



Proceedings of the 17<sup>th</sup> International Conference  
**LIBEREC ECONOMIC FORUM**

**2025**



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The Power of Image: the Impact of Visuals on Online Consumer Decision Making

[10.15240/tul/009/lef-2025-23](https://doi.org/10.15240/tul/009/lef-2025-23)

***MOTTO: New Horizons in Economics and Business***

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# The Power of Image: the Impact of Visuals on Online Consumer Decision Making

## Abstract

The visual presentation of products is a key factor influencing customer decision-making in an online environment where consumers are unable to physically interact with the goods. This paper examines how different visual formats - thumbnail photographs, dynamic visuals, videos and 3D presentations - influence customers' mental imagery, attitudes and purchase intentions. An analysis of expert studies found that dynamic formats and videos, especially those demonstrating product use, have a significantly positive effect on customer engagement and purchase decisions. It was also found that the effectiveness of visual elements varies by product type, with the ability to compensate for the lack of physical contact with visuals designed to suggest tactile qualities or text descriptions being crucial for experiential products (e.g. food, clothing). The study also highlights the importance of congruence between visual imagery and accompanying text and draws attention to the automatic, uncontrollable effects of visual stimuli on customer attitudes, which operate independently of the user's motivation and cognitive resources. The results provide online retailers with practical guidelines for optimizing visual strategies to increase purchase intentions and reduce consumers' cognitive uncertainty.

**Key Words:** Visual Product Presentation, Consumer Decision-Making, Purchase Intention, Mental Imagery, C-Commerce Marketing

**JEL Classification:** M31, M37

## Introduction

In today's online environment, the visual presentation of products plays a vital role in the customer decision-making process (Cheng & Zhang, 2022). Since consumers do not have the opportunity to physically interact with the goods, they rely primarily on visual information to judge the quality of products and make subsequent purchasing decisions. This includes a wide range of visual formats such as preview photos, dynamic visuals, videos and 3D presentations (Jiang et al., 2024), (Wang et al., 2024).

This systematic review seeks to address the research question: What impact do preview photographs and other visual forms of product presentation in online environment have on consumer decision-making and purchasing behaviour? The analysis focuses on identifying key visual elements and mechanisms that can help online retailers and marketers to optimize their visual strategy and increase the effectiveness of online presentations. Despite the growing body of literature examining the influence of visual elements on consumer behavior in the context of online commerce, existing studies tend to focus on narrowly defined aspects. For instance, Vazquez et al. (2023) focus on specific aspects of image quality and text review types in social commerce and their impact on purchase intentions through mental imagery and social presence. Similarly, Kim and Lennon (2008) compare the influence of visual and verbal information on attitudes and purchase intentions in a more general online shopping context, with an emphasis on compensating for the absence of physical contact. Up to date, there is a lack of a comprehensive systematic review that synthesises findings on the influence of a wider range of visual formats - from thumbnail photographs and dynamic visuals to videos and 3D presentations - on mental imagery, attitudes and purchase intentions in the online environment (Vazquez et al. , 2023), (Kim & Lennon, 2008).

## 1. Methods of Research

The aim of this study was to explain how thumbnail photos and other visual elements influence customer decision-making in the online environment. To do so, a systematic literature search was conducted, with relevant studies being searched in the Web of Science database. The decision to limit the search to Web of Science was based on its comprehensive coverage of high-quality, peer-reviewed journals and advanced filtering tools that support systematic reviews. Although databases such as Scopus or Google Scholar could potentially provide broader coverage, they also include a higher proportion of non-peer-reviewed or duplicate records, which may reduce the methodological rigour of the review. Future research could extend the search to these databases to capture additional relevant studies.

The search strategy was designed with an emphasis on two thematic areas: visual aspects of product representations and customer decision-making processes. The query used combined keywords from both areas, namely:

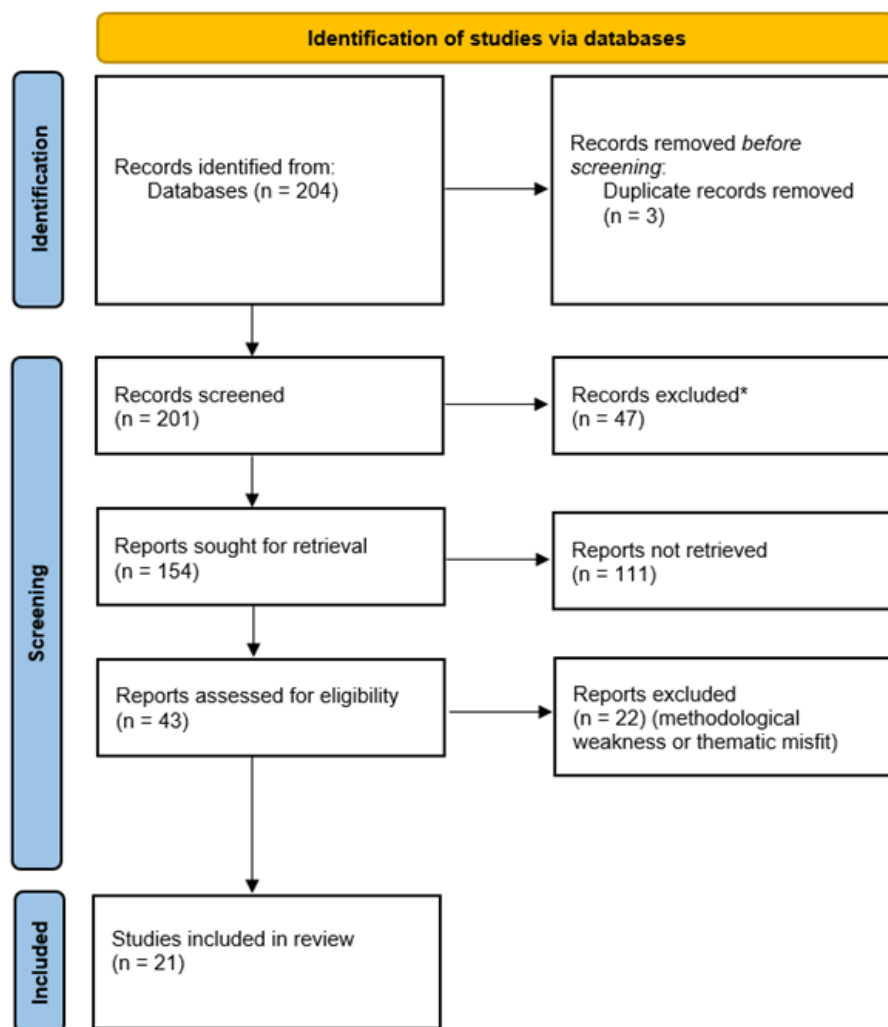
("thumbnail image" OR "preview image" OR "product photo" OR "product image" OR "visual representation" OR "image quality" OR "imagery") AND ("consumer decision-making" OR "customer choice" OR "purchase intention" OR "click behavior" OR "choice behavior" OR "user decision")

The last search was conducted on 30 June 2025, identifying a total of 204 results. A series of selection criteria were subsequently applied. First, three duplicate records were removed, after which filtering by publication year (2015 to 2025) was continued, reducing the number to 169 studies. Next, only articles written in English (166) were retained, followed by only "article" type documents, resulting in a set of 154 records.

This file was then subjected to a first screening based on title and abstract. At this stage, 12 articles that did not answer the research question were excluded. The resulting file after the first screening therefore comprises 142 articles.

Of the 142 records, 43 articles were traced and full text was retrieved. These studies were then subjected to a second round of screening, in which 22 studies were excluded on the basis of content and methodological relevance. The resulting set of 21 articles forms the basis for the systematic analysis conducted in this search. The process of study selection, including the stages of identification, screening and inclusion in the final analysis, is clearly illustrated in the following PRISMA diagram (Fig. 1). The diagram documents the numbers of records at each stage of the selection process and the reasons for their eventual exclusion.

**Fig. 1: Diagram of study selection**



Source: own processing based on PRISMA template (Prisma, 2021)

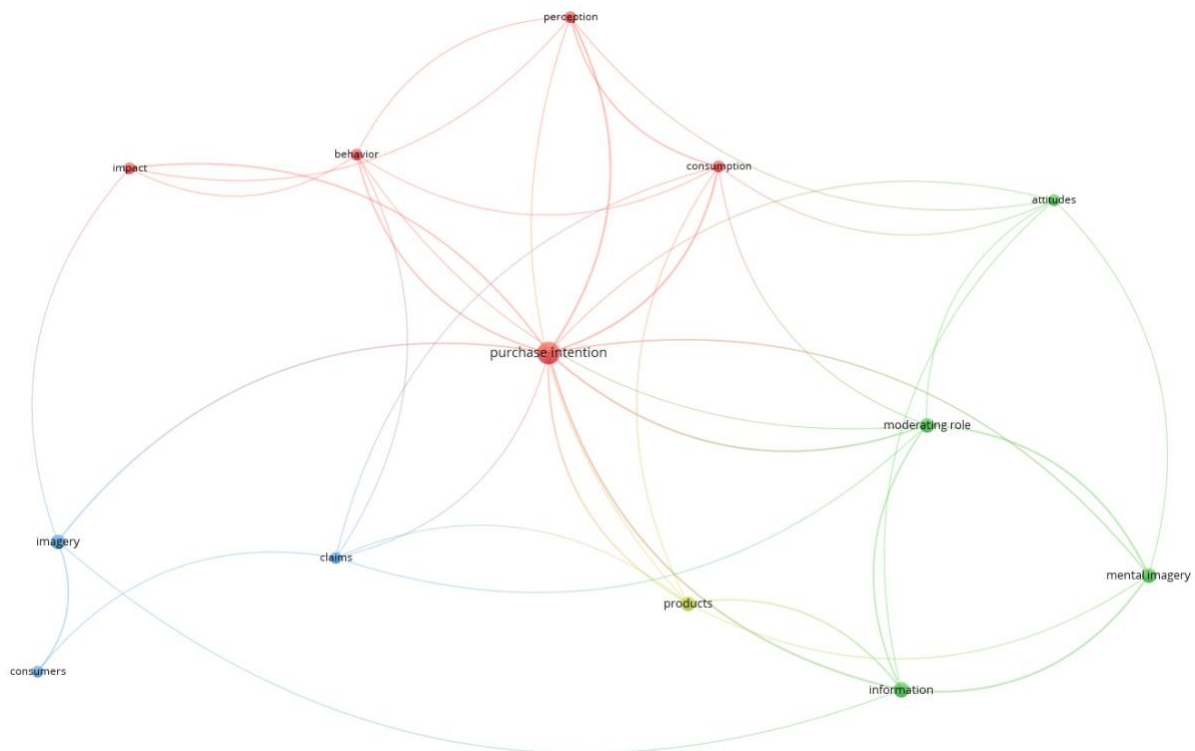
\*Excluded based on publication year (outside 2015–2025), document type (non-article), or language (non-English).

## 2. Results of the Research

In order to support the structure of the systematic search results, keyword analysis was also performed using the VOSviewer software tool. This approach allowed the identification of the main thematic areas based on the frequency and association between terms that occurred together in the analysed articles. The resulting network of key terms shows that the most frequent and central term is purchase intention, which is linked to a number of other key terms reflecting different mechanisms of influence of visual elements.

Based on this visualization, the results of the systematic search could be divided into four main categories: (1) influence on attitude and purchase intention, (2) product perception and mental representation, (3) specific visual elements and their impact, and (4) the role of product type. These areas correspond to thematic clusters in the visualization network.

**Fig. 2: Visualisation of thematic clusters based on keyword analysis**



Source: own processing with VOSviewer sw

### 2.1 Influence on attitudes and purchase intention

In the online environment, visual representations of products, such as preview photographs or other digital formats, are among the important sources of information by which consumers judge product quality and subsequently make purchase decisions. Different types of visual presentation, including still images, videos or 3D models,

significantly influence consumers' perceptions, their emotions and also their final purchase intentions (Zhang, 2023).

Research has shown that "mindful ads", which contain carefully chosen visual elements, can create a stronger sense of immersion in the product presentation, leading to higher purchase intention compared to conventional ads (Errmann, 2025). Similarly, dynamic visuals, including videos, significantly enhance purchase intention compared to static images, especially for products where visual information helps to bridge information asymmetry. Dynamic presentation also reduces the emergence of cognitive conflict and promotes positive emotional responses from customers (Wang et al., 2021).

The style of preview images and the type of packaging are also of specific importance. For example, studies have shown that natural versus artificial packaging imagery has a significant impact on purchase intention for products that may evoke feelings of embarrassment in customers. (Ye et al., 2022). In addition, it has been confirmed that a rich visual presentation ("rich product presentation") helps customers understand both the practical and emotional value of a product more comprehensively, which again supports their purchase decision (Zhang, 2023).

## **2.2 Product perception and mental representation**

Images effectively stimulate the mental imagination of consumers. The visual appeal of packaging design, including product illustration, significantly influences purchase intention (Zhao et al., 2024). In online environments where tactile experience is lacking, visual information can compensate for tactile deficiencies (Jiang et al., 2024). Tactile suggestive visuals ("haptic cues in metaphorical visual language" - MVL) can enhance the perception of tactile product features and influence purchase intentions. Specifically, handheld tactile cues can enhance mental simulation for products where touch is important (e.g., blankets), thereby increasing perceptions of softness and warmth, leading to more positive product evaluations and purchase intention (Cheng & Zhang, 2022).

The vividness of mental imagery determines how strongly visual stimuli in advertising work. When an image conveys specific and meaningful information about product consumption, the consumer mentally connects to it and the imagination is activated. Conversely, if the image contains little relevant information, attention shifts to the visual surface - the colors, quantity, or style (Zhang et al., 2025). In the digital environment, then, the match between the visual and the description also plays a role: if they match, imagination vividness, understanding, and positive attitudes toward the product increase (Cheng & Zhang, 2022).

## **2.3 Specific visual elements and their impact**

Different types of visual elements have different effects on customer decision-making. For example, dynamic product displays significantly reinforce purchase intent over static visuals, especially in the context of online seafood sales. This is because dynamic visuals



promote customer immersion and stimulate their mental imagination more vividly (Wang et al., 2021). Similarly, the repeated display of the same ingredient on product packaging can reinforce the perception of taste, promote sensory-specific satiety and positively influence purchase intention (Thomas et al., 2023).

Significant differences in the effectiveness of visual formats are shown in a study focusing on staggered product views. This is because these views, when specifically described, promote vividness of mental imagery, which facilitates better product understanding, creates more positive customer attitudes, and increases their willingness to purchase. Conversely, in the case of abstract descriptions, conventional views are more effective because they facilitate imagination and understanding of the product (Cheng & Zhang, 2022).

An increasingly common strategy for online retailers is to use videos to showcase products. Videos are richer and more vivid than photos or text and significantly increase the perceived ease of imagining a product. At the same time, they offer the closest experience to physically viewing the goods in a store. The effectiveness of this approach has been confirmed by studies that show how to use a product more effectively than videos that focus only on its appearance. This is true for both products that customers primarily search for ("search" products) and those whose features are best judged by direct experience ("experience" products) (Cheng et al., 2022; Zhang, 2023).

## **2.4 The role of product type**

The impact of visual elements varies by product type. For products such as food or clothing, mental imagery plays a major role due to the absence of direct tactile contact (Jiang et al., 2024), (Jeganathan & Szymkowiak, 2023). At the same time, however, it has been shown that, for example, for common clothing items - such as a sweatshirt - tactile descriptions in text form can be more effective than pictorial visualization when it comes to triggering tactile imagery and influencing purchase decisions (Silva et al., 2021).

Visual presentation works well for a smaller selection of products and can be particularly effective when it comes to slightly innovative goods - for example, through staggered views that encourage understanding and imagination. However, for larger ranges or highly innovative products, it may be more appropriate to opt for more detailed verbal descriptions to better support informed decision-making. Thus, the choice of presentation form should take into account both the number of choices and the degree of innovativeness of the product (Wang et al., 2024), (Cheng & Zhang, 2022).

## **3. Discussion**

This systematic review focused on the research question of the impact of preview photographs and other forms of visual product presentation on consumer decision-making and purchasing behaviour in the online environment. The results of the analysis of available studies showed that visual elements play a key role in shaping consumers'

mental imagery, reinforcing positive attitudes towards the presented products and increasing their purchase intentions. The following discussion further develops these findings in the broader context of existing scholarship, highlighting their theoretical relevance and practical implications for marketing communication and strategic decision-making in the online retail environment.

### **3.1 Theoretical Implications**

The results of the research extend the existing knowledge on the influence of visual presentation in the online environment. Studies have confirmed that visual elements significantly promote mental imagery, leading to more positive attitudes and higher purchase intention. Dynamic elements, such as videos, reduce customer uncertainty and evoke positive emotions more effectively than static images (Wang et al., 2021). Mindful ads with strong visual elements have also been shown to draw customers more strongly into the presentation and encourage purchase intent (Li et al., 2023).

It is also important to match the type of visuals and accompanying text. For example, detailed ("exploded") views are more appropriate when combined with concrete descriptions, while general views are better complemented by abstract texts (Cheng & Zhang, 2022). Moreover, in the online environment, the possibility to physically touch the product is missing, which can be partially compensated by suggestive tactile descriptions. These descriptions are often more effective than visual stimuli alone, especially for products such as clothing (Cheng & Zhang, 2022). Conversely, for products such as pajamas or dumbbells, tactile cues in the form of visuals help simulate direct experience and support purchase decisions (Leng et al., 2022).

Recent research has shown that some visual cues affect customers automatically, regardless of their motivation or cognitive capacity. This suggests that preview photos may operate outside of consumers' conscious control, with important implications for their persuasive power (Hütter & Sweldens, 2018).

### **3.2 Practical Implications**

The results of the research also provide several practical recommendations that online retailers and marketers can use to effectively optimize the visual presentation of products. First of all, it is worth investing in dynamic visuals, such as videos or dynamic visuals, especially for products where the image serves as the primary source of information (Wang et al., 2021). Specifically, videos that show the product in use are more effective than videos that focus only on the product's appearance. This is true both for products whose features customers primarily search for ('search' products) and for products whose qualities can be appreciated more through direct experience ('experience' products) (Cheng et al., 2022).

For food products, it is then recommended to use repetition of images of the same ingredients on the packaging or preview photo. This is because this approach helps to



highlight the mental image of taste, which positively influences consumers' purchase intention (Thomas et al., 2023). In the case of products where tactile sensation plays a significant role (e.g., clothing), it is advisable to compensate for the absence of physical touch with vivid, tactilely suggestive descriptions directly on the website to help customers better visualize the texture and feel of the product (Silva et al., 2021).

### **3.3 Research limitations**

Although the systematic search provided valuable insights, it is important to note its limitations, some of which are based on the limitations of the individual studies analysed. The demographic limitations of the samples are a crucial aspect, as many studies included samples composed predominantly of university students or specific groups of participants, limiting the ability to generalise the findings to a wider population. This reliance on relatively homogeneous samples, particularly university students, may limit the ecological validity of the findings. Younger, more digitally literate participants may respond differently to visual presentation formats than older or less tech-savvy consumers, potentially overstating the effectiveness of certain visual strategies in the broader population.

Another limitation is the experimental setting - most studies took place in simulated online scenarios or in laboratory conditions, which may reduce the applicability of results in real-world settings. In addition, some studies purposely limited participants to desktop or laptop users, which raises the question of whether the observed visual effects would have the same effect when using smaller mobile devices.

Specific limitations also relate directly to this systematic review: the search was conducted only through the Web of Science database, included studies published in the last 10 years, and was conducted in English only. These limitations may mean that relevant findings published in other databases, over a longer timeframe or in other languages may not have been captured.

Given the global scope of the reviewed studies, it is important to consider potential cultural moderators of visual effects. For instance, cultural differences in aesthetic preferences, colour symbolism, or communication styles may influence how consumers interpret and respond to product visuals. Future research could investigate whether visual strategies found effective in one cultural context yield similar results elsewhere.

## **Conclusion**

This systematic research confirmed that the visual presentation of products has a major impact on customer behaviour in the online environment. The findings show that preview photographs and dynamic visual elements such as videos significantly promote positive attitudes, reinforce mental imagery and lead to increased purchase intentions. On a theoretical level, it was found that appropriately chosen visual formats not only improve product perception, but also reduce cognitive uncertainty and automatically influence customer attitudes without users' conscious control.

In marketing practice, these findings offer concrete recommendations for optimizing the visual strategy of online retailers. In particular, it is recommended to use dynamic visuals and videos that show the product in the context of its use, thereby increasing customer engagement and purchase intent. At the same time, it is recommended to use repeated displays of key product elements (e.g. **ingredients in food products**), which reinforces customers' sensory perceptions. This systematic review thus provides both a theoretical framework for further academic research and concrete guidance for effective marketing practice.

## Acknowledgment

The paper was written with the support of Project SPEV no. 6/2025: "Management Challenges in the Context of Digital Transformation", granted by the University of Hradec Králové, Czech Republic.

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