





# Online Visual Merchandising Cues Impacting Consumer Pleasure and Arousal: An Empirical Study

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**Abstract.** The visual merchandising is a crucial aspect of physical and online retail establishments, as it significantly impacts consumer behavior. In an online retail setting, visual merchandising takes the form of online visual merchandising cues (OVMC), such as product images, videos, product descriptions, and website design. These elements are critical in attracting customers, increasing engagement, and driving sales. This study aims to focus on the significant OVMC influence on consumer pleasure and arousal. The study's sample population comprised respondents who shop for electronics products online in the Vijayawada city of Andhra Pradesh, India. The study used the probability sampling design known as systematic random sampling and comprised 385 respondents. This study suggests that OVMC, including website aesthetic appeal, website ads, homepage landing, product reviews, and product feature explanation videos, are essential in persuading visitors to go from casual online browsing to purchasing electronic products. This study contributes to the existing body of literature by providing a comprehensive overview of the critical factors that impact consumer behavior in an online retail setting, specifically concerning electronic products. It provides insights into how marketers can use online visual cues to influence consumer behavior and drive sales in the e-commerce market. It offers insight into the OVMC and the key factors influencing consumer pleasure and arousal in online purchases so that online marketers can adapt their marketing strategies to reach and induce online purchasers effectively.

**Keywords:** Electronic Shopping · Consumer Arousal · Pleasure · Online Visual Merchandising Cues · E-commerce and E-retailing

## 1 Introduction

In an online retail setting, visual merchandising takes the form of online visual merchandising cues (OVMC), such as product images, videos, product descriptions, and

website design. These elements are critical in attracting customers, increasing engagement, and driving sales. As the e-commerce market in India continues to grow, marketers must understand the key factors that influence online sales, such as OVMC. They must ensure that the online shopping experience is visually appealing and provides customers with the information they need to make informed purchasing decisions. This may involve investing in high-quality product photography, utilizing interactive product videos, and incorporating user-friendly website design and navigation. The e-commerce market in India continues to grow, marketers must emphasize online visual merchandising to remain competitive and drive sales. Understanding the key factors that influence consumer behavior, such as OVMC, is crucial for success in the online retail space.

The concept of using appearance, window displays, interior decor, business layout, fixtures, lighting, and sensory appeals such as music and aroma to attract customers and guide them through the customer conversion cycle was introduced by [13]. Visual merchandising strategies, including product placement, store design, mannequins, materials, props, lighting, graphics, and signs, are carefully planned to create a visually appealing environment [15]. Online visual merchandising incorporates various elements to improve the user experience, including selecting visually appealing products. An aesthetic appeal significantly impacts consumers' behavioral intentions, with visually appealing websites having a more significant influence [9]. Consumers' perceptions of website visual appeal and usability are influenced by straightforward messaging, such as social media and advertising, which may impact future purchasing decisions [9].

Visual merchandising is a tactical strategy to maximize a company's product sales and profits. Since these elements have drawn customers in and encouraged them to make purchases, visual merchandising serves the same objective in both physical and online establishments. The website's design elements and product placement can significantly impact a customer's shopping decision. According to a well-designed website company an attractive product placement can significantly influence a customer's buying behavior [26]. Additionally, the online store's verbal and visual information, such as product descriptions and images, can affect customer attitudes and buying intentions [19]. In terms of user perception, three main factors affect the customer experience: pleasure, arousal, and readability. The degree to which customers find the online shopping experience pleasurable and arousing can impact their overall perception of the website and influence their buying behavior. Furthermore, readability, or the ease with which a customer can understand and navigate the website, is also crucial in shaping the customer's perception and purchase intentions.

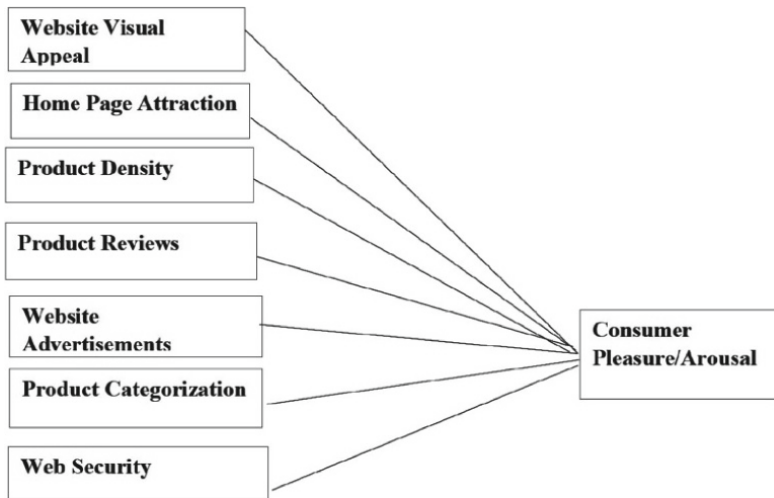
Therefore, it is essential for online retailers to carefully consider the design elements, product placement, and verbal and visual information on their website, as these factors can significantly impact a customer's shopping decision. Additionally, it was discovered that the visuals type, informative type, and a combination of the two were three types of web-based learning system web pages that were substantially correlated with favorability and content richness. This study focusses on identifying the key factors influencing consumer pleasure and arousal in online purchases so that online marketers can adapt their marketing strategies to reach and induce online purchasers effectively.

## 2 Literature Review

The study of online visual merchandising (OVM) has been divided into high-task and low-task environments [17]. A website's aesthetics and sign-up page are considered low-level tasks, while activities related to website usability and consumer-focused product marketing are considered high-level tasks [30]. OVM has been categorized into three main groups of e-shop aspects: product presentation, the visual design of websites, and online advertising. Manganari (2011) [21] created the Online Store Environment Framework (OSEF), which categorizes e-commerce websites into four virtual dimensions: atmospherics, layout and design, theatrics, and social presence. Research has shown that a high-quality image and appropriate text space on an e-commerce website can positively impact visitor intent [11]. Im and Ha (2011) identified three visual merchandise components, online pathfinding aid, environment, and manner of the product for clothing websites [14]. Other studies have explored the impact of presentation, presentation strategy, and product elements on visual merchandising [16, 23]. The primary visual merchandising components include layout, merchandise featuring, presenting techniques, color, and packaging [18].

The design of a store's layout has a significant positive impact on a customer's decision to purchase [23]. Product presentation, color, and illumination also have a strong positive correlation with the consumer's purchase intention. The conceptual framework of visual merchandising also captures customer pleasure and arousal as critical characteristics, which can impact consumer decisions, including purchasing behavior [23]. The perception of voice assistants as pseudo-human agents is different from that of websites, which are perceived as tools or inter-faces utilized by the service provider and result in a more positive perception and rating of the website [6]. The Park and Kim (2003) found that presenting a product provides more information to customers, impacting their purchasing decisions [24]. Practical product displays increase purchases [29]. The e-store's color and language make it easier for customers to shop online [7]. A website's color, shade, design, and background affect users' buying behavior and intention to purchase [2]. Websites with superior visual design have higher customer satisfaction [25]. Website quality does not directly affect impulsive purchase decisions, but in combination with sales promotions, it can impact impulse buying behavior [28]. The authors also found that fashion awareness directly affects impulsive purchases.

The visual attractiveness significantly impacts consumers' feelings of pleasure and arousal. Other studies show that a well-designed website can directly influence a customer's purchase decision [3]. Griffith (2005) research shows that a structured online store layout can lead to more favorable customer responses by emulating usability and goal orientation [8]. Manganari found that user-friendly website layouts directly influence customers' behavioral intentions [21]. Balakrishnan, Dahnil and Yi (2014) concluded that the design of an online store has a substantial impact on a user's arousal and attitude toward the site, positively affecting their desire to make a purchase [1]. Researchers found that website aesthetics significantly impact consumers' psychological and behavioral traits. Targeted merchandising, layout, intelligent shop design, and other visual merchandising techniques like packaging, product displays, and signage can help customers locate the right items. All four visual merchandising aspects can



**Fig. 1.** Online visual merchandising and customer (OMVC) behavior Research Framework

influence consumers' impulse purchases, but the impact of promotional offers near the entry is comparatively greater (Fig. 1).

Visual merchandising strategies, such as sales or promotional signage and product presentation, significantly impact consumers' purchasing decisions. According to Ha, Kwon and Lennon [9], sale or promotional signage is any visual element that informs the viewer about sales or promotional offers. The authors found that product marketing on websites and blogs influences consumer decisions. Recommendation systems are crucial in building a competitive edge and customer loyalty as they serve as "virtual salesmen" [6]. Customers only use recommendation systems to make buying decisions if they value and trust the advice provided [12]. A search box is necessary for every e-commerce website, and it has developed several features to enhance user convenience [2]. Pathfinding components include a "clear route" and a "noticeably impacted inclination to browse. The Klumpe (2020) [20] studied the impact of push and pull information transmission and social proof cues on actual location information sharing by users. Push information delivery requires always-on access location monitoring, while pull information sharing alleviates consumer privacy concerns and increases credibility through social proof. The study found that social proof had a more significant influence than pull information transmission when both strategies were applied.

The website security of an e-commerce site is crucial for ensuring customer privacy and protecting against scams and financial losses [4]. According to Mohd and Zaab (2019) [22], building customer trust is essential for facilitating transactions and encouraging repeat business. However, only 29% of users make online transactions due to security and usability issues. To improve e-commerce website performance, a comprehensive evaluation model that assesses both usability and security is needed. The Chen, Chen and Lin (2020) [5] suggest that interaction, dynamicity, subtlety, and prominence must be established to bridge the gap between product placement techniques and audience perceptions, thus increasing engagement. However, the literature on online visual

merchandising and customer (OMVC) behavior primarily focuses on clothing websites, with very few studies examining electronic goods as search products. This study aims to fill the gap by exploring the impact of OMVC components on website visual appeal, home page attraction, product density, reviews, website advertisements and web security for electronic devices.

### 3 Research Methodology

The study employed an empirical research design and utilized a systematic random sampling method to select a sample population of 385 shoppers of electronic products in Vijayawada, Andhra Pradesh, India. The sample size was determined based on Morgan's sample size chart and a 95% confidence level. The study used a self-administered questionnaire with 53 items to gather data from the participants. The questionnaire underwent pilot testing to ensure its reliability. SPSS Version 24 was used for data analysis using Reliability Analysis, ANOVA with Post-hoc Bonferroni Test, Multiple Regression Analysis, and Factor Analysis. The study's results aimed to add to the knowledge of online visual merchandising components' effect on consumer enjoyment and arousal, purchase intention, and customer satisfaction when purchasing electronic devices.

## 4 Results and Discussion

### 4.1 Respondent Demographic Profile

Table 1 shows the demographic profile of the survey respondents who buy electronic products online. Most of the buyers (75.8%) are between 18 and 23 years old and have a higher education level (90% have at least a bachelor's or master's degree). Most respondents (80%) said they would purchase electronic items online, with the majority (70%) preferring Amazon as their preferred e-commerce site. Most of the respondents (63%) are willing to spend at least Rs. Nine hundred ninety-nine per month on electronic products and prefer to buy smartphones, tablets, laptops, and mobile accessories online. Most respondents (88%) agreed that they use digital technology to compare prices from multiple websites before making a purchase, and 73% preferred to buy electronic products online using mobile apps.

### 4.2 Reliability Analysis

The dependability of the questionnaire used in the study was tested by conducting a reliability test. According to Hair et al. (2022), a reliability test assesses the consistency and stability of the results over time [10]. The reliability test results showed that the questionnaire had a high level of dependability with a Cronbach's alpha of 0.875, which is over the required threshold of 0.70. This suggests that the questionnaire used in the study is applicable and consistent in measuring the factors considered. The high dependability of the questionnaire adds to the validity of the study's results and conclusions.

**Table 1.** Respondent's demographic profile

Variable	Example	Frequency	Percentage
Gender	Male	186	48.31%
	Female	199	51.69%
Age	18–23	292	75.84%
	24–29	84	21.82%
	Above 40	9	2.34%
Qualification	School	16	4.16%
	UG	147	38.18%
	PG	214	55.58%
	Doctorate	8	2.08%
Purchasing Electronic Products Online	Amazon	272	70.65%
	Flipkart	96	24.94%
	Others	17	4.42%

### 4.3 Multiple Regression Analysis

Multiple regression analysis is a statistical method that is used to assess the relationship between one or more independent variables (in this case, Online Visual Merchandising Cues (OVMC)) and a dependent variable (in this case, consumer pleasure and arousal behavior). The analysis aims to determine the strength and direction of the relationship between the independent and dependent variables and to identify which OVMC has the most significant impact on consumer pleasure and arousal behavior. In this study, the multiple regression analysis used to identify which OVMC has the most significant impact on consumer pleasure and arousal behavior and to quantify the strength of the relationship between OVMC and consumer behavior. Online retailers can use this information to optimize their visual merchandising strategies and improve the customer experience, leading to increased sales and customer satisfaction. For instance, R-squared ( $R^2$ ) is a statistical measure that shows what proportion of a dependent variable's change in a regression model can be explained by one or more independent variables. The  $R^2$  value measures the proportion of variation in the dependent variable (consumer pleasure and arousal) explained by the independent variables (seven competency categories). In this case, an  $R^2$  value of 0.267 indicates that the seven competency categories can explain 26.7% of the variation in consumer pleasure and arousal.

Table 2 presents the beta value that explains how online visual merchandising cues determine customer arousal and pleasure. If a beta value's t-test result is significant (i.e.,  $P$  is lesser than .05), then these independent variables (Online visual merchandising cues) significantly influence the model. The results show that consumer pleasure-and arousal-seeking behavior is significantly influenced by website visual appeal, home page attraction cum video appeal, and product reviews as per the data collected and analyzed. The results of the regression analysis suggest that there is a significant relationship

**Table 2.** Multiple regression analysis

Variables	B Unstandardized	Std error	Beta Standardized	t	Sig
Constant	1.228	.522		2.353	.021
Website Visual Appeal	.474	.127	.420	3.742	.000
Homepage Attraction and videos	.340	.110	.286	3.097	.003
Product Density	.125	.104	.141	1.208	.230
Product reviews	-.297	.150	-.262	-1.981	.040
Website Advertisement	.002	.090	.003	.026	.980
Product categorization	.077	.071	.104	1.084	.281
Web Security	-0.71	.125	-.063	-.571	.569

between online visual merchandising cues (website visual appeal, home page attraction cum video appeal, and product reviews) and customer arousal and pleasure. This means that changes in online visual merchandising cues are associated with changes in customer arousal and pleasure.

Accepting the hypothesized significant relationship between online visual merchandising cues and customer arousal and pleasure highlights the importance of online visual merchandising in shaping customer behavior and purchasing decisions. By creating visually appealing websites, engaging home pages, and providing easily accessible product reviews, online retailers can increase customer arousal and pleasure and drive sales.

## 5 Conclusion and Implication

### 5.1 Conclusion

This study looked at the significant impact of OVMC on consumers who purchase electronic products online. The study found that website visual appeal, home page attraction and video appeal, and product reviews were essential to consider when building a website for an electronic product. These factors influence the purchasing decisions of online customers [27]. The regression analysis results showed that most OVMC characteristics positively affect consumer arousal and enjoyment. These findings support the conclusion of Wu, Chen and yen [30] that OVMC influences the emotional state of consumers, with product image quality impacting the pleasure state of customers and website visual appeal significantly impacting arousal and pleasure.

### 5.2 Research Limitation and Implications

The study has several limitations that need to be considered. Firstly, the study's sample only consisted of online purchasers of electronic goods, limiting the generalizability of the findings to other product categories or populations. Secondly, most participants

were from Vijayawada, Andhra Pradesh, India so the results may differ from other regions or countries. Finally, the study only considered one product category, electronic goods, and future research may expand to include other product categories. Despite these limitations, the study has several implications for practitioners in the e-commerce and m-commerce industries. The study highlights the importance of website visual appeal, home page attraction and videos, and product re-view in influencing consumer arousal and enjoyment. Practitioners should consider these factors when designing and developing websites for electronic products.

Moreover, the study's findings emphasize the importance of demographic variables, such as age, income, education, and the type of product purchased, in shaping consumers' perceptions of online visual marketing cues. This information can be used to develop targeted marketing strategies for specific population segments. Overall, the study contributes to the literature on online visual merchandising and its impact on consumer behavior and highlights the need for future research in this area.

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