengthens perceived risk—particularly for new sellers without established reputations (Ha et al., 2021). Uncertainty directly influences the internal psychological state, the organism (O), represented by trust. Without sufficient and accurate information, trust formation weakens because consumers cannot confidently assess product features, functions, benefits, usage, customer service, or warranty support.

High-quality, complete information reduces uncertainty (Zhu et al., 2020). Clear descriptions, structured bullet points, rich A+ Content, and visual demonstrations help consumers understand the product more fully. This clarity signals transparency and professionalism, which strengthens trust in both the product and the seller (Gefen et al., 2003). Once trust is established, it drives the final stage of the S-O-R model, the response (R): purchase intention. Trust thus functions as the key mechanism converting information quality into purchase intention.

This conceptual paper proposes that in Amazon's competitive context, information quality does not directly generate purchase intention. Rather, information quality reduces perceived risk, builds trust, and indirectly leads to purchase intention. For new sellers seeking customer acceptance, this mediated pathway is the only viable route to conversion. Trust is not one factor among many. It is the sole gateway.

Recommendations to the Organization

Based on the findings of this conceptual study, several practical recommendations are proposed for e-commerce organizations, particularly Amazon sellers and platform managers, to enhance online purchase intention. These recommendations are grounded in the S-O-R framework and highlight how improvements in information quality can strengthen consumer trust and ultimately influence purchasing behaviour. The following sections outline key actions across six dimensions of information quality to support more effective product page design and decision-making support.

Usefulness

Product information should be designed to directly support purchase decision-making rather than simply describing the product. Sellers should prioritise details that answer key consumer questions such as “Will this product solve my problem?” or “How does it compare to alternatives?”. For example, highlighting functional benefits, real usage scenarios, and compatibility with consumer needs increases perceived diagnostic value, which strengthens trust and ultimately purchase intention.

Completeness

Product listings should provide a full set of relevant information, including specifications, dimensions, materials, usage instructions, warranty details, and customer reviews. Incomplete listings create uncertainty and increase perceived risk, which weakens trust. Sellers should ensure that both technical details and experiential information (e.g., real user feedback, FAQs) are included to reduce information gaps in the decision-making process.

Clarity

Information must be presented in a structured and easy-to-understand format. Complex descriptions should be simplified using bullet points, headings, and visual segmentation. Ambiguous or overly technical language should be avoided or explained clearly. Clear communication reduces cognitive effort, allowing consumers to process information more efficiently and form quicker trust judgments.

Conciseness

While completeness is important, information should not be overwhelming. Redundant or repetitive content should be removed, and only decision-relevant details should be highlighted. Concise presentation improves readability and reduces information overload, which is particularly important in mobile shopping environments where attention spans are limited.

Accuracy

All product information must be factually correct and consistent across text, images, and specifications. Misleading claims, exaggerated descriptions, or inconsistencies between product images and actual features can severely damage consumer trust. Sellers should implement regular content audits and ensure alignment between marketing descriptions and actual product performance to maintain credibility.

Currency

Product information should be regularly updated to reflect changes such as price adjustments, stock availability, new features, or improved product versions. Outdated information can lead to negative purchase experiences and post-purchase dissatisfaction. Continuous updating of listings, especially reviews and promotional details, ensures that consumers make decisions based on the most current and relevant data.

Conclusion

This study examines the role of information quality in shaping online purchase intention on Amazon through the S–O–R framework. It argues that information quality does not directly drive purchase intention; instead, its effect operates through trust as the key mediating mechanism. In highly competitive marketplaces, especially for new sellers, consumers face significant uncertainty and perceived risk. Without complete, accurate, and clear product information, trust cannot be established, and purchase intention remains low. Conversely, high-quality information presented through product descriptions, bullet points, A+ content, images, and videos reduces uncertainty, strengthens trust, and facilitates purchase decisions. This paper contributes by clarifying the indirect relationship between information quality and purchase intention, positioning trust as the critical link between stimulus and response. It also highlights the strategic role of information quality in overcoming trust barriers in

competitive e-commerce environments. Overall, enhancing information quality is not merely a matter of improving content, but a fundamental approach to building trust and driving sales performance on platforms such as Amazon.

Contribution

This study contributes both theoretically and contextually to the understanding of online consumer behaviour in e-commerce environments. Theoretically, it extends the Stimulus–Organism–Response (S–O–R) framework by clarifying the mechanism through which information quality influences purchase intention. Rather than assuming a direct relationship, this study argues that information quality functions as an external stimulus that shapes consumers' internal psychological state through trust, which in turn drives purchase intention. By positioning trust as the key mediating mechanism, this paper provides a clearer explanation of how consumers process online product information before making purchase decisions.

This study also enriches the literature on information quality by integrating six key dimensions—usefulness, completeness, clarity, conciseness, accuracy, and currency—into a unified conceptual framework. These dimensions are linked to practical Amazon listing elements such as product descriptions, bullet points, images, videos, and A+ Content, offering a more structured understanding of how information quality can be applied in digital retail settings.

Contextually, this study contributes to the Amazon marketplace literature by addressing the challenges faced by new or unfamiliar sellers in highly competitive online environments. In such contexts, consumers often perceive higher levels of uncertainty and risk, making trust more difficult to establish. The findings highlight the strategic role of high-quality information in reducing perceived risk, building trust, and increasing purchase intention. Therefore, this study provides valuable insights for both researchers and practitioners seeking to understand and improve online sales performance in competitive e-commerce platforms

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