

Environmental Cues in Physical and Online Retail: Implications for Consumer Shopping Patterns

Gowri Pisolkar*, Dr.Asif Ali Syed**, Prof.Pinakapani**

Research Scholar, AMU* Associate Prof, Management, AMU*

** Profesor, Management, GITAM, Hyderabad

Email:gowripisolkar@gmail.com

ORC ID: 0000-0003-0795-0255

KEYWORDS <i>Retail, stimuli, store layout, physical, online</i>	ABSTRACT Purpose – The retail landscape has evolved dramatically with the advent of e-commerce, yet physical stores remain a vital component of the shopping experience. This paper examines the environmental cues present in both physical and online retail environments and their influence on consumer shopping patterns. By analysing various sensory stimuli, store layout, and digital design elements, we aim to elucidate how these cues shape consumer behaviour and decision-making processes. Design / Methodology / Approach. It was decided to use a survey method to test the objective. A google form was circulated to few known contacts and responses were sought, thus data collection was done through circulating the questionnaire. Analysis was done by simple frequency distribution and conclusions were drawn based on the responses. Findings - The interplay between online and physical store environments significantly influences consumer shopping behaviour, with each channel offering distinct advantages. Physical stores provide tactile experiences and human interaction, while online platforms offer convenience and personalization. Retailers must recognize these differences and adapt their strategies to create a seamless and integrated shopping experience that enhances customer satisfaction and loyalty. Originality / Value – This paper uniquely examines the online and physical store environment cues influencing the shopping pattern. As the retail landscape continues to evolve, understanding the nuances of how these cues interact and influence consumers. By understanding and strategically leveraging these cues, retailers can enhance the shopping experience, drive consumer engagement, and ultimately increase sales. Consumer behaviour will be essential for retailers aiming to optimize their marketing strategies and enhance customer experiences.
---	--

1.INTRODUCTION

The shopping experience encompasses a myriad of factors that influence consumer behaviour. Environmental cues, defined as stimuli that shape the perception of a retail environment, play a critical role in guiding consumer decisions. These cues can be categorized into sensory stimuli, including visual, auditory, olfactory, and tactile elements, as well as the overall spatial arrangement and design of the store or website. Understanding these cues is essential for retailers aiming to optimize the shopping experience, enhance customer satisfaction, and ultimately drive sales.

The retail landscape has undergone significant transformation in current years, motivated by the twin forces of technological progression and varying consumer behaviour. As both physical stores and online platforms vie for consumer attention, understanding the environmental cues that influence shopping patterns has become paramount for retailers. This paper explores the various environmental cues present in both physical and online retail settings, examining how these cues affect consumer behaviour and decision-making processes.

Environmental Cues Defined

Environmental cues refer to external stimuli that can influence consumer perceptions, emotions, and behaviours in a retail context. These cues can be categorized into two main types: ambient cues, which include factors such as lighting, music, and scent, and design cues, which encompass layout, signage, and aesthetic elements. In the context of online retail, environmental cues can include website design, product presentation, and user interface elements.

Physical Store Environmental Cues

In physical retail environments, several environmental cues significantly affect consumer behaviour. These include:

1. **Visual Merchandising:** The arrangement of products, signage, and store layout can dramatically influence shopping patterns. For instance, eye-catching displays can attract attention and create a sense of urgency, encouraging impulse purchases. Research has shown that products placed at eye level are more likely to be purchased, highlighting the importance of strategic product placement.
2. **Ambient Conditions:** Factors such as lighting, colour schemes, and temperature contribute to the overall atmosphere of a store. Warm lighting and soft colours tend to create a welcoming environment, promoting longer shopping durations. Conversely, harsh lighting and cluttered spaces can deter customers. Studies indicate that consumers often associate certain colours with specific emotions, influencing their purchasing decisions.
3. **Olfactory Cues:** The sense of smell is a powerful driver of consumer behaviour. Retailers often use scent marketing to induce encouraging emotions and improve the shopping experience. For example, the smell of freshly baked bread in a grocery store can create a sense of comfort and nostalgia, leading to increased sales. Research suggests that pleasant scents can prolong the time consumers spend in a store, increasing the likelihood of purchases.
4. **Auditory Elements:** Background music can significantly influence shopping behaviour. Upbeat music may encourage faster shopping, while slower tempos can lead to extended browsing times. The choice of music genre can also affect the perceived brand image; for instance, classical music may enhance perceptions of luxury, while contemporary pop may appeal to younger demographics.

Online Store Environmental Cues

As e-commerce continues to grow, understanding the environmental cues present in online retail is increasingly important. Key factors influencing online shopping behaviour include:

1. **Website Design and Navigation:** The layout and usability of an e-commerce site are crucial for user experience. A well-organized site with intuitive navigation can enhance consumer satisfaction and encourage repeat visits. Conversely, complicated layouts can frustrate users and lead to cart abandonment. Research shows that consumers prefer websites that are visually appealing and easy to navigate, with clear calls to action.
2. **Visual Content:** High-quality images, videos, and product descriptions play a vital role in online shopping. Consumers rely heavily on visual cues to assess product quality and suitability. Detailed product images and videos can reduce uncertainty and increase confidence in purchase decisions. "Furthermore, the use of augmented reality (AR) technology allows consumers to visualize products in their own environments, enhancing engagement and reducing return rates."
3. **Social Proof and Reviews:** Online reviews and ratings serve as powerful social cues that influence consumer behaviour. "Positive reviews can build trust and credibility, while negative feedback can deter potential buyers." Research indicates that consumers are more likely to purchase products that have been positively reviewed by others, as they perceive these products as more reliable and desirable.
4. **Personalization:** Tailored shopping experiences, driven by algorithms that analyse consumer behaviour, can significantly enhance the online shopping experience. Personalized recommendations and targeted marketing can create a sense of relevance for consumers, increasing the likelihood of conversion. "Studies have shown that personalized experiences can lead to higher customer satisfaction and loyalty."

Comparative Analysis of Physical and Online Cues

While both physical and online retail environments utilize environmental cues to influence consumer behaviour, the mechanisms and effects can differ substantially. Physical stores provide a multi-sensory experience that engages consumers on various levels, whereas online stores rely heavily on visual and auditory cues due to the lack of physical interaction.

For instance, while a pleasant in-store scent can enhance the shopping experience, online retailers must rely on visual appeal and informative content to create a compelling atmosphere. Additionally, the immediacy of physical shopping allows consumers to experience products first hand, which can lead to more spontaneous purchasing decisions, whereas online shopping often involves more deliberation and comparison.

Moreover, the social aspect of shopping in physical stores—such as interacting with sales staff and other customers—can influence consumer behaviour differently than the solitary experience of online shopping. In physical stores, consumers may be swayed by the presence of other shoppers, while online, social proof through reviews and ratings becomes paramount.

Moreover, the immediacy of physical stores allows for spontaneous purchasing behaviours that may not occur in online settings, where consumers often engage in more deliberate decision-making processes. However, online retailers can leverage data analytics to personalize shopping experiences, tailoring environmental cues based on individual consumer preferences and behaviours.

The interplay between environmental cues and consumer behaviour has garnered significant attention in retail research, particularly in the context of physical and online store environments. Environmental cues encompass various stimuli, including atmospheric elements in physical stores and digital interfaces in online settings, which collectively influence consumers' shopping patterns.

In physical retail environments, atmospheric elements such as lighting, music, scent, and spatial layout have been shown to affect consumer emotions, behaviours, and purchase intentions. For instance, Baker et al. (1994) established that ambient conditions, including music tempo and scent, significantly influence consumers' mood and, consequently, their shopping duration and spending behaviour. Additionally, the spatial arrangement of products can enhance product visibility and accessibility, leading to increased sales (Grewal et al., 2003). The concept of 'servicescape' proposed by Bitner (1992) further emphasizes the importance of "the physical environment in shaping customer experiences and perceptions, indicating that a well-designed store atmosphere can lead to higher customer satisfaction and loyalty."

In contrast, the online shopping environment presents unique challenges and opportunities for influencing consumer behaviour. The digital landscape is characterized by visual design, website navigation, and interactive elements, which serve as environmental cues.

Objectives

1. Analyse how environmental cues in physical retail settings influence consumer behaviour and shopping patterns.
2. Examine the impact of online retail environments on consumer decision-making processes and purchasing habits.
3. Identify key similarities and differences between physical and online retail environments in shaping consumer experiences.
4. Investigate the role of sensory stimuli, such as sight, sound, and smell, in both retail formats and their effect on customer engagement.
5. Provide recommendations for retailers to optimize their strategies by leveraging environmental cues effectively to enhance consumer satisfaction and drive sales.

Literature Review

The retail landscape has evolved significantly with the rise of e-commerce, leading to a dynamic interplay between online and physical store environments. Understanding how these environments influence consumer shopping behaviour is crucial for retailers aiming to optimize their strategies. This study synthesizes insights from 20 research papers to explore the impact of online and physical store environments on consumer behaviour, highlighting key factors, interactions, and implications for retailers.

Research by Childers et al. (2001) highlights the significance of website aesthetics and usability in enhancing user experience and facilitating purchase intentions. Moreover, the presence of interactive features, such as product videos and customer reviews, can create a more engaging shopping experience, leading to increased consumer trust and purchase likelihood (Huang & Benyoucef, 2013).

The amalgamation of "physical" and "online" shopping experiences has become increasingly relevant with the rise of omnichannel retailing. Consumers often traverse between physical and online environments, necessitating a cohesive understanding of how environmental cues function across platforms. Verhoef et al. (2015) argue that the seamless integration of physical and digital experiences can enhance customer satisfaction and loyalty. The concept of 'phygital' retailing, which blends physical and digital elements, allows retailers to leverage environmental cues from both realms to influence shopping behaviour effectively (Grewal et al., 2020).

Furthermore, the psychological underpinnings of consumer behaviour in response to environmental cues have been explored through various theoretical frameworks. "The Stimulus-Organism-Response (S-O-R) model" posits "that environmental stimuli (S) affect consumers' internal states (O), leading to behavioural responses (R) (Mehrabian & Russell, 1974)." This model has been applied in both physical and online contexts, illustrating how environmental cues can evoke emotional responses that subsequently influence purchasing decisions.

Recent studies have also begun to investigate the role of sensory marketing in shaping consumer experiences. Sensory cues, such as visual imagery, auditory elements, and tactile feedback, can produce immersive shopping experiences that resonate with consumers on multiple levels (Krishna, 2012). For instance, visual merchandising in physical stores can evoke emotional responses that enhance product appeal, while sensory elements in online environments can enhance perceived product quality and desirability (Peck & Childers, 2003).

The Role of Physical Store Environments

Physical stores continue to play a vital role in the retail ecosystem, offering unique experiences that online platforms often cannot replicate. The ambiance, human interaction, and tactile experiences in physical stores significantly influence consumer behaviour. For instance, store atmospherics, such as lighting, music, and layout, can enhance the shopping experience, leading to increased customer satisfaction and loyalty (Niekerk et al., 2024) (Angula & Zulu, 2021) (Chate & Bharamanaikar, 2021). Additionally, the in-store experience fosters brand connection and trust, which are critical for customer retention (Zhu, 2021) (Nilsson, 2023).

The Influence of Online Store Environments

Online shopping has become increasingly popular due to its convenience, accessibility, and the ability to compare products effortlessly. E-commerce platforms leverage technology to create personalized experiences, such as tailored recommendations and virtual try-ons, which can influence consumer purchasing decisions (Das, 2024) (Singla, 2024). However, online shopping also presents challenges, such as the inability to physically interact with products, which can lead to dissatisfaction and a shift to physical stores (Kim & Han, 2023).

Key Factors Influencing Consumer Choice

Several factors influence consumers' decisions to shop online or in-store, including convenience, product variety, pricing, and social interaction. Convenience is a significant driver of online shopping, particularly for time-sensitive consumers (Chandrakhanthan et al., 2024) ("A Comparative Study of Factors Affecting Online and Offline Retailing Choices of Shoppers", 2023). Product variety and competitive pricing also play crucial roles, with consumers often opting for the channel that offers the best value ("A Comparative Study of Factors Affecting Online and Offline Retailing Choices of Shoppers", 2023) (Novawanda & Indah, 2024). Social interaction, while less influential, can still impact decisions, especially in physical stores where face-to-face interactions enhance the shopping experience ("A Comparative Study of Factors Affecting Online and Offline Retailing Choices of Shoppers", 2023) (Zamfirache et al., 2024).

Interactions between Online and Physical Channels

The relationship between online and physical channels is complex, with each channel influencing the other. For example, physical stores can drive online sales by showcasing products and creating brand awareness, while online platforms can complement physical stores by offering extended product ranges and convenient delivery options (Chan et al., 2021). This integration is essential for creating a seamless omnichannel experience, which enhances customer satisfaction and loyalty (Zhu, 2021) (Sun et al., 2021).

The Impact of External Factors

External factors, such as environmental conditions and technological advancements, also influence consumer shopping behaviour. For instance, smog pollution has been shown to increase online shopping for fresh food due to consumers preferring to stay indoors (Liang et al., 2021).

Additionally, technological advancements, such as mobile shopping apps, have transformed the retail landscape, offering new ways for consumers to interact with brands and make purchases (Das, 2024) (Canio et al., 2019).

Implications for Retailers

Retailers must adapt to the evolving retail landscape by understanding the strengths and weaknesses of each channel. Physical stores should focus on creating engaging experiences through store atmospherics and personalized service, while online platforms should prioritize convenience, personalization, and seamless integration with physical stores (Nilsson, 2023) (Angula & Zulu, 2021) (Chate & Bharamanaikar, 2021). By leveraging the unique attributes of each channel, retailers can create a cohesive strategy that meets the diverse needs of consumers.

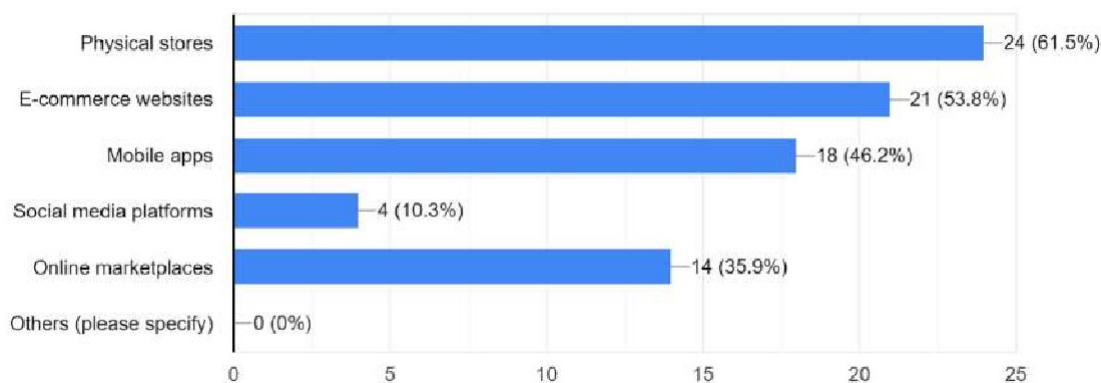
Research methodology

It was decided to use a survey method to test the objective. A google form was circulated to few known contacts and responses were sought, thus data collection was done through circulating the questionnaire. Analysis was done by simple frequency distribution and conclusions were drawn based on the responses.

Analysis

1. For the question on which channel do you initiate most of your shopping journeys?

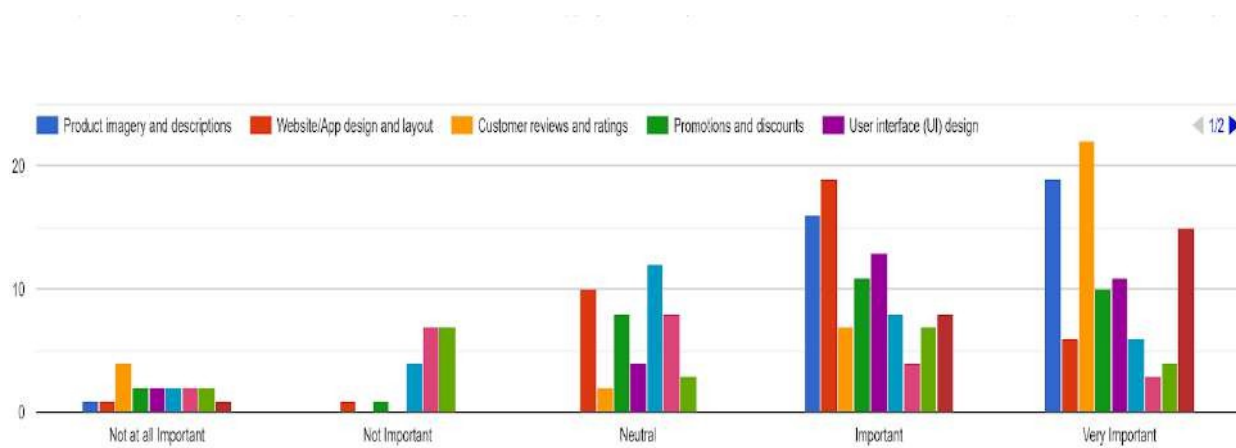
Astonishingly the responses received showed most of the consumers still initiate their shopping in a physical store with e-commerce websites being the second choice social media platforms had low ratings. It goes on to show that the physical store is still the preferred mode of shopping over all other modes.



2. How important are the atmospheric cues in influencing your online behaviour?

Website design and customer reviews happen to be most important part of online shopping atmosphere in comparison to other shopping cues online. Product imagery and descriptions, user interface are also important. Promotions and discounts are not very important in comparison. Even personalised product promotion and

urgency tacticts do not seem to stand out with customers.



The frequency distribution of responses highlights the significance of various atmospheric cues in shaping online shopping behaviour. Notably, **product imagery and descriptions**, **website/app design**, and **promotions and discounts** were rated as highly important by a significant portion of respondents. Among these, **promotions and discounts** received the highest frequency in the "Very Important" category, indicating its strong influence on consumer decisions.

On the other hand, fewer respondents considered these factors "Not Important" or "Not at All Important," suggesting that most users acknowledge the role of these atmospheric cues in their shopping experience. The varied responses across categories also highlight individual differences in preferences, with some shoppers prioritizing **website layout and UI design**, while others focus on **customer reviews and ratings**.

Overall, the findings reinforce the need for e-commerce platforms to optimize multiple aspects of their online presence, particularly **visual content, design, and promotional strategies**, to enhance user engagement and conversion rates.

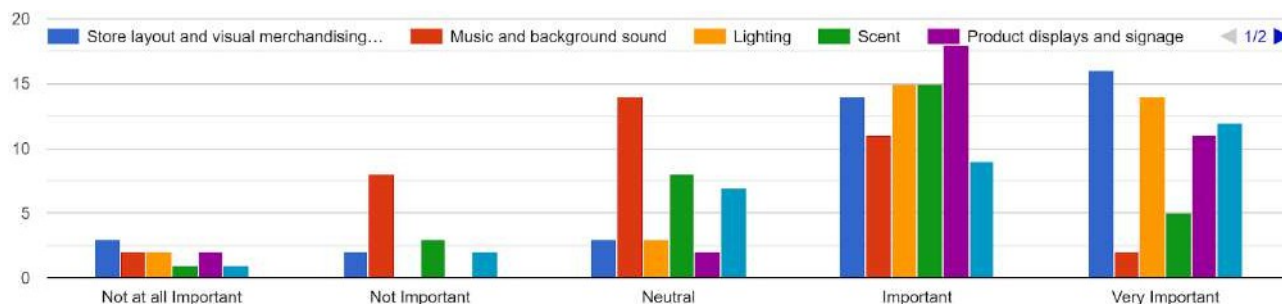
3. How important are atmospheric cues in influencing shopping in store?

For this the store layout became the important aspect followed by product display

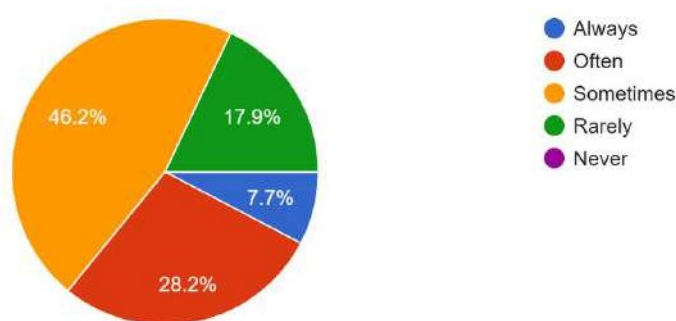
The analysis of the distribution reveals that several atmospheric elements significantly shape in-store shopping preferences. **Store layout and visual merchandising**, along with **product displays and signage**, emerged as the most influential factors, with the majority of participants rating them as either *Important* or *Very Important*. **Lighting** also received strong positive responses, reinforcing its role in enhancing the overall shopping ambiance.

While **scent** and **background music** drew more mixed reactions—ranging from *Neutral* to *Important*—their presence still holds value in crafting a pleasant in-store environment. Interestingly, **music and background sound** had a notable count in the *Not Important* and *Neutral* categories, suggesting it may not universally impact shopper behaviour.

In summary, the findings underscore that carefully curated visual and spatial elements within a store play a vital role in shaping customer experience, whereas sensory cues like sound and scent, though impactful for some, may have a more subjective influence.



The responses received for the question 4. Do you find atmospheric cues consistent between the online and offline store? The responses received showed varied degree of responses.



The pie chart illustrates the varied consistency of atmospheric cues across online and offline retail environments. A substantial portion of respondents (46.2%) indicated that such cues are aligned only *sometimes*, suggesting inconsistency in how sensory and design elements are maintained across platforms. Another 28.2% observed these cues *often*, pointing to efforts toward creating a unified brand experience.

Meanwhile, only a small segment (7.7%) believed that these cues are *always* consistent, indicating that achieving seamless integration remains a challenge. Additionally, 17.9% of participants reported experiencing consistency *rarely*, reflecting noticeable gaps between digital and physical store atmospheres.

This distribution indicates that while some progress has been made in bridging the experiential gap, there is still considerable room for improvement in delivering a cohesive shopping environment across both channels.

Implications for Retail Strategy

Understanding the impact of environmental cues on shopping patterns is essential for retailers seeking to optimize their strategies. For physical stores, creating an inviting atmosphere through thoughtful ambient and design cues can enhance customer satisfaction and increase sales. Retailers should consider investing in sensory marketing strategies, such as curated playlists or signature scents, to create memorable shopping experiences.

In the online realm, retailers must prioritize website design and product presentation to capture consumer attention and drive conversions. Employing high-quality visuals, engaging content, and user-friendly interfaces can significantly enhance the online shopping experience. Furthermore, leveraging data analytics to personalize the shopping journey can lead to increased customer loyalty and repeat purchases.

Conclusion

In conclusion, environmental cues in both physical and online retail environments play a crucial role in shaping consumer shopping patterns. Retailers must recognize the importance of these cues and strategically design their environments to enhance the shopping experience. By leveraging sensory stimuli, effective store layout, and engaging digital designs, retailers can create compelling environments that attract and retain customers. As the retail landscape continues to evolve, ongoing research into the effects of environmental cues will be essential for understanding and optimizing consumer behaviour in both physical and online contexts.

The environmental cues present in both physical and online retail settings play a crucial role in shaping consumer shopping patterns. By understanding and strategically leveraging these cues, retailers can enhance the shopping

experience, drive consumer engagement, and ultimately increase sales. As the retail landscape continues to evolve, ongoing research into the interplay between environmental cues and consumer behaviour will be essential for developing effective retail strategies.

The interplay between online and physical store environments significantly influences consumer shopping behaviour, with each channel offering distinct advantages. Physical stores provide tactile experiences and human interaction, while online platforms offer convenience and personalization. Retailers must recognize these differences and adapt their strategies to create a seamless and integrated shopping experience that enhances customer satisfaction and loyalty. The literature underscores the critical role of environmental cues in shaping consumer shopping patterns in both physical and online retail environments. As the retail landscape continues to evolve, understanding the nuances of how these cues interact and influence consumer behaviour will be essential for retailers aiming to optimize their marketing strategies and enhance customer experiences. Future research should explore the dynamic interplay between physical and online cues and their cumulative effects on consumer behaviour in an increasingly integrated retail environment.

References

- [1] “Baker, J., Grewal, D., & Parasuraman, A. (1994). The influence of store environment on quality inferences and store image. *Journal of the Academy of Marketing Science*, 22(4), 328-339.”
- [2] “Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2), 57-71.”
- [3] Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behaviour. *Journal of Retailing*, 77(4), 511-535.
- [4] Grewal, D., Levy, M., & Kumar, V. (2003). Customer experience management in retailing: An organizing framework. *Journal of Retailing*, 79(2), 83-95.
- [5] Grewal, D., Roggeveen, A., & Nordfält, J. (2020). The future of retailing. *Journal of Retailing*, 96(1), 1-6.
- [6] Huang, Z., & Benyoucef, M. (2013). From e-commerce to social commerce: A close look at design features. *Electronic Commerce Research and Applications*, 12(1), 4-18.
- [7] “Krishna, A. (2012). An integrative review of sensory marketing: Engaging the senses to affect shopping behaviour. *Journal of Consumer Psychology*, 22(3), 332-351.”
- [8] “Mehrabian, A., & Russell, J. A. (1974). An approach to environmental psychology. *The MIT Press*.”
- [9] “Peck, J., & Childers, T. L. (2003). To have and to hold: The influence of tactile stimulation on consumer product evaluation. *Journal of Consumer Research*, 30(3), 430-442.”
- [10] “Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From multi-channel retailing to omnichannel retailing: Introduction to the special issue on omnichannel retailing. *Journal of Retailing*, 91(2), 174-181.”