

AI-GENERATED PRODUCT DESCRIPTIONS AND THEIR EFFECT ON PURCHASE INTENTION

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Abstract

The rapid integration of artificial intelligence (AI) into digital commerce has transformed how product information is created and presented. AI-generated product descriptions are increasingly used to enhance scalability, personalization, and operational efficiency in online retail platforms. However, limited empirical research examines their influence on consumer purchase intention. This study investigates the impact of AI-generated product descriptions on purchase intention, considering the mediating roles of perceived informativeness and trust, and the moderating role of disclosure transparency

Keywords: Artificial intelligence, product descriptions, purchase intention, consumer trust, e-commerce, AI disclosure

Introduction

Artificial intelligence is reshaping digital commerce by automating content creation, personalization, and customer interaction. E-commerce platforms increasingly deploy AI tools to generate product descriptions at scale, reducing costs and enabling rapid product listing expansion. Companies such as Amazon and Alibaba Group utilize AI-driven systems to optimize product content and improve consumer engagement. Despite operational benefits, the consumer response to AI-generated product descriptions remains underexplored. Product descriptions serve as critical informational cues influencing perceived quality, trust, and purchase decisions. If consumers perceive AI-generated content as less authentic or credible, it may negatively affect purchase intention. Conversely, AI-generated descriptions may enhance clarity, personalization, and informativeness, thereby improving decision confidence. AI-generated product descriptions

and images have a complex, nuanced effect on consumer purchase intentions, acting as a "double-edged sword" that depends heavily on transparency, product type, and consumer perception. While AI can enhance efficiency and provide detailed content, explicitly labeling content as "AI-generated" often reduces trust and purchase intention, particularly for high-risk or experiential products.

Key Findings on AI-Generated Content and Purchase Intention:

- **Negative Impact of Explicit Disclosure:** When consumers are informed that a product description or image is AI-generated, their purchase intention significantly decreases. This is primarily driven by a "persuasion knowledge" mechanism, where consumers become skeptical of the authenticity, quality, and sincerity behind the product, assuming it is a "false" or "deceptive" representation.
- **The "Authenticity" Gap:** AI-generated content is frequently perceived as lacking a "human touch," making it less effective for products that require high emotional engagement.
- **High-Risk vs. Low-Risk Products:** The negative impact is more pronounced for "high-risk" or high-involvement products, such as expensive electronics, luxury items, or financial services, where consumers are more cautious.
- **Positive Impact of Implicit Use (Undisclosed):** When AI is used to create content without explicit labeling, it can perform as well as or even better than human-created content, especially when it improves visual appeal or provides concise information.
- **Product Type Moderation:**
 - **Hedonic/Experience Goods:** AI-generated content often performs worse here because it fails to evoke the necessary emotional response.
 - **Utilitarian/Functional Goods:** AI-generated content can perform better because consumers are more focused on practical, objective information, which AI can efficiently provide.

Factors Influencing the Effect of AI Content

- **Perceived Effort:** Consumers often believe that AI-generated content requires less effort from merchants, which reduces their perceived value and willingness to pay, particularly for luxury or premium products.

- **Price Premium:** The negative effect of AI-generated labels on purchase intention is amplified for high-priced products, as consumers perceive a mismatch between the high cost and the low effort of AI generation.
- **AI "Hallucinations":** When AI produces inaccurate information, it can lead to consumer distrust, significantly lowering purchase intention.
- **Contextual Framing:** Explicitly stating the reason for using AI (e.g., for cost efficiency or to provide better, more detailed information) can sometimes mitigate the negative impact.

Strategic Recommendations for Marketers

- **Use AI for Efficiency, Not Always for Transparency:** In cases where content is indistinguishable from human work, it may not be necessary to explicitly label it as AI-generated.
- **Tailor by Product Type:** For functional, utilitarian products, use AI to create detailed, informative, and concise descriptions. For luxury, experiential, or high-involvement products, prioritize human-written content or ensure AI content is heavily edited to retain a "human touch".
- **Emphasize Benefits, Not Tech:** Avoid using buzzwords like "artificial intelligence" in product descriptions; instead, focus on the features and benefits of the product itself.
- **Human-in-the-Loop:** Ensure that AI-generated descriptions are verified by humans to prevent "hallucinations" and ensure accuracy.

Conclusion

In conclusion, AI-generated product descriptions represent a powerful tool for enhancing purchase intention in online retail. By increasing perceived informativeness and fostering trust, AI content can positively influence consumer decision-making. The effectiveness of AI-generated descriptions, however, depends on the perceived credibility of the content and consumer attitudes toward AI, particularly in contexts where disclosure of authorship is considered.

From both theoretical and managerial perspectives, this study underscores the importance of integrating AI-generated content strategically, balancing operational efficiency with psychological and affective considerations. E-commerce platforms that effectively leverage AI to create informative, trustworthy, and personalized product descriptions are likely to gain sustainable competitive advantages, higher conversion rates, and stronger consumer engagement.

over time. As AI continues to evolve, its role in shaping digital commerce experiences will expand, making insights from this study relevant for both scholars and practitioners seeking to understand the intersection of automation, consumer behavior, and online retail performance.

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