

EXPLORING SENSORY MARKETING: THE IMPACT OF VISUAL STIMULI ON ONLINE PURCHASE INTENTIONS

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Abstract

This study investigates the critical role of visual imagery in influencing consumer purchase intentions within the online shopping environment. While extensive research has been conducted on online purchasing behaviors, comprehending how visual stimuli within sensory marketing frameworks specifically affect these intentions is needed. By reviewing existing literature, this research aims to bridge the gap by employing the Stimulus-Organism-Response (SOR) model and mental imagery theory to develop a theoretical framework for analyzing the impact of visual stimuli on purchase intentions across various digital contexts.

Keywords: visual stimuli, sensory marketing, online purchase intention, SOR model.

Introduction

Relevance of the topic. Consumers' perceptions of products are significantly shaped by their sensory experiences, which play a crucial role in decision-making. As Goel et al. (2023) state, sensory marketing is recognized as an essential approach to enhance a brand's engagement with customers by appealing to all their senses and eliciting emotional responses (Haase & Wiedmann, 2018; Kim et al., 2021). Images provide detailed information about the product's features and serve as inspirational cues about the overall customer experience. Consequently, the strategic use of product images has become a critical aspect of e-commerce marketing, significantly impacting consumer behavior.

In recent years, the rapid expansion of online shopping has significantly transformed the retail landscape. According to Eurostat (2023), 70% of EU citizens aged 16-74 purchased or ordered goods or services online in 2023, reflecting a two percentage point increase compared to 2022. As 92% of individuals in this age group used the internet within the last 12 months, competition among online retailers to attract and retain customers has intensified. Thus, in the context of online shopping, product images are the primary means by which consumers can visually evaluate a product before making a purchase decision (Chaudhuri et al., 2018). The visual presentation of products is pivotal in influencing consumer perception and purchasing behavior. High-quality product images can significantly enhance the online shopping experience by offering precise and detailed visual information. Visual imagery, in turn, helps alleviate the uncertainty consumers often face when purchasing online. Li et al. (2014) noted that various factors shape customers' online shopping behavior, with product images as a crucial information source. As a result, these visual stimuli enable consumers to comprehend the product's features better, impacting their confidence and propensity to purchase.

Li et al. (2014) have categorized product images into four visual stimuli: informational, emotional, aesthetic, and social. Each of these elements uniquely contributes to the consumer's decision-making process. Informative images help consumers better understand product features, emotionally appealing images evoke feelings that can drive purchasing decisions, aesthetically pleasing images capture attention and enhance desirability, and images conveying social presence can foster a sense of connection and trust with the consumer. Online retailers should strive to provide high-quality product images that are clear, well-illuminated, and accurately depict the item's features. It can help cultivate consumer confidence and drive sales performance.

Research by Ryu & Ryu (2021) examines how visual appeals in online shopping environments impact consumer responses, emphasizing the significance of excitement and fluency. Likewise, a study by Smith et al. (2010) evaluates virtual model technology to enhance the online shopping experience, further highlighting the critical role of visual presentation. An EEG-based (electroencephalography) investigation by Wang et al. (2021) provides empirical evidence on how dynamic visual elements in

product images can increase consumer engagement and purchase intention. Additionally, Li et al. (2014) empirically examined the influence of product photos on online consumers' purchase intent, utilizing image-processing techniques to analyze consumer reactions. Two experimental findings by Liu et al. (2022) indicate that food images with high color saturation can effectively enhance consumers' purchase intention. Furthermore, the impact of color saturation is influenced by visual proximity and consumption context. The advantage of high color saturation diminishes when a food item appears visually close or when social consumption is anticipated. Serial mediation analyses suggest heightened perceptions of freshness and tastiness drive the color saturation effect. Elder & Krishna (2022) analyze and structure a conceptual framework that examines the formation of mental imagery, the processes of elicitation and elaboration of mental imagery, the multi-modal aspects of sensory imagery, and the implications for consumer behavior.

Research problem. Despite extensive research on online purchasing, a gap remains in understanding how visual stimuli within sensory marketing frameworks influence consumer purchase intentions. This research, with its comprehensive approach of leveraging the Stimulus-Organism-Response (SOR) model and mental imagery theory, aims to address this gap and provide a thorough framework for examining the influence of visual stimuli on online purchase intentions across varied digital contexts.

The subject matter of the research – this research explores visual imagery's role within sensory marketing's framework of purchase intention in online shopping environments. The study investigates how product visuals evoke sensory experiences that guide consumer decisions in digital marketplaces.

Research aim – to analyze the impact of visual stimuli on purchase intention in online shopping environments. This study will leverage mental imagery and the Stimulus-Organism-Response model (SOR model) theory to provide a theoretical framework.

Research objectives:

1. To systematically identify and synthesize existing literature on the role of visual stimuli in influencing online purchase intention.
2. To uncover the sensory characteristics of compelling product imagery that enhance consumer engagement and improve conversion rates in e-commerce.
3. To propose an adjusted theoretical framework that integrates the SOR (Stimulus-Organism-Response) model and mental imagery theories, highlighting the relationship between visual imagery and online purchase intentions. This framework will not only contribute to academic knowledge but also provide practical insights for marketers and e-commerce professionals.

Research methods: this systematic literature review explores the current understanding of how visual imagery influences online purchase intention. Guided by the theoretical frameworks of mental imagery theory and the SOR model, the research presents an adjusted theoretical framework that illustrates the influence of visual imagery on online purchase intention in the context of sensory marketing.

1. Sensory Marketing

Krishna, A. (2012) defines sensory marketing as “*marketing that engages the consumers' senses and affects their perception, judgment and behavior.*” In other words, sensory marketing is a conceptual approach that seeks to engage one or more of the five human senses: sight, smell, sound, touch, and taste. Managers can leverage sensory marketing strategies to shape consumers' subconscious perceptions and associations with abstract product attributes (Krishna, 2012).

Although sensory marketing is a crucial strategy for product merchandising, empirical research on the relationship between sensory elements and their impact on consumer perception and behavior remains to be limited. This lack of in-depth understanding makes it challenging for retailers to integrate various sensory elements into their marketing approach effectively (Lyu & Huang, 2024). As online consumers cannot directly interact with merchandise, product images are a primary proxy for the tactile experience, significantly impacting their purchase intent. The effectiveness of product imagery in driving purchase behavior is multifaceted, involving psychological, emotional, and perceptual factors. According to Cheng et al. (2022), major e-commerce platforms and online retailers have concentrated

on optimizing product presentation to communicate product details to consumers more effectively. Currently, online merchants are augmenting traditional image-based product displays on e-commerce homepages with an increasing use of video content.

2. The Role of Visual Stimuli on Online Purchase Intention

In today's information-rich and visually driven landscape, visuals have become crucial mediums for communication and social influence. This evolution has facilitated a transition from reliance on verbal and text-based messages toward the increasing prominence of visual imagery, echoing the adage that "a picture conveys more than a thousand words." Studies have shown that visual perception accounts for approximately 80% of information individuals gather about their environment. Additionally, nearly 80% of human memory is comprised of visual recollections. Consequently, designers, marketers, retailers, and producers across various industries actively leverage visuals when advertising and promoting their products and services (Szulc & Musielak, 2023).

According to Cheng et al. (2022), consumers cannot directly experience products when shopping online, leading to heightened perceptions of uncertainty and risk. If consumers cannot obtain sufficient and necessary product information, they may be reluctant to make a purchase. Consequently, online retailers must design and manage product presentations to address this challenge effectively. Oktriana (2019) also suggests that sight positively impacts consumers' intentions to repurchase. Furthermore, the sense of sight can stimulate emotional reactions to products and other stimuli and capture consumers' attention (Han et al., 2024).

Emotional Engagement. Emotional engagement is a crucial component of product imagery. Images that elicit positive emotions can heighten a product's perceived appeal. For example, research by Ryu & Ryu (2021) demonstrates how visual elements that evoke excitement and fluency can positively impact consumer responses. Emotional imagery can forge a connection between the consumer and the product, rendering it more desirable. This emotional bond can promote impulsive purchasing behavior and cultivate brand loyalty (Ryu & Ryu, 2021).

Aesthetic Appeal. Aesthetics capture consumer attention and enhance a product's perceived value. Visually captivating images can help products stand out in the crowded online retail landscape. Li et al. (2014) highlighted that the aesthetic appeal of product visuals significantly impacts consumers' purchasing intent. High-quality, meticulously composed, well-lit, and professionally presented images can evoke a premium product perception, influencing consumer preferences and purchase decisions.

Social Presence. Product images that convey a sense of social presence can also influence online shopping behavior. Social presence refers to the perception of human warmth and sociability in a digital environment. Incorporating models or lifestyle contexts into product visuals can enable consumers to envision themselves using the item, cultivating a feeling of connection and relatability. Smith et al. (2010) highlighted that this approach can be highly effective in evaluating virtual model technology. By visualizing themselves interacting with the product, consumers can more easily imagine how it would fit into their lives, which may ultimately drive purchase intent.

Product Image Dynamism. The dynamism of product visuals, exemplified by features like 360-degree views or videos, can augment the online shopping experience. Wang et al. (2021) EEG study investigating the impact of product image dynamism on purchase intention offers empirical evidence that dynamic visual elements can enhance consumer engagement. Such dynamic visuals provide a more comprehensive product perspective, enabling consumers to interact with it virtually. This interactive experience can foster heightened engagement levels and increase the likelihood of purchase.

Influence on Perceived Product Quality and Evaluation. Consumers are more likely to form a positive evaluation of a product if the images are visually appealing and provide a comprehensive understanding of the product's features. Studies have demonstrated that high-quality images can lead to higher purchase intentions by enhancing the perceived value and attractiveness of the product. For instance, Ryu & Ryu (2021) research highlights the importance of visual excitement and fluency in consumer responses, suggesting that appealing images can significantly boost purchase intent. In this competitive environment, the quality of product images has emerged as a crucial factor influencing consumer behavior (Su & Zhu, 2023).

2.1. Impact on Consumer Attention and Engagement

Visually striking images are more likely to stand out among competing products, drawing consumers' eyes and encouraging them to explore further. The initial visual impact of a high-quality image can create a lasting impression, making the product more memorable and appealing.

Studies have shown that consumers spend more time on product pages featuring high-quality images. These images attract attention and help maintain visual interest and clarity. For example, Smith et al. (2010) evaluation of virtual model technology demonstrates how detailed and realistic images can significantly enhance consumer engagement, allowing consumers to visualize the product in a more personal and relatable context.

Wang et al. (2021) study on product image dynamism highlights how dynamic visual elements can boost consumer engagement. When consumers can interact with product images—rotating them, zooming in to see fine details, or watching demonstration videos—they are more likely to spend extended time on the product page. This increased engagement often translates into higher interest levels and a greater likelihood of making a purchase. Interactive images also help address common consumer concerns and questions about the product, reducing hesitation and increasing confidence in the purchasing decision. High-quality imagery can effectively bridge the gap between online and offline shopping experiences by offering a comprehensive visual representation.

In summary, effective visual presentation can strengthen consumer confidence, evoke positive emotions, and drive sales performance. High-quality product images can create a lasting impression and foster a stronger emotional connection with the brand by capturing consumers' attention. Visually appealing and dynamic imagery has been shown to enhance perceived product quality, increase engagement, and ultimately drive purchase intent and sales. Through social sharing and word-of-mouth marketing, visually compelling product visuals can also expand brand awareness and reach new potential customers.

3. Theoretical framework

The Stimulus-Organism-Response model (SOR model) developed by Mehrabian and Russell in 1975, explains how sensory perceptions, including visual stimuli such as product images, influence consumer behavior through emotional responses. This model illustrates that a visual stimulus, like high-quality and appealing product imagery, elicits an emotional reaction in the consumer, shaping their subsequent behavioral response, such as increased purchase intent and brand loyalty. By leveraging the power of visuals, online retailers can effectively bridge the gap between online and offline shopping experiences, strengthening consumer confidence, evoking positive emotions, and driving sales performance (Goel P. et al., 2023).

The conceptual framework of mental imagery, a prominent theoretical construct within consumer psychology, has received substantial scholarly attention in examining consumer behavior. Empirical research has demonstrated that textual and visual content in various advertising mediums, such as broadcast, print, travel, and online product imagery, can evoke mental imagery in consumers, subsequently influencing their product evaluations and behaviors (Cheng et al., 2022). Visual stimuli (e.g., product imagery) serve as cues that trigger mental imagery processes in consumers. The emotional responses elicited by these visual cues are mediated by the mental imagery generated. The quality and vividness of mental imagery can influence the emotional response's intensity and valence. Ultimately, the emotional response shapes the consumer's behavioral intentions and actions.

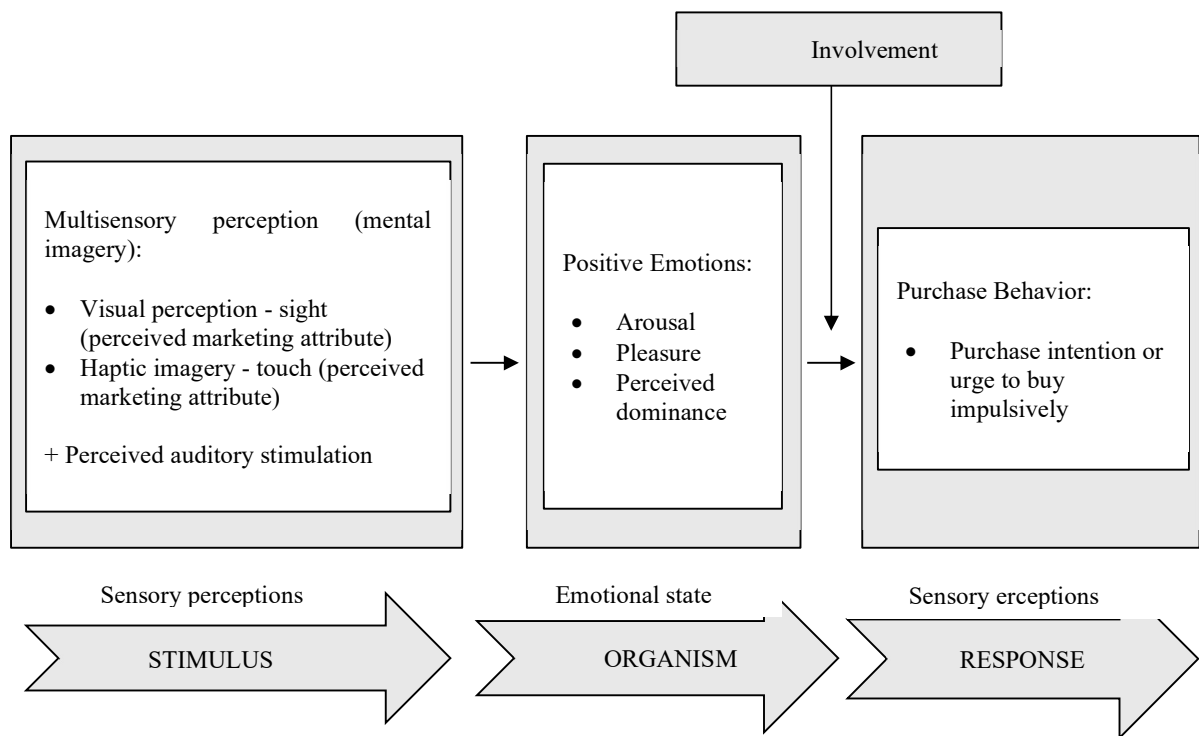


Figure 1: Theoretical framework

Source: created by authors based on Li et al.(2022), Cheng et al. (2022), Han et al. (2024)

By combining the SOR model and mental imagery theory, this research proposes a more nuanced and comprehensive framework for understanding the influence of visual stimuli on online purchase intention. Ngo et al. (2024) suggest that investing in high-quality visual assets, such as product images and videos, is crucial for meeting consumer expectations and enhancing the online shopping experience. It could lead to increased impulsive purchasing behavior. The direct link between arousal and pleasure suggests that designing e-commerce environments that leverage arousal to evoke positive emotions can significantly boost consumer satisfaction and encourage impulsive buying behavior.

Conclusion

1. The systematic review of the existing literature, including the SOR model, reveals visual imagery's central role in influencing consumer purchase intention within the online shopping context. Visuals shape initial impressions and play a pivotal part in fostering engagement and improving conversion rates. By synthesizing the findings, this study uncovers key sensory characteristics, such as image quality, clarity, and aesthetics, that contribute to compelling product imagery. These sensory attributes significantly enhance consumer engagement by providing a richer, more immersive experience, even without physical product interaction.

2. The research also led to an adjusted framework to elucidate the relationship between visual imagery and online purchase intentions. The findings underscore that compelling and informative product visuals serve as a powerful cue for consumers, shaping their perceptions of product quality, trustworthiness, and value. When product images effectively communicate sensory attributes, they bridge the gap between the online and offline shopping experience, fostering heightened engagement and purchase intent.

3. In conclusion, the strategic deployment of visual presentation is essential for online retailers, enhancing consumer confidence, evoking positive emotions, and driving sales. As e-commerce grows, sensory marketing, mainly through visual elements, will remain crucial for optimizing product presentation and improving the overall customer experience. The proposed framework provides a foundation for future research and practice, offering retailers actionable insights into enhancing their visual marketing strategies.

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SENSORINIS MARKETINGAS: VIZUALINIŲ STIMULŲ ĮTAKA PIRKIMO KETINIMUI INTERNETU

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Santrauka

Šis straipsnis nagrinėja sensorinio marketingo svarbą ir vizualinių dirgiklių poveikį vartotojų pirkimo ketinimams internetinės prekybos kontekste. Sensorinis marketingas apibrėžiamas kaip strategija, įtraukianti vieną ar kelis pojūčius – regą, klausą, kvapą, skonį ir lytėjimą – siekiant paveikti vartotojų sprendimus ir elgseną. Tačiau internetinėje prekyboje, kur vartotojai negali fiziškai patirti produkto, rega tampa pagrindiniu pojūčiu, leidžiančiu įvertinti produkto savybes ir sumažinti neapibrėžtumą. Vizualiniai dirgikliai, tokie kaip aukštos kokybės, informatyvūs, estetiškai patrauklūs ir socialinį ryšį perteikiantys produktų vaizdai, yra itin svarbūs vartotojų įsitraukimui ir pirkimo sprendimams.

Straipsnyje pabrėžiama, kad emocinis įsitraukimas, estetinė produkto vaizdų patrauklumas ir jų gebėjimas sukurti socialinio artumo pojūtį yra pagrindiniai veiksniai, skatinantys teigiamą vartotojų elgseną. Produktų vaizdai, kurie kelia teigiamas emocijas, skatina ne tik impulsyvų pirkimą, bet ir formuoja lojalumą prekės ženklui. Estetiškai patrauklūs, profesionaliai pateikti vaizdai didina produkto suvokimą kaip kokybiško, o tai tiesiogiai veikia vartotojų sprendimų priėmimą. Be to, socialinio artumo aspektas, sukurtas įtraukiant produktų naudojimo kontekstus ar modelius, leidžia vartotojams geriau įsivaizduoti, kaip produktas pritaikomas jų gyvenime, o tai didina pirkimo ketinimus.

Straipsnyje remiamasi Stimulo-Organizmo-Reakcijos (SOR) modeliu bei mentalinio vaizdavimo teorija, kurios padeda atskleisti, kaip vizualiniai dirgikliai per emocinius atsakus formuoja vartotojų elgesį. Išvadose pabrėžiama, kad strateginis vizualinės prezentacijos naudojimas yra esminis veiksnys internetinėje prekyboje, leidžiantis gerinti vartotojų pasitenkinimą, skatinti spontanišką pirkimą ir stiprinti emocinį ryšį su prekės ženklu.

Pagrindiniai žodžiai: vizualiniai stimulai, sensorinis marketingas, pirkimo ketinimas internetu, SOR modelis.