

Repositório ISCTE-IUL

Deposited in *Repositório ISCTE-IUL*:

2024-03-18

Deposited version:

Accepted Version

Peer-review status of attached file:

Peer-reviewed

Citation for published item:

Aires, M., Dias, Á. & Pereira, L. (2024). How visual merchandising influences Generation Z purchasing behaviour in supermarkets. *International Journal of Arts and Technology*. 15 (1), 13-37

Further information on publisher's website:

10.1504/IJART.2024.137300

Publisher's copyright statement:

This is the peer reviewed version of the following article: Aires, M., Dias, Á. & Pereira, L. (2024). How visual merchandising influences Generation Z purchasing behaviour in supermarkets. *International Journal of Arts and Technology*. 15 (1), 13-37, which has been published in final form at <https://dx.doi.org/10.1504/IJART.2024.137300>. This article may be used for non-commercial purposes in accordance with the Publisher's Terms and Conditions for self-archiving.

Use policy

Creative Commons CC BY 4.0

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in the Repository
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

How Visual Merchandising Influences Generation Z Purchasing Behavior in Supermarkets

Abstract

The competitive landscape between brands and retailers requires the optimisation of strategies to increase consumer purchases. Visual merchandising elements can effectively influence consumers to buy certain products or brands, even if unplanned. Different generations have different needs and require tailored strategies. This study examines the impact of visual merchandising elements on the impulse buying tendencies of Generation Z. The variables analysed include store layout, colours, lighting, in-store promotions, store ambience and salesperson interactions. A literature review explored these variables, consumer behaviour and the characteristics of Generation Z. Nine hypotheses were then formulated and tested using an online questionnaire. The survey received 206 responses from Gen Z, exploring their perceptions of these elements and their impulse buying behaviour. The results showed that in-store promotions and store ambience have a positive effect on Generation Z's impulse buying behaviour, while lighting has a negative effect. Store layout also influences their impulse buying tendencies when mediated by store ambience.

Keywords: Visual Merchandising, Generation Z, Consumer Behavior, Impulse Buying.

1. Introduction

In recent years, we have witnessed an increasingly competitive market, which in turn has led to an increase in consumer demand for products and services that satisfy their basic needs, but not only. This intensification of competition, especially in the retail sector, promotes, among other things, the development and improvement of strategies that lead to purchase and customer satisfaction and, consequently, their retention (Marques et al., 2013). The relationship that exists between consumers and retailers is crucial to their success, and for this reason it is essential to create atmospheres and environments that meet customers' needs, providing them with quality services and products at competitive prices and surrounded by a pleasant experience. In order to respond to these needs of retailers, techniques have been developed that are able to create purchase desires in the consumer, and it is in this sense that the theme of this study emerges (Pappu & Quester, 2006).

There are several moments in the consumer purchase cycle where the retailer can act: research, evaluation, category, brand and product selection, new purchase and recommendation (Shankar & Yadav, 2011). And at all these stages there are strategies to influence the consumer: technological and digital innovation, multichannel marketing, store environment and design, store merchandising, sales staff, promotions, etc. All of these strategies create stimuli that are likely to trigger a desire or need to purchase in the consumer, which is partly why more than half of purchase decisions are made in-store (Inman et al., 2009).

In this way, it is already possible to have a brief idea of the relevance of merchandising, an essential communication tool. It is on this concept, and its importance (or not) in the buying behaviour of Generation Z, that the rest of the study will unfold. We know that Generation Z is full of new habits and ideals, so the question arises: "Do all these strategies at the point of sale continue to influence these young people?"

Color, lighting, music, and floor merchandising are all important elements in attracting customers and stimulating impulse buying behavior. Several studies have investigated the influence of these factors on consumer behavior.

Color is a powerful tool in visual merchandising that can attract customers and influence their buying behavior. It has been found that certain colors can evoke specific emotions and affect consumers' perceptions of products and brands. For example, warm colors like red and orange are often associated with excitement and can create a sense of urgency, while cool colors like blue and green are calming and can promote a sense of trust and reliability (Jaini et al., 2021).

Lighting is another important element in visual merchandising that can create a welcoming and attractive store environment. Proper lighting can highlight products, create focal points, and enhance the overall ambiance of the store. Bright lighting can increase arousal and stimulate impulse buying behavior, while dim lighting can create a more relaxed and intimate atmosphere (Iberahim et al., 2019).

Music also plays a significant role in influencing consumer behavior. The tempo, volume, and genre of music can all impact customers' mood and emotions, which in turn can affect their buying decisions. Upbeat and fast-paced music can create a sense of excitement and urgency, while slow and soothing music can promote relaxation and encourage browsing (Tanveer et al., 2022).

Floor merchandising, which refers to how the store utilizes the floor space to display and promote products, is another important factor in attracting customers and stimulating impulse buying behavior. Effective floor merchandising can guide customers through the store, create visual interest, and encourage exploration. It can also influence the perception of product value and quality (Khisa et al., 2020).

Overall, these elements of visual merchandising, including color, lighting, music, and floor merchandising, can work together to create an attractive and engaging store environment that captures customers' attention and stimulates impulse buying behavior. Retailers can strategically utilize these elements to enhance the shopping experience and increase sales (Jaini et al., 2021).

The main objective of this study is to identify which merchandising tools influence the buying behaviour of Generation Z, more specifically the impulse buying tendency, by analysing 9 hypotheses using SmartPLS3 software. In short, at the end of this exercise, we will understand how consumers perceive these factors in their in-store impulse buying tendencies.

This research is divided into six sections. In line with the objectives of this research, a brief background on the evolution of marketing, the role of visual merchandising and its areas of application, as well as a notion of consumer behaviour and the main characteristics that define Generation Z will be provided. The literature review of this set of concepts allowed the development of nine hypotheses and, consequently, a conceptual model. This is followed by an explanation of the research methodology used, the data collection process and the corresponding measurement. The results obtained are then presented, interpreted and related to existing theory. Finally, the conclusions, contributions, limitations and suggestions for future research are presented.

2. Literature Review

2.1 Generation Z's Buying Behavior

Consumers are exposed to stimulating environments every day. Upon entering a supermarket, where there are thousands of products, people, colours, sounds and smells, each consumer reacts differently and sometimes unexpectedly to these stimuli. It is on the basis of these reactions and desires generated by the various stimuli that consumers make their decisions (Cant et al, 2006).

It is from this analysis that each store and retailer must derive its marketing and visual merchandising strategies. All the competition that currently exists in the retail sector makes each retailer strive more and more to provide the best and most appealing shopping experience for the consumer (Cant et al., 2013). However, unpredictability is part of the process and knowing that not all consumers will react in the same way, it is important to group them into segments that share the same characteristics. In this way, by developing specific strategies for each target, it is possible to obtain a more accurate response from consumers (Liu & Gao, 2022).

The entire sales process is centred on the shopper, and for this reason it is important to understand what are the spaces within the point of sale that can generate more interest, what arouses their curiosity, and even what can make them change their ideas at the moment of purchase (Araujo et al., 2017). Zenone and Buairide (2006) highlighted some motivations and factors that affect the customer's purchase process. The shopper is sensitive to the entire environment at the point of sale, be it the store ambience, the noise, the cleanliness, the lighting, and even the behaviour of the shop assistants and the layout of the products.

Once the customer has an overview of the environment, he or she begins to think about immediate needs. Throughout the buying process, the consumer becomes enthusiastic and motivated. Typically, these motivations take into account impulse purchases, whether of complementary, appealing and innovative products, the level of exposure of the products, and existing promotions and advertising. However, for this to happen, the shopper needs to recognise the utility of the product, the complementarity and even the notion of rotation that the product has. This can be achieved through visual or auditory advertising or point-of-sale materials (Jie & Chaetnalao, 2022).

For the purchase decision to be made, the consumer needs to feel comfortable and confident, and this is where the ambience of the store can have an impact, through colours, lighting, framing of the product in the space, layout, etc. The cleanliness of the space is also

linked to comfort, as well as the availability of information provided by staff, labels, prices, promotions, etc. (Hung et al., 2022). The cleanliness of the space is also related to comfort, as is the availability of information provided by staff, labels, price and promotional information, among others (Hung et al., 2022).

During the purchase process, economy also plays a role in the decision, as all consumers want to save money. Therefore, it is important to have a good product value by presenting the product in a good light, creating a good brand image and demonstrating the added value of the product. In turn, novelty also helps the loyalty process, as the shopper will associate the store where they usually shop with original, quality products. Transparency and credibility are also factors that can influence the customer, so it is crucial to be excellent at displaying prices and registering products at the checkout.

Last but not least, emotions summarise the motivations and factors that influence the customer's buying process, and are thought to be the customer's sense of fulfilment, especially when making an impulsive purchase. In short, the motivations highlighted by Zenone and Buairide (2006) are related to sensitivity, enthusiasm, profitability, comfort, cleanliness, information, economy, innovation, credibility and emotion. Therefore, all these motivations have their weight and relevance in the impulsive buying tendency. According to Beatty and Ferrel (1998), the impulsive buying tendency is the tendency to buy products spontaneously and unplanned, without thinking or considering the consequences.

According to Fister-Gale (2015), Generation Z consists of young people born in 1995 or later and is the most educated generation. They are also characterised by being extremely knowledgeable about the technology that surrounds them, innovative and truly creative (Priporas et al., 2017). In fact, since its emergence, Generation Z has proven to be very different from previous generations, and it is therefore believed that it will bring about major changes in consumer behaviour (Schlossberg, 2016).

Four major movements characterise this age group, which allows them to be distinguished from the others. First, the interest and curiosity for new technologies and the need to be constantly updated with everything that is happening in the world. Second, the search and selection of everything that is easy, which means that when given two options to choose from, Generation Z will tend to choose the easiest option that requires less effort. Third, the need to feel safe and in their comfort zone, and finally, the desire to sometimes step out of their own reality (Ernst & Young, 2015).

Due to this new way of being a consumer, it is clear that Generation Z is less loyal to different brands and retailers, and more concerned with the experience and values that brands

defend (Pina & Dias, 2021). Therefore, the industry increasingly feels the need to do more and better in order not to lose the attention of this segment (Schlossberg, 2016).

Özkan (2017) states that Generation Z, which is not yet as involved in business as the other generations, generally follows consumer trends. Part of this generation is still financially dependent on their parents, so they end up being more conscious and selective about how they spend their money and the products they choose to buy. They are increasingly aware of and sensitive to the concepts defended by brands, but they are no more loyal than previous generations. Surrounded by information and alternative products, Generation Z is constantly waiting for market innovation. These young people have a preference for products that bring real convenience to their lives, and for this reason they are the generation that researches products the most before buying them. Their final decision tends to be made by those who offer the best price.

At this point, the question arises: how will these very young, but very special, consumers be influenced by the visual merchandising of a channel that they use less and less? It is this question that I will focus on in the next few paragraphs.

The influence of visual merchandising can vary depending on the specific context and demographic. Research has shown that the appearance of merchandising has a significant impact on consumer behavior, including their perception of the store's ambiance, their willingness to spend time in the store, and their intentions to make a purchase ("Role of Visual Merchandising in Attracting Consumers in a Retail Store: A Quantitative Perspective", 2023). Elements of visual merchandising, such as shop windows and signs, have been found to be particularly persuasive in attracting consumers ("Role of Visual Merchandising in Attracting Consumers in a Retail Store: A Quantitative Perspective", 2023). Additionally, visual merchandising directly affects the shopping experience, making it important for retailers to ensure an efficient and appealing business climate (Mondol et al., 2021). The use of visually appealing designs and other visual merchandising stimuli can play a critical role in satisfying consumer experiences and influencing impulsive buying behavior (Sachitra & Konara, 2023). Determinants of visual merchandising, such as window displays, mannequin displays, floor merchandising, promotional signage, and lighting, have been found to influence customers' impulse buying behavior (Iberahim et al., 2019). Overall, visual merchandising has the potential to significantly impact consumers' brand attitude and purchase intention (Park et al., 2014).

2.2 Hypotheses Development and Conceptual Model

Given the topic under analysis, which is to understand how visual merchandising affects the buying behaviour of Generation Z in-store, more specifically the impulse buying tendency, it is crucial to understand the relevance of the hypotheses under study.

2.2.1 The impact of Store Layout on Impulsive Buying Tendency

The store layout is the way each retail store is organised and how each zone and element is distributed. This can include any signage that exists in the store, as well as displays, islands in the central aisle of the store and other materials. This distribution is designed from the outset to ensure that the consumer stays longer in the store and walks through all the aisles whenever possible (Parente, 2000).

According to Ong (2002), there are several ways to organise the layout of shelves, but retailers focus on three main methods: the grid, the free-flow and the forced-path layout. In line with what Ong (2002) says, Levy and Waitz (2004) also identified three similar ways of organising the space and aisles of a store, which are the grid, free-flow and circular layouts.

Ong (2002) states that the grid layout turns out to be the one that brings more profitability to the store and is therefore the most interesting. It is characterised by rectangular spaces with long parallel aisles. In this way, consumers are more exposed to all the products and end up having to walk through most of the aisles as the main products are in the corners of the store. The author also notes that this method is convenient for store staff, making it easier to restock shelves, check inventory, etc. This type of store layout is often used in supermarkets.

The second type of layout, free flow, is characterised by islands, displays and shelves that are freely and randomly distributed throughout the store. In this way, the consumer is free to make his or her own way through the space. This type of layout is more characteristic of apparel stores and ends up giving more emphasis to the store environment and the aesthetics of the space to make it more appealing to the consumer. This layout also allows the consumer to move through the different areas, leading to the possibility of impulse purchases. However, it is more expensive for the retailer (Ong, 2002).

The final method, the forced path, is a store layout where the consumer has to walk all the way through the store until they reach the checkout area again, giving them visual contact with most items as they walk through (Ong, 2002). It is therefore important for supermarkets to organise their space in such a way that consumers are directed to areas, but mainly to areas,

where the most desirable and profitable items are displayed (Peter & Olson, 1999). However, it is important not to neglect the comfort of the consumer by keeping the areas spacious, organised and easily accessible.

Davies and Tilley (2004) point to the importance of a good store layout as a factor that can lead to interesting consumer behaviour, such as increased purchase decisions. Most consumers make decisions based on what they observe at the point of sale, so it is important that the organisation of rooms, aisles and even shelves attracts them visually.

An optimised store layout makes it easier for consumers to find products, which in turn makes it easier for them to make decisions. If the consumer feels safe and comfortable in their usual supermarket, this feeling will make the shopper more susceptible to impulse buying (Aghazadeh, 2005). Even shoppers with more self-control tend to make impulse purchases in stores with a good layout (Sherman et al., 1997). Ghani and Kamal (2010) also consider store layout as an important stimulus for unplanned purchases. Therefore, the following research hypothesis was formulated:

H1: Store layout positively impacts the impulsive buying tendency of Generation Z in a retail store.

2.2.2 The effect of Lighting and Colors on Impulsive Buying Tendency

Colour and lighting are also fundamental to the consumer's buying process. These two elements should support the store layout and help guide customers through products and aisles. It is also something that should be well planned, as it can really affect the consumer's mood, both positively and negatively (Carvalho & Motta, 2004). In addition to the primary and obvious need for lighting at the point of sale for product and space visibility, lighting is also a very relevant aspect of the store interior. When it comes to retail stores, this detail becomes even more important as it has the ability to give the space personality and highlight areas and products. According to Ou et al. (2011), this effect is enhanced when combined with the right colours and tones.

Morton (2004) studied how people interpret colours and what they mean to them in a retail environment. He concludes that certain colours have an impact on the buying process: red, for example, is a symbol of passion and attraction, while yellow conveys happiness to the consumer. By using colour in conjunction with lighting, retailers can improve product presentation, increase visibility and make the environment more comfortable, attractive and

therefore more conducive to shopping. According to Newland and Hopper (2016), these two factors influence the consumer's mood and final decision and should therefore be used strategically.

According to Dunne and Lusch (2008), lighting has an impact on consumers and can influence their purchasing behaviour. Supermarkets use these lighting positioning techniques as a way to motivate the consumer to buy more of the featured products. As stated by Espinoza et al. (2004), the impulsive will to buy increases when they are in an environment that pleases them and makes them feel comfortable, either at the level of lighting or appropriate colours. Yildirim et al. (2007) also state that colours evoke some positive emotions in consumers and can therefore contribute to their purchasing decisions. If they make him feel more comfortable and confident in his environment, he is more likely to make unplanned purchases. This leads to the following hypotheses:

H2: Lighting positively impacts the impulsive buying tendency of Generation Z in a retail store.

H3: Colors positively impact the impulsive buying tendency of Generation Z in a retail store.

2.2.3 The importance of In-store Promotions on Impulsive Buying Tendency

According to Sumeisey (2014), promotional signage is any sign, communication or image that conveys a unique and differentiated promotional message that immediately captures the consumer's attention and indirectly acts as a salesperson whose goal is to sell. The aim of in-store promotions is to provide consumers with information that will help them make a purchase decision. Ali and Hasnu (2013) emphasise the importance of the effects of promotions and the materials used to highlight them, because if they are well developed, they can be the key in a moment of consumer indecision.

In addition to the promotions themselves, supermarkets also make extensive use of posters and other communication materials that are placed in the aisles, on shelves and at checkouts, with the main purpose of informing or promoting a campaign about products or services (Newlands & Hooper, 2016). These promotions help consumers to choose between brands for products that are bought on a regular basis (e.g. eggs, water, toilet paper, etc.), but can also lead to impulse purchases of products (Alves et al., 2022). These are products that

would not initially be on the shopping list, but the realisation that they are on sale makes consumers feel that they should take the opportunity to buy them.

In-store promotions and discounts are increasingly used techniques to encourage consumers to make impulse purchases (Lo et al, 2016). In addition, communication about promotions, offers and coupons scattered throughout the store can also act as a reminder to use a coupon or a reminder that something else may be missing from the home, leading the shopper to make an unplanned purchase.

Brands are increasingly aware of the impact of in-store promotions on sales, so they, along with retailers, are increasingly betting on samples, vouchers, coupons or other types of promotions (Atulkar & Kesari, 2017). In turn, the consumer's attention is also increasingly drawn to these types of promotions, as his final decision is largely related to the price and the value that the item has for him. For this reason, supermarkets are betting on what they know is one of the main drivers of impulse purchases (Atulkar & Kesari, 2017). With this in mind, the following hypothesis was developed:

H4: In-store promotions positively impact the impulsive buying tendency of Generation Z in a retail store.

2.2.4 The influence of Salesperson Interactions on Impulsive Buying Tendency

During the shopping process, consumers are more likely to follow suggestions and make successive impulse purchases when they need to buy a product about which they have no prior knowledge (Lo et al., 2016). These suggestions can reach the shopper through interactions with store staff, or even through the opinions of people who may be accompanying the customer.

According to Argo and Dahl (2020), interactions with in-store personnel also seem to influence the consumer's orientation in product analysis, which in turn influences the consumer's purchase choices and, ultimately, impulsive decisions. Similarly, in-store assistants tend to make recommendations that ultimately influence the final purchase decision. Interestingly, customers tend to spend more time shopping when they are accompanied, which is positive because not only are they exposed to more opinions, but they also end up spending more time in contact with the variety of products in the store, with more opportunities for impulse shopping (Pradhan, 2016).

In general, in-store salespeople are equipped with skills and instructions to assist consumers when necessary and contribute to the actual purchase of the product (Badgaiyan and

Verma, 2014). Among the various existing techniques used in customer interactions, one of the most common is to demonstrate the similarities between the shopper and the salesperson. When this happens, the consumer gains trust and tends to evaluate the salesperson and the point of sale positively, which in turn increases their purchase intentions (Mohan et al., 2013). In addition to all these techniques, Hartmann et al. (2020) mention that interactions with the salesperson influence purchase behaviour, and the way these interactions take place can really manipulate impulse purchases.

The interaction between a salesperson and visual merchandising elements plays a significant role in influencing consumer behavior. Visual merchandising elements, such as color, lighting, mannequins, music, and floor merchandising, are important in attracting customers and stimulating impulse buying behavior (Jaini et al., 2021). These elements can arouse internal emotions in customers and contribute to their in-store merchandise exploration, brand preference, and purchase intentions (Park et al., 2014). The combination of a salesperson's interaction with these visual merchandising elements can further enhance the overall shopping experience and influence customers' decision-making process (Khisa et al., 2020). By understanding the importance of these elements and their impact on consumer behavior, retailers can strategically utilize visual merchandising and train their salespeople to effectively engage with customers and drive sales (Jaini et al., 2021). For this reason, it was hypothesized:

H5: Salesperson interactions positively impact the impulsive buying tendency of Generation Z in a retail store.

2.2.5 Store Ambiance as a mediating effect

According to Foster and McLelland (2015), store ambiance includes not only the physical elements present in a retail store, such as the store layout, floor, shelves, windows, etc., but also non-palpable elements such as lighting, colours and smells. Naturally, this topic has attracted increasing interest from retailers, who are increasingly looking for techniques and strategies to increase in-store sales.

Zhou and Wong (2004) show that store ambiance is a conscious and collective effort by retail store teams to create an environment that generates emotional effects on consumers and, consequently, a desire to buy. If consumers feel good when they enter the store, and if the emotions that the environment evokes in them are pleasant, they are more likely to stay for a

longer period of time, which means that retailers can, in a sense, actively manipulate shoppers' stimuli (Vieira, 2013).

Store ambience is an aggregation of a number of physical and non-physical factors (store layout, displays, music, colours, lighting, etc.) and has therefore attracted interest in stores (Mohan et al., 2013). Retailers use these elements to create a pleasant, comfortable and stimulating experience for the shopper, which in turn leads to more purchases. A smart, user-friendly store layout, shelves arranged in the way shoppers plan their purchases, lighting directed at strategic points, and colours and music that create a welcoming environment make the shopper's experience much more interesting (Mohan et al. 2013). Thus, by strategically aligning each of these factors, store ambience has the ability to influence unplanned shopping behaviour. In this sense, the following hypothesis emerges:

H6: Store ambience positively impact the impulsive buying tendency of Generation Z in a retail store.

As store ambience theoretically aggregates a number of variables, it was also used as a mediator between each of the variables (store layout, lighting and colours) and impulse buying behaviour to understand how strong each of them is when combined with the other factors. The following mediation hypotheses emerged:

H7: Store ambience mediates the relationship between store layout and impulsive buying tendency of Generation Z in a retail store.

H8: Lighting mediates the relationship between store layout and impulsive buying tendency of Generation Z in a retail store.

H9: Color mediates the relationship between store layout and impulsive buying tendency of Generation Z in a retail store.

2.2.6 Conceptual Model

According to the themes presented in the literature review, and taking into account the different relationships revealed between the different variables, we propose the theoretical model presented below (Figure 1).

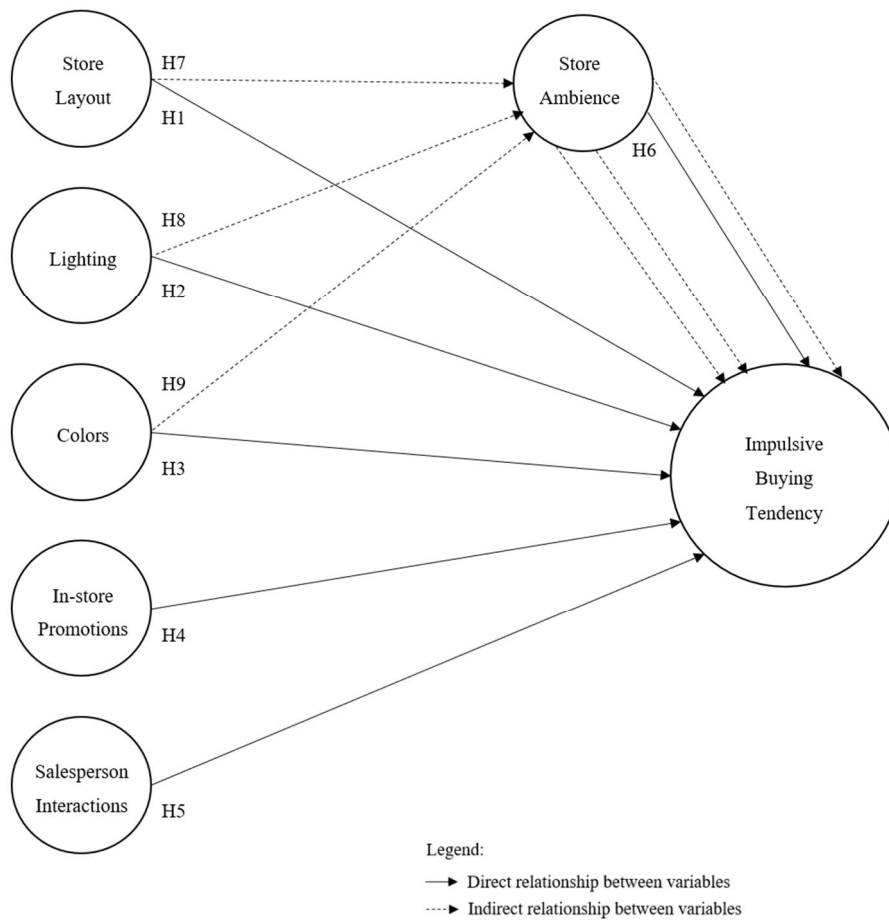


Figure 1. Conceptual Model

3. Methodology

3.1. Data collection and Sample

The methodology used in this thesis was the analysis of primary data. A quantitative study was conducted using the literature review, which allowed the development of viable hypotheses and a conceptual model. The hypotheses stated in this deductive analysis are supported by existing ideas and literature (Woiceshyn & Daellenbach, 2018). According to Locke (2007), the deductive approach involves moving from the general to the specific, which means starting with a theory that leads to the development of a hypothesis.

On the basis of the model designed and the hypotheses to be evaluated, a questionnaire aimed at Generation Z was developed. A questionnaire was chosen as the means of data collection because it is the most used method in this type of research, not only because of its

reduced cost, but also because of the ease of processing information and the low probability of error (Vilelas, 2009).

The questionnaire was first tested on a group of 8 people, not only people familiar with the terms and involved in this aspect of marketing, but also family and friends who had no connection with the area. In this way it was possible to identify possible errors or less clear and perceptible issues. Once this group had analysed the questionnaire and made the necessary improvements, the questionnaire was officially released. It should be noted that the responses collected in the pre-test were not included in the final sample.

The group that analysed the questionnaire and pretested it made it possible to review the syntax of the questions and change a number of technical terms that could be difficult to interpret, as well as simplifying the questionnaire so that there were no overlapping questions with potentially identical answers. This exercise made the research instrument clearer and more comprehensible. It was also possible with the pretest to estimate the interview time so that when the information was collected in the field it was presented with greater rigour.

This questionnaire, created using the Google Forms platform, was circulated on social networks from 15 to 22 March and received a total of 206 valid responses.

The questionnaire consisted of a short introduction to explain the main objectives of the study and the confidentiality of the data provided, followed by a series of questions divided into three main groups. The first group, consisting of 5 questions and called "consumer profile", aimed to analyse the main purchasing and consumption behaviours of these young people. The second group analysed the respondents' perception of the variables that support the hypothesis. Finally, a short set of socio-demographic questions were asked.

In terms of socio-demographic data, the sample consisted of 206 young people born up to 1995, of whom approximately 71% were female and the rest male. In terms of educational level, more than 57% have a bachelor's degree and almost 28% have a master's degree, with the rest of the sample having lower educational levels.

The key points of the consumer profile are as follows 47% of the sample shop in a supermarket once a week, 34% shop two to four times a week and only 2.5% shop daily. This means that around 83% of respondents are influenced by retailer merchandising at least once a week. When analysing the type of purchases usually made by the participants in this study, it is interesting to note that, despite the growth of the Internet and the possibilities of buying via the Internet, 87% of the sample claim to make all their purchases in a physical store, with none of this group of people making all their purchases via the retailers' websites.

In terms of how the consumers in this study shop in the supermarket, around 75% say they take a shopping list with them and try to understand in the store if there is anything they might be missing. Only 10% of the sample limit themselves to what they have already decided to buy, while the remaining 15% analyse everything they need in the store. With this data, we can see the impact that visual merchandising can effectively have on consumers, namely on impulse buying, as almost 90% recognise that the final decision is made in the store.

In order to get a first impression of some of the aspects that can directly or indirectly influence the consumer, respondents were asked about the importance of a number of factors in their decision making. An analysis of the responses shows that the first two factors considered most important were price, followed by promotion. The third factor, which was also considered important, was the recommendation of family and friends, followed by innovation in the market and the recommendation of experts. Finally, and not considered very important by the sample, is the recommendation of influencers. This set of factors is usually used in stores as a trigger for an impulse purchase, either through materials that highlight prices and/or promotions through flashy colours such as yellow and red, or through the use of materials that use images of influencers or statements such as "Recommended by experts".

The final question for this group was to think about the supermarket where they tend to shop. Around 42% said Continente was their first choice and around 31% said Pingo Doce. This question was particularly important as it was the starting point for the next group.

3.2. Instrument and Variables

The second part of the questionnaire was divided into seven different groups, which in turn were divided into three to five statements. To measure these variables, existing scales that have been previously studied by other authors were used. The statements relating to store layout, lighting and colours, in-store promotions, store ambience and salesperson interaction were included in the set of independent variables. The dependent variable is impulse buying tendency. In addition, between three and five statements were collected for each variable. And in order to form this measurable model, a five-point Likert scale was used, with 1 being "I totally disagree" and 5 being "I totally agree". Although the questionnaire was developed in Portuguese, due to the target population, all the statements analysed were taken from literature written in English, so they had to be translated into the language in which the survey was carried out. This translation was carried out with due care so that the statements fully reflected what the authors intended.

4. Results

4.1 Data analysis

To evaluate the conceptual model presented above, the partial least squares regression (PLS) method was used using SmartPLS 3 software (Ringle et al., 2015). Subsequently, the analysis and understanding of the results was divided into two parts, the first focusing on analysing the reliability and validity of the model, and the second on evaluating the results of the structural model.

In order to test the quality of the model, indicators of reliability, convergent validity, reliability of internal consistency and discriminant validity were used. The results obtained indicate a standardised factor loading of all the elements, as they were all above 0.6 (the minimum value being 0.69). Since $p < 0.001$, it is concluded that the reliability of each indicator has been demonstrated (Hair et al., 2017).

Next, it was observed that the Cronbach's alpha coefficient (α) and the composite reliability (CR) had values above the threshold of 0.7 (Hair et al., 2017). Thus, the reliability of internal consistency was confirmed (Table 1). Convergent validity was also confirmed, as all elements had positive and significant loads, the composite reliability (CR) values were greater than 0.7, and all variables obtained average variance extracted (AVE) values greater than 0.5 (Bagozzi & Yi, 1998), as shown in Table 1.

Table 1. Cronbach's Alpha Coefficient (α), Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	α	CR	AVE
(1) Colors	0.882	0.914	0.682
(2) Impulse Buying Tendency	0.713	0.803	0.576
(3) Layout	0.840	0.879	0.593
(4) Lighting	0.840	0.902	0.756
(5) In Store Promotions	0.878	0.925	0.804
(6) Salesperson Interactions	0.840	0.901	0.752
(7) Store Ambience	0.772	0.898	0.814

Two different approaches were then used to assess discriminant validity. First, a criterion proposed by Fornell and Larcker (1981) was used, which states that the square root of the average variance extracted (AVE), shown in bold in Table 2, must be greater than the highest correlation value between the variables, and as can be seen, this principle is fulfilled by all constructs (Table 2). Next, the heterotrait-monotrait ratio (HTMT) was applied (Hair et al., 2017; Henseler et al., 2015), which stipulates that all HTMT values must be less than 0.85. When analysing the values presented in Table 2, this criterion is also confirmed, thus providing evidence of discriminant validity.

Table 2. Correlations and support for discriminant validity

Variables	1	2	3	4	5	6	7
(1) Colors	0.826	0.348	0.417	0.519	0.258	0.438	0.391
(2) Impulse Buying Tendency	0.269	0.759	0.351	0.114	0.779	0.319	0.684
(3) Layout	0.375	0.284	0.770	0.452	0.394	0.411	0.408
(4) Lighting	0.440	0.032	0.373	0.869	0.160	0.288	0.227
(5) In Store Promotions	0.228	0.593	0.357	0.134	0.897	0.339	0.639
(6) Salesperson Interactions	0.368	0.249	0.365	0.233	0.305	0.867	0.440
(7) Store Ambience	0.327	0.481	0.377	0.188	0.532	0.365	0.902

Note: Diagonal numbers shown in bold are the square roots of AVE. Below the diagonal are the correlations between the variables. Above the diagonal are the HTMT values.

The variance inflation factor (VIF) was used to assess the collinearity of the model. According to the results obtained, where the minimum VIF is 1.24 and the maximum is 1.57, both below the critical value of 5.0 (Hair et al., 2017), it is concluded that there is no collinearity.

Finally, the structural model was analysed by the size and significance of its structural coefficients, taking into account the evaluation of two metrics: (1) the predictive accuracy through the values of R², and (2) the assessment of the predictive relevance through the values of Q² (Hair et al., 2017). The R² values of the model-dependent variables: impulsive buying tendency and store ambience were 42% and 18%, respectively. These values are greater than 10% (Falk & Miller, 1992), so the predictive accuracy of the model can be confirmed. With regard to the Q² scores for the same variables mentioned above, they were 0.222 and 0.132 respectively, indicating the predictive relevance of the model, as they are values greater than

zero. It is also worth mentioning the use of bootstrapping with 5000 repetitions, a non-parametric procedure that allowed us to assess the significance of the estimates of these parameters.

4.2 Direct effects

Table 3 below shows that the variables with the highest correlation between them are in-store promotions and impulse buying tendency ($\beta = 0.457$). On the other hand, the opposite is observed with colours and impulse buying tendency, as they are the variables with a lower relationship ($\beta = 0.148$).

When analysing the direct effects between the different variables, colours have a significant positive effect on impulse buying ($\beta = 0.148$, $p > 0.001$), which supports H3. Contrary to the previous variables, store layout does not have a significant positive effect on impulse buying ($\beta = 0.046$, n.s.), which does not support H1.

Lighting, on the other hand, has a significantly negative relationship with impulse buying ($\beta = -0.149$, $p < 0.05$), which supports H2. In-store promotions are highly correlated with impulse buying ($\beta = 0.457$, $p < 0.001$), supporting H4.

Salesperson interactions have no significant effect on impulse buying ($\beta = 0.000$, n.s.), so H5 is not supported. Finally, store ambience has a significant positive effect on impulse buying ($\beta = 0.200$, $p < 0.01$), supporting H6.

Table 3. Structural model assessment

Direct Effects	Path Coefficient	Standard Errors	t Statistics	p Values
Colors -> Impulse Buying Tendency	0,148	0,063	2,353	0,019
Colors -> Store Ambience	0,224	0,088	2,548	0,011
Layout -> Impulse Buying Tendency	0,046	0,075	0,610	0,542
Layout -> Store Ambience	0,301	0,076	3,938	0,000
Lighting -> Impulse Buying Tendency	-0,149	0,060	2,471	0,014

Lighting -> Store Ambience	-0,023	0,074	0,309	0,757
In Store Promotions -> Impulse Buying Tendency	0,457	0,069	6,574	0,000
Salesperson Interactions -> Impulse Buying Tendency	0,000	0,056	0,006	0,995
Store Ambience -> Impulse Buying Tendency	0,200	0,073	2,738	0,006

4.3 Mediating effects

To test the mediation hypotheses, the recommendations of Hair, et al. (2017, p. 232) were followed. The bootstrapping procedure was used to test the significance of indirect effects through mediators (Preacher & Hayes, 2008). In this sense, Table 4 reflects the results of the mediation effects analysed.

The indirect effect of lighting on impulse buying through the mediating effect of store ambience is not significant ($\beta = -0.005$, n.s.) and therefore does not support H8.

Similarly, the indirect effect of colours on impulse buying through the mediated effect of store ambience is also not significant ($\beta = 0.045$, n.s.), which also does not support H9. In the opposite direction, and in support of H7, it was found that the indirect effect of store layout on impulse buying through the mediated effect of store ambience is significant ($\beta = 0.060$, $p < 0.05$).

Table 4. Result of specific mediating effects

Direct Effects	Path Coefficient	Standard Errors	t Statistics	p Values
Lighting -> Store Ambience -> Impulse Buying Tendency	-0,005	0,015	0,306	0,760
Colors -> Store Ambience -> Impulse Buying Tendency	0,045	0,023	1,937	0,053
Layout -> Store Ambience -> Impulse Buying Tendency	0,060	0,028	2,133	0,033

5. Discussion

Consumer behaviour in-store, and therefore impulse buying, is closely linked to a number of internal and external factors. From the store environment, which includes layouts, colours, staff, promotions and other factors, there are a number of techniques that can help the supermarket achieve more sales, even unplanned sales. However, these factors affect different generations in different ways, and what affected a consumer 20 years ago may not affect them today. Generation Z has revolutionised many aspects, bringing with it new needs and trends. This study has allowed us to understand how visual merchandising is still influencing this generation.

5.1 Direct effects

According to the study conducted, the store layout did not have a direct and significant impact on the impulsive buying behaviour of Generation Z. The store layout provides the consumer with a better shopping experience, which, by making them feel comfortable and confident, can lead to a greater desire to buy. However, this factor alone may not be strong enough to lead Generation Z, a generation that is increasingly aware of their spending and more knowledgeable about what they are looking for, to make unplanned purchases (Özkan, 2017). Moreover, it could be argued that this effect is difficult for consumers to perceive when evaluating their behaviour in stores. Thus, contrary to what some authors argue, H1 was not validated and the variable store layout does not have a direct effect on the impulsive buying behaviour of Generation Z. Nevertheless, as we will see later, this variable will have a strong relationship with the variable impulsive buying tendency through a mediating variable.

Lighting, analysed in H2, showed a negative correlation with Generation Z's impulsive buying tendency. Although these results were not presented by the authors in the literature review, this relationship may be related to the fact that Generation Z's impulse buying moments occur in situations where stores have weaker lighting. This means that it is in large supermarket chains, where the lighting is well planned and contributes to their comfort, that consumers tend to make their planned and regular purchases. However, in supermarkets with poor lighting, such as corner shops, the consumer may be more inclined to make an unplanned purchase.

Contrary to the results shown here, several authors have classified colours at the point of sale, which usually convey pleasant sensations to the consumer and can also be used as a means of highlighting other aspects of the store (e.g. promotional labels), as a strategy that

contributes to impulsive buying tendencies (Yildirim et al., 2007). H3 confirms that in-store colour continues to have a significant positive effect on impulse buying among Gen Z. This relationship is certainly strengthened by the fact that this generation has so much information at their fingertips that they rely more and more on strong information, attractive colours and images to grab and hold their attention long enough to make an impulse purchase.

In-store promotions, which have been identified by numerous authors in the literature as one of the biggest triggers for impulse buying, are also the variable in this study that has the highest correlation with impulse buying tendency (Atulkar & Kesari, 2017). Consumers are very influenced by prices, or the discounts and offers associated with them, in their purchasing process, which often leads them to make unplanned purchases. Generation Z maintains the same trend, and as the relationship analysed in H4 shows, in-store promotions continue to have a significant positive impact on this generation's impulsive buying behaviour.

Although some authors claim that interactions with the salesperson can influence the consumer's buying behaviour and consequently the impulse buying tendency, this is not supported by the results of H5 when it comes to Generation Z. Generation Z tends to do deeper research throughout their buying process in order to find the best prices, in the best stores, and that the final decision brings them the most added value (Özkan, 2017). In this way, they become less susceptible to suggestions or opinions that may come from third parties and are therefore less influenced in this way. In this sense, the fact that interactions with the salesperson do not have a significant effect on impulsive buying tendencies may be related to this behaviour of Generation Z.

Finally, and in line with what the authors say about this variable, store ambience proved to have a positive and significant effect on the impulsive buying tendency of Generation Z analysed in H6. Store ambience, which aggregates a set of techniques and tools used at the point of sale, such as layout, music, colours, promotional signs, among others, continues to be relevant in the buying process of this new and different generation (Foster & McLelland, 2015). If the retailer succeeds in highlighting the brands and their messages to the consumer through the ambience of the store, if it presents good prices and interesting offers, and if it succeeds in highlighting these products in a creative way, it will continue to be able to capture the attention of these young consumers even in this traditional channel.

5.2 Mediating effects

Based on the results obtained, store ambience does not mediate between lighting and colours, but it does mediate between store layout and impulse buying. However, although these relationships may make sense in practice, they are still poorly developed from a theoretical point of view. In this way, this study also presents its theoretical contribution to the development of research related to the mediating effect of store ambience in impulse buying.

Store ambience as a mediating effect had neither a positive nor a negative effect on the relationship between lighting and colours and impulse buying, according to the results of H8 and H9. In the direct analysis between the variables, lighting already showed a negative relationship with impulse buying (H2). This negative relationship, although not previously explained by other articles and authors, may be related to the way in which poor lighting can act as an impetus for unplanned purchases in convenience stores. In this sense, and following the same reasoning, the ambience of the store will not affect the impulse buying tendency in these situations, as this type of store places little emphasis on this aspect. Colours, on the other hand, have the ability to evoke a wide range of emotions in the consumer and, if used well, can contribute positively to the feeling of being in the store. According to the results obtained in H9, this variable can act individually in the impulsive buying tendency, without necessarily depending on the other elements of the store ambience. Colours, regardless of the situation, can always contribute to the impulsive buying tendency of Generation Z, regardless of the environment around them.

Store layout, on the other hand, did not show a direct relationship with impulse buying, but there is some effect through the mediating effect of the ambience store. Store ambience includes a number of variables that help consumers feel comfortable and motivated in the store. Although the store layout does not have this direct effect, it does contribute, in combination with other physical and non-physical factors, to making the consumer more susceptible to impulse buying.

6. Conclusion

6.1 Theoretical conclusions

The aim of this study was to understand how visual merchandising influences the buying behaviour of Generation Z, in particular their impulse buying tendencies, in a retail

environment. Several variables were defined to investigate this issue, including store layout, lighting, colours, in-store promotions, salesperson interactions and store ambience, taking into account findings from other studies on the same topic.

The various threads in the literature pointed to a strong relationship between these elements and the tendency to make unplanned purchases, although there is still no literature and studies analysing these relationships for Generation Z. However, through a questionnaire and analysis of the results using SmartPLS3 software, it was possible to confirm some relationships between variables. The results suggest that there are positive effects between in-store promotions, store ambience and the impulse buying tendencies of Gen Z. Lighting has also been shown to have an impact on the latter variable, but the effect is negative. These results allowed us to test H2, H4 and H6.

Although the results did not show a positive effect between store layout and the impulsive buying tendency of Generation Z, which does not support H1, this variable already showed a positive relationship through the mediating effect of store ambience, which supports H7. Although store ambience is a mediating effect between store layout and impulse buying, the same is not true for colours and lighting, leading to the non-validation of H8 and H9.

Thus, by comparing the results of this study with those of other literature, this study shows that the impact of visual merchandising in retail stores on impulse buying is not reflected in the same way across generations. On the other hand, the results obtained with Generation Z are partly justified by the main characteristics of their buying habits.

6.2 Managerial Implications

Firstly, in-store promotions have been shown to positively influence the impulse buying tendencies of this demographic. Retailers should, therefore, concentrate on creating compelling, time-sensitive promotions. This could involve using digital signage or strategically placed posters to highlight these promotions, or even leveraging mobile apps and QR codes to offer exclusive in-store discounts. Sales staff should also be well-informed about ongoing promotions to effectively communicate them to customers.

Secondly, the study highlighted the importance of store ambience. It not only has a direct positive effect on impulse buying but also serves as a mediator between store layout and impulse buying. Retailers should invest in creating a welcoming atmosphere, which could include the right choice of music, scent, and temperature. The store layout should also be designed to facilitate easy navigation and enhance the overall ambience. High-impulse items

could be placed near the checkout or along main pathways, and signage could be used to guide customers through the store.

Interestingly, the study found that lighting has a negative impact on the impulse buying tendencies of Generation Z. Retailers should consider opting for softer, more natural lighting as opposed to harsh, bright lights. Mood lighting in certain sections of the store could also be experimented with, and tests could be conducted to find the optimal lighting setup for this demographic.

The study did not find a significant relationship between colors and salesperson interactions on impulse buying for Generation Z. While colors may not directly influence impulse buying, they can still be used to reinforce brand identity. Sales staff should be trained to engage with Generation Z customers in a manner that aligns with their buying habits, which could include leveraging technology for more personalized interactions.

It's also crucial to note that the impact of visual merchandising elements on impulse buying is not uniform across generations. Retailers might consider segmenting store areas or times of day to cater to different generational preferences. Data analytics should be used to continuously monitor the effectiveness of visual merchandising strategies across different customer demographics.

Lastly, as this is one of the first studies to analyze these variables for Generation Z, continuous research is essential. Retailers should conduct periodic customer surveys to gauge the effectiveness of the changes they implement and use in-store analytics tools to track customer behavior, as suggested by Costa et al. (2020). By understanding and implementing these implications, retailers can better cater to the unique buying behaviors of Generation Z, thereby maximizing revenue and enhancing customer satisfaction.

6.3 Limitations and further research

Throughout this study, some relevant limitations have emerged that could be improved in future research.

Firstly, the sample used may be limited as it does not guarantee the inclusion of the different elements of the population in such a way that the results of the sample can be generalised to the population. As this was a quantitative study, it would be interesting in future studies to approach the subject in a more qualitative way, also in order to understand some of the results obtained through the questionnaire.

Also, as the results were obtained through a survey where respondents were asked to recall times when they shopped and give feedback on how they felt they reacted in certain circumstances, there may be some bias in the responses. Ideally, an in-store questionnaire should be administered just after the consumer has finished shopping, as the whole process is still fresh in their mind. In addition to this method, an in-store analysis of how the consumer reacts to certain situations can be carried out in the future to understand the real impact of the stimulus without forcing the consumer to think about it.

It's also relevant to note that the research on how visual merchandising influences the buying behavior of Generation Z offers valuable insights but has some limitations, particularly in the scope of its applicability across different types of retailers and commodity sections. The study did not delve into how impulse buying tendencies might vary between, for example, imported supermarkets and fair-price supermarkets, or between different commodity sections like appliances and food. These are critical aspects that future research should consider.

The study focused on general retail environments without distinguishing between the types of retailers like imported supermarkets, which often carry high-end or exotic products, and fair-price supermarkets, which focus on affordability. The impulse buying triggers in these two types of retail settings could be fundamentally different. For instance, in imported supermarkets, the allure of unique or exclusive items might drive impulse buying, while in fair-price supermarkets, promotions or discounts could be more effective. Future research should explore these nuances to offer more targeted managerial implications.

Another limitation is the lack of focus on how different commodity sections within a store might influence impulse buying. Appliances are generally considered high-involvement purchases that are less likely to be bought on impulse, whereas food items, especially snacks and candies, are more prone to impulse buying. Understanding these differences could lead to more effective merchandising strategies tailored to each section. Future studies could explore how visual merchandising strategies could be adapted to different types of products to maximize their impact on impulse buying.

The study also did not explore the possibility of employing cross-sectional strategies, where elements from one type of retail setting are applied to another to influence impulse buying. For example, could a fair-price supermarket benefit from introducing an 'exclusive' section that employs merchandising strategies common in imported supermarkets? Or could imported supermarkets drive more impulse buying by incorporating discount strategies typically found in fair-price supermarkets? These are questions that future research could aim to answer.

In summary, while the study provides a foundational understanding of how visual merchandising impacts the impulse buying behavior of Generation Z, there is a need for more nuanced research. Future studies should consider the variations in impulse buying tendencies across different retail settings and commodity sections to offer a more comprehensive view. This would not only enrich the academic literature but also provide retailers with more targeted strategies to cater to different customer behaviors and preferences.

References

- Aghazadeh, S. (2005). Layout strategies for retail operations: A case study. *Management Research News*, 28(10), 31–46. <https://doi.org/10.1108/01409170510785002>
- Ali, A., & Hasnu, S. (2013). An analysis of in-store shopping environment on consumers' impulse buying: Evidence from Pakistan. 560–570.
- Alves, H. M., Sousa, B., Carvalho, A., Santos, V., Lopes Dias, Á., & Valeri, M. (2022). Encouraging brand attachment on consumer behaviour: Pet-friendly tourism segment. *Journal of Tourism, Heritage & Services Marketing*, 8(2), 16-24.
- Araujo, M. H. B. de, Ribeiro, H. C. M., & Bezerra, E. P. (2017). Visual Merchandising: A Vitrine e sua Influência no Comportamento do Consumidor. *Revista de Gestão E Contabilidade Da UFPI*, 4(2), 56. <https://doi.org/10.26694/2358.1735.2017.v4ed25668>
- Argo, J. J., & Dahl, D. W. (2020). Social Influence in the Retail Context: A Contemporary Review of the Literature. *Journal of Retailing*, 96(1), 25–39.
- Atulkar, S., & Kesari, B. (2017). Impulse Buying: A Consumer Trait Prospective in Context of Central India. *Global Business Review*, 19(2), 477–493. <https://doi.org/10.1177/0972150917713546>
- Badgaiyan, A. J., & Verma, A. (2014). Intrinsic factors affecting impulsive buying behaviour—Evidence from India. *Journal of Retailing and Consumer Services*, 21(4), 537–549. <https://doi.org/10.1016/j.jretconser.2014.04.003>
- Bagozzi, R. P., & Yi, Y. (1998). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. <https://doi.org/10.1007/bf02723327>
- Bahman, S. P., Kamran, N., & Mostafa, E. (2013). The effect of marketing mix in attracting customers: Case study of Saderat Bank in Kermanshah Province. *African Journal of Business Management*, 7(34), 3272–3280. <https://doi.org/10.5897/ajbm12.127>
- 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. <https://doi.org/10.1177/0092070394224002>
- Beatty, S. E., & Ferrell, E. M. (1998). Impulse buying: Modeling its precursors. *Journal of Retailing*, 74(2), 169–191. [https://doi.org/10.1016/s0022-4359\(99\)80092-x](https://doi.org/10.1016/s0022-4359(99)80092-x)
- Blessa, R. (2003). *Merchandising no ponto-de-venda*. Atlas, 2, 206.
- Boone, L. E., & Kurtz, D. L. (2015). *Marketing Contemporâneo*. Cengage.
- Buttle, F. (1984). Merchandising. *European Journal of Marketing*, 18(6/7), 104–123. <https://doi.org/10.1108/eum0000000004795>

- Cant, M. C., A Brink, & Sanjana Brijball. (2006). *Consumer behaviour*. Juta.
- Cant, M. C., Hefer, Y., & Machado, R. (2013). Visual merchandising displays: Positive or negative effect on consumer behaviour? *Gender and Behaviour*, 11(2), 5720–5727. <https://doi.org/10.10520/EJC144832>
- Cant, M. C., Van Heerden, N., & Ngambi, H. C. (2010). *Marketing management a South African perspective*. Juta Academic.
- Carvalho, J. L. F. dos S. de, & Motta, P. C. (2004). A Iluminação Ambiental Vista pelos Participantes das Interações de Serviços. *Revista Eletrônica de Gestão Organizacional*, 2(1).
- Cordova, G. I., Surichaqui, S. del R. G., Ricaldi, F. del P. P., & VicenteRamos, W. (2020). Impact of visual merchandising on the purchase decision of consumers from retail stores in central Peru. *Management Science Letters*, 2447–2454. <https://doi.org/10.5267/j.msl.2020.4.005>
- Costa, R. L., Pereira, L. F., Dias, A. L., & Gonçalves, R. (2020). Engage customers in co-creation: Is critical for projects success. *The Journal of Modern Project Management*, 8(2), 65-73. <https://doi.org/10.19255/JMPM02405>.
- Davies, J., & Tilley, N. (2004). Interior Displays: Using the management services approach in retail premises. *Managing Services*, 10, 48 (7), 10–13.
- Dunne, P. M., & Lusch, R. F. (2008). *Retailing* (6th ed.). Thomson Higher Education.
- Ernst & Young LLP. (2015). *What if the next big disruptor isn't a what but a who?* https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/digital/ey-rise-of-gen-z-new-challenge-for-retailers.pdf
- Espinoza, F., Liberali, G., & D'Angelo, A. (2004). Testing the influence of retail atmosphere on store choice criteria, perceived value and patronage intentions. *American Marketing Association*, 120–125.
- Etzet, M. J., Walker, B. J., & Stanton, W. J. (2005). *Marketing*. Makron Books.
- Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling*. University Of Akron Press.
- Farias, D. O. S., Santana, P. S., & Rosa, F. D. C. (2020). Neuromarketing e a influência do Shopper no Ponto de Venda: Estudo de Caso do Produto Desodorante. *Revista Acadêmica Da Faculdade Progresso*, 6(1).
- Ferreira, B., Marques, H., Caetano, J., Rasquilha, L., & Rodrigues, M. (2015). *Fundamentos de marketing*. Edições Sílabo.

- Filipe, S., Rocha, A., & Vilhena, D. (2018). O Comportamento do Consumidor perante as Ações Promocionais no Ponto de Venda. *International Journal of Marketing, Communication and New Media*, 6(2182-9306), 49–75.
- Fister-Gale, S. (2015). Forget millennials: are you ready for gen Z? *Chief Learning Officer*, 38–48.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Foster, J., & McLelland, M. A. (2015). Retail atmospherics: The impact of a brand dictated theme. *Journal of Retailing and Consumer Services*, 22, 195–205. <https://doi.org/10.1016/j.jretconser.2014.07.002>
- Garcia, S. F. A., Gonzalez, S., & Mauad, T. (2010). Análise do Comportamento de Compra de Três Segmentos de Consumidores nos Supermercados. *Revista Brasileira de Marketing*, 9(1), 17–39. <https://doi.org/10.5585/remark.v9i1.2150>
- Ghani, U., & Kamal, Y. (2010). The impact of in-store stimuli on the impulse purchase behaviour of consumers in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 8(2), 155–160.
- Gudonavičienė, R., & Alijošienė, S. (2015). Visual Merchandising Impact on Impulse Buying Behaviour. *Procedia - Social and Behavioral Sciences*, 213, 635–640. <https://doi.org/10.1016/j.sbspro.2015.11.464>
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). SAGE Publications.
- Hartmann, N., Plouffe, C. R., Kohsuwan, P., & Cote, J. A. (2020). Salesperson influence tactics and the buying agent purchase decision: Mediating role of buying agent trust of the salesperson and moderating role of buying agent regulatory orientation focus. *Industrial Marketing Management*, 87, 31–46. <https://doi.org/10.1016/j.indmarman.2020.02.023>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Inman, J. J., Winer, R. S., & Ferraro, R. (2009). The Interplay among Category Characteristics, Customer Characteristics, and Customer Activities on in-Store Decision Making. *Journal of Marketing*, 73(5), 19–29. <https://doi.org/10.1509/jmkg.73.5.19>
- Kardes, F., Cronley, M., & Cline, T. (2014). Consumer Behavior. Cengage Learning.

- Katakam, B. S., Bhukya, R., Bellamkonda, R. S., & Samala, N. (2021). Longitudinal analysis versus cross-sectional analysis in assessing the factors influencing shoppers' impulse purchase behavior – Do the store ambience and salesperson interactions really matter? *Journal of Retailing and Consumer Services*, 61, 102586. <https://doi.org/10.1016/j.jretconser.2021.102586>
- Kotler, P. (1974). Atmospherics as a Marketing Tool. *Journal of Retailing*, 49, 48–64.
- Kotler, P. T., & Armstrong, G. (2018). Principles of Marketing (17th ed.). Pearson.
- Kotler, P., Kartajaya, H., & Setiawan, I. (2017). Marketing 4.0: Mudança do Tradicional para o Digital. In *Comunicação pública* (Issues Vol.14 nº 27). Conjuntura Actual Editora. <https://doi.org/10.4000/cp.4302>
- Kotler, P., & Keller, K. L. (2013). *Administração de Marketing* (14th ed.). Pearson Education.
- Kwok, L., Tang, Y., & Yu, B. (2020). The 7 Ps marketing mix of home-sharing services: Mining travelers' online reviews on Airbnb. *International Journal of Hospitality Management*, 90(0278-4319). <https://doi.org/10.1016/j.ijhm.2020.102616>
- Laurindo, D. M. (2018). *A Origem e a Evolução do Marketing*. 29º Enangrad.
- Levy, M., & Weitz, B. A. (2004). Retailing Management (5th ed.). McGraw-Hill Irwin.
- Lima, D. (2016). Effects of Marketing in different stages of development. *Academic Journal of Business, Administration, Law and Social Sciences*, 2(2410-3918), 343–348.
- Lo, L. Y.-S., Lin, S.-W., & Hsu, L.-Y. (2016). Motivation for online impulse buying: A two-factor theory perspective. *International Journal of Information Management*, 36(5), 759–772. <https://doi.org/10.1016/j.ijinfomgt.2016.04.012>
- Locke, E. A. (2007). The Case for Inductive Theory Building. *Journal of Management*, 33(6), 867–890. <https://doi.org/10.1177/0149206307307636>
- Marques, S. H., Cardoso, M. M., & Palma, A. P. (2013). Environmental factors and satisfaction in a specialty store. *The International Review of Retail, Distribution and Consumer Research*, 23(4), 456–474. <https://doi.org/10.1080/09593969.2013.785442>
- Masson, J. É., & Welloff, A. (1997). *Que é o Merchandising?* Cetop.
- Mohan, G., Sivakumaran, B., & Sharma, P. (2013). Impact of store environment on impulse buying behavior. *European Journal of Marketing*, 47(10), 1711–1732. <https://doi.org/10.1108/ejm-03-2011-0110>
- Morton, J. (2004). *Colors That Sell: Tried and Tested Color Schemes* (4th ed.). Colorcom.
- Mowen, J. C., & Minor, M. S. (2003). *Comportamento do Consumidor*. Prentice Hall.
- Newlands, D., & Hooper, M. J. (2016). *The Global Business Handbook* (1st ed.). Routledge. <https://doi.org/10.4324/9781315557663>

- Ong, S. J. (2002). *Store Layout and Costumer Flow*. Business Focus of Manilla.
- Ong, F. S., Khong, K. W., Yeoh, K. K., Syuhaily, O., & Nor, O. Mohd. (2018). A comparison between structural equation modelling (SEM) and Bayesian SEM approaches on in-store behaviour. *Industrial Management & Data Systems*, 118(1), 41–64. <https://doi.org/10.1108/imds-10-2016-0423>
- Ou, L.-C., Luo, M. R., Sun, P.-L., Hu, N.-C., & Chen, H.-S. (2011). Age effects on colour emotion, preference, and harmony. *Color Research & Application*, 37(2), 92–105. <https://doi.org/10.1002/col.20672>
- Özkan, M. (2017). Generation Z - The Global Market's New Consumers- And Their Consumption Habits: Generation Z Consumption Scale. *European Journal of Multidisciplinary Studies*, 5(1), 150–157. <https://doi.org/10.26417/ejms.v5i1.p150-157>
- Pancrácio, P. (2000). *Promoção de Vendas*. Futura.
- Parente, J. G. (2000). *Varejo no Brasil: gestão e estratégia*. Atlas.
- Peter, J. P., & Olson, J. C. (1999). *Consumer Behavior and Marketing Strategy*. McGraw-Hill/Irwin.
- Pina, R., & Dias, Á. (2021). The influence of brand experiences on consumer-based brand equity. *Journal of brand Management*, 28, 99-115.
- Pradhan, V. (2016). Study on Impulsive Buying Behavior among Consumers in Supermarket in Kathmandu Valley. *Journal of Business and Social Sciences Research*, 1(2), 215–233. <https://doi.org/10.3126/jbssr.v1i2.20926>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>
- Priporas, C.-V., Stylos, N., & Fotiadis, A. K. (2017). Generation Z consumers' expectations of interactions in smart retailing: A future agenda. *Computers in Human Behavior*, 77(1), 374–381. <https://doi.org/10.1016/j.chb.2017.01.058>
- Ringle, C. M., Wendes, S., & Will, A. (2015). *SmartPLS3.0*. Hamburg: www.smartpls.de.
- Schiffman, L. G., & Kanuk, L. L. (2000). *Comportamento do consumidor* (6th ed.). LTC.
- Schlossberg, M. (2016). Teen Generation Z is being called “millennials on steroids,” and that could be terrifying for retailers. *Business Insider*.
- Shankar, V., & Yadav, M. S. (2011). Innovations in Retailing. *Journal of Retailing*, 87, S1–S2. <https://doi.org/10.1016/j.jretai.2011.04.004>
- Sherman, E., Mathur, A., & Smith, R. B. (1997). Store environment and consumer purchase behavior: Mediating role of consumer emotions. *Psychology and Marketing*, 14(4),

- 361–378. <https://doi.org/3.0.co;2-7>>10.1002/(sici)1520-6793(199707)14:4<361::aid-mar4>3.0.co;2-7
- Sumeisey, G. M. (2014). The Effect of Visual Merchandising on Consumer Impulse Buying Behavior at the Executive Store Manado. *Journal EMBA*.
- Świeczak, W. (2017). The Impact of Modern Technology on Changing Marketing Actions in Organisations. *Marketing 4.0. Marketing of Scientific and Research Organizations*, 26(4), 161–186.
- Teixeira, N. A. M. (2021). *Análise do impacto do merchandising no comportamento do consumidor* [Dissertação de Mestrado].
- Vieira, V. A. (2013). Stimuli–organism–response framework: A meta-analytic review in the store environment. *Journal of Business Research*, 66(9), 1420–1426. <https://doi.org/10.1016/j.jbusres.2012.05.009>
- Vilelas, J. (2009). *Investigação: O processo de Construção do Conhecimento* (1st ed.). Edições Sílabo.
- Wakefield, K. L., & Baker, J. (1998). Excitement at the mall: Determinants and effects on shopping response. *Journal of Retailing*, 74(4), 515–539. [https://doi.org/10.1016/s0022-4359\(99\)80106-7](https://doi.org/10.1016/s0022-4359(99)80106-7)
- Weun, S., Jones, M. A., & Beatty, S. E. (1998). Development and Validation of the Impulse Buying Tendency Scale. *Psychological Reports*, 82(3), 1123–1133. <https://doi.org/10.2466/pr0.1998.82.3c.1123>
- Woiceshyn, J., & Daellenbach, U. (2018). Evaluating Inductive Vs Deductive Research in Management Studies. *Qualitative Research in Organizations and Management: An International Journal*, 13(2), 183–195. <https://doi.org/10.1108/qrom-06-2017-1538>
- Yildirim, K., Akalin-Baskaya, A., & Hidayetoglu, M. L. (2007). Effects of indoor color on mood and cognitive performance. *Building and Environment*, 42(9), 3233–3240. <https://doi.org/10.1016/j.buildenv.2006.07.037>
- Zamberlan, L., Sparemberger, A., Daronco, E., & Blume, M. (2010). *Gestão Estratégica do Ponto de Venda : Decisões para Qualificar a Performance no Varejo*. Unijai.
- Zenone, L. C., & Buairide, A. M. R. (2006). *Marketing da promoção e merchandising: Conceitos e estratégias para ações bem-sucedidas*. Pioneira Thomson Learning.
- Zhou, L., & Wong, A. (2004). Consumer Impulse Buying and In-Store Stimuli in Chinese Supermarkets. *Journal of International Consumer Marketing*, 16(2), 37–53. https://doi.org/10.1300/j046v16n02_03

- Hung, M. C., Nakatsu, R., Tosa, N., & Kusumi, T. (2022). Learning of art style using AI and its evaluation based on psychological experiments. *International Journal of Arts and Technology*, 14(3), 171. <https://doi.org/10.1504/IJART.2022.128444>
- Jie, G., & Chaetnalao, A. (2022). Design and development of an experimental prototype of Chinese Tang Dynasty tomb murals under the intervention of digital media technology. *International Journal of Arts and Technology*, 14(3), 236. <https://doi.org/10.1504/IJART.2022.128467>
- Liu, G., & Gao, F. (2022). Colour deviation correction method of art image based on fuzzy classification. *International Journal of Arts and Technology*, 14(3), 224. <https://doi.org/10.1504/IJART.2022.128468>
- Iberahim, H., Zulkurnain, N., Shah, R., & Rosli, S. (2019). Visual merchandising and customers' impulse buying behavior: a case of a fashion specialty store. *International Journal of Service Management and Sustainability*, 4(1). <https://doi.org/10.24191/ijsms.v4i1.8141>
- Jaini, A., Zulkiffli, W., Ismail, M., Mohd, F., & Hussin, H. (2021). Understanding the influence of visual merchandising on consumers' impulse buying behaviour: analysing the literature. *International Journal of Academic Research in Business and Social Sciences*, 11(12). <https://doi.org/10.6007/ijarbss/v11-i12/11277>
- Khisa, H., Hoque, E., Hanif, F., Chaion, M., Rahman, M., Siddika, S., ... & Islam, T. (2020). Impacts of visual merchandising on customer buying behavior in bangladeshi clothing stores. *European Journal of Business Management and Research*, 5(6). <https://doi.org/10.24018/ejbmr.2020.5.6.621>
- Tanveer, T., Kazmi, S., & Rahman, M. (2022). Determinants of impulsive buying behavior: an empirical analysis of consumers' purchase intentions for offline beauty products. *Nurture*, 16(2), 75-89. <https://doi.org/10.55951/nurture.v16i2.129>
- Role of visual merchandising in attracting consumers in a retail store: A quantitative perspective. (2023). *Journal of Informatics Education and Research*. <https://doi.org/10.52783/jier.v3i1.33>
- Iberahim, H., Zulkurnain, N., Shah, R., & Rosli, S. (2019). Visual merchandising and customers' impulse buying behavior: a case of a fashion specialty store. *International Journal of Service Management and Sustainability*, 4(1). <https://doi.org/10.24191/ijsms.v4i1.8141>
- Mondol, E., Salman, N., Rahid, A., & Karim, A. (2021). The effects of visual merchandising on consumer's willingness to purchase in the fashion retail stores. *International Journal*

- of Academic Research in Business and Social Sciences, 11(7).
<https://doi.org/10.6007/ijarbss/v11-i7/10469>
- Park, D., Jeon, J., & Sullivan, P. (2014). How does visual merchandising in fashion retail stores affect consumers' brand attitude and purchase intention?. The International Review of Retail Distribution and Consumer Research, 25(1), 87-104.
<https://doi.org/10.1080/09593969.2014.918048>
- Sachitra, V. and Konara, S. (2023). Role of interior and exterior stores visual merchandising on consumers' impulsive buying behaviour: reference to apparel retail stores in sri lanka. Asian Journal of Education and Social Studies, 40(1), 16-29.
<https://doi.org/10.9734/ajess/2023/v40i1863>
- Pappu, R. and Quester, P. (2006). Does customer satisfaction lead to improved brand equity? an empirical examination of two categories of retail brands. Journal of Product & Brand Management, 15(1), 4-14. <https://doi.org/10.1108/10610420610650837>
- Jaini, A., Zulkifli, W., Ismail, M., Mohd, F., & Hussin, H. (2021). Understanding the influence of visual merchandising on consumers' impulse buying behaviour: analysing the literature. International Journal of Academic Research in Business and Social Sciences, 11(12). <https://doi.org/10.6007/ijarbss/v11-i12/11277>
- Khisa, H., Hoque, E., Hanif, F., Chaion, M., Rahman, M., Siddika, S., ... & Islam, T. (2020). Impacts of visual merchandising on customer buying behavior in bangladeshi clothing stores. European Journal of Business Management and Research, 5(6).
<https://doi.org/10.24018/ejbmr.2020.5.6.621>
- Park, D., Jeon, J., & Sullivan, P. (2014). How does visual merchandising in fashion retail stores affect consumers' brand attitude and purchase intention?. The International Review of Retail Distribution and Consumer Research, 25(1), 87-104.
<https://doi.org/10.1080/09593969.2014.918048>

Annexes

Appendix A: Variables under analysis - the items and respective authors

Variables	Abbreviation	Statements in English	Authors
Layout	LY	LY1. The layout in the store helps me browse the products comfortably	Ong et al. (2017),

		LY2. The layout in the store makes it easy for me to get to the shelves or products I want	Wakefield & Baker (1998).
		LY3. The layout in the store assists me in making buying decision	
		LY4. I like the layout of the store	
		LY5. Overall, the layout in the store makes it easy for me to get around	
Lighting	LIG	LIG1. The store is well lit	Mohan et al. (2013)
		LIG2. The store is correctly lit (neither too bright nor dull)	
		LIG3. Lighting in the store is pleasant	
Colors	COL	COL1. I think the interior wall and floor colour schemes of this store were attractive	Ong et al. (2017), Wakefield & Baker (1998), Baker et al. (1994).
		COL2. I feel very calm with the colour scheme of the store	
		COL3. I think the colours used in the store appeared to be currently fashionable	
		COL4. I feel pleasant in this store because of its colour	
		COL5. Combinations of colour in the store make me feel refreshed	
In Store Promotions	PROM	PROM1. Store-level promotions make me buy products spontaneously	Katakam et al. (2021)
		PROM2. Store-level promotions increase my desire to buy the products	
		PROM3. Store-level promotions entice me to buy things on the spur of the moment	
Store Ambience	ST AMB	ST AMB1. Attractive product displays stimulate me to buy	Katakam et al. (2021)
		ST AMB2. The exclusive displays used in shops for certain products provoke me for buying spontaneously	

		ST AMB3. I prefer to shop at a store where it is easy to locate products/merchandise	
Salesperson Interactions	INT	INT1. Helpful employees in the store have an influence on my buying decision	Katakam et al. (2021)
		INT2. I tend to purchase more in the stores with friendly employees	
		INT3. The store employees influence my buying decision	
Impulse Buying Tendency	IBT	IBT1. I only buy things that are on my shopping list.	Mohan et al. (2013), Weun et al. (1998)
		IBT2. When I go shopping, I buy things that I had not intended buying	
		IBT3. I am a person who makes unplanned purchases	
		IBT4. When I see something that really interests me, I buy it without considering the consequences	
		IBT5. It is fun to buy spontaneously	