

# IDENTIFYING POSITIONING AXES FOR BUILDING BRAND EQUITY IN CORK FASHION PRODUCTS

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## Abstract

Cork is a natural, recyclable, non-toxic and renewable resource with unique functional characteristics that is part of a self-sustaining sector. It is increasingly being applied to fashion brands from its traditional use in the wine and construction sectors. This shift is posing new challenges, starting with the determination of the positioning axes that are viable to create brands with value. To answer this question, the methodology used consists of a three-step sequence that includes a series of interviews to identify potential positioning axes, a questionnaire with 152 answers to confirm the validity of these axes and then applying partial least squares structural equation modelling (PLS-SEM). The consumer-based brand equity (CBBE) pyramid model is used as the brand equity model. The results show that fashion brands of cork products can position themselves on the functional and symbolic axes. The axes are sustainability, Portugal, ecology, nationalism, heritage, lightness, creativity, biodiversity, softness, innovation, waterproofness and resistance. The application of PLS-SEM to the CBBE pyramid model has shown that brand equity can be built on the foundation of the validated positioning axes.

**Implications for Central European audience:** This study establishes a framework for the development of sustainable cork fashion brands, which are representative of the traditions or heritage that symbolically are a nation's identity. It comprises a structured sequence of interviews (to identify the positioning axes), a questionnaire (to ensure brand equity) and the application of PLS-SEM to the CBBE (to verify the compliance of the framework). Based on empirical evidence, this framework can be applied to other industries or products that want to create brands with value.

**Keywords:** Brand equity; positioning; cork products, brand positioning, brand value, sustainable cork fashion brands

**JEL Classification:** M30, M31, M37

## Introduction

Cork oak forests are a very special ecosystem with a delicate balance, and with approximately 34% of the world's cork oak forests, Portugal has the largest area of cork oak forests in the world (Carrusca, 2015). Gil (1998) mentioned the use of cork in fishing equipment, buoys, stoppers and roofing in the first century AD. However, archaeology shows that cork was used in China, Egypt, Babylon and Persia as early as 3000 BC for the production of different types of fishing tackle and equipment (Gil, 2005). Cork is a plant tissue and has unique and unrivalled properties that no ingenuity or technology has yet been able to replicate or surpass. It is a plant-based raw material with exceptional physical and mechanical properties and environmental characteristics: it is renewable, recyclable, non-toxic and extremely durable. The regenerative capacity of the tree is excellent: even without the use of chemical herbicides, fertilizers or careful irrigation during the nine-year period between harvests, the bark will grow back and the cork will be ready for harvesting again (Carrusca, 2015). As a floating and sealing material, the pleasant and unusual texture of cork, as well as its colour and physical and chemical characteristics, have aroused the interest of industry, with new applications for this raw material (Sousa, 2019). Cork is a unique raw material due to its chemical composition (Mestre & Vogtlander, 2013). As mentioned in Amorim (2014) and Silva et al. (2005), it is impossible to reproduce so many characteristics at the same time in a single material: (i) excellent thermal and acoustic insulation; (ii) impermeability to liquids and gases; (iii) excellent resistance to fire and high temperatures; (iv) high resistance to friction; (v) excellent elasticity and compressibility; (vi) good resilience; (vii) very light and buoyant; (viii) hypoallergenic; (ix) comfortable; and (x) soft to the touch. From a sustainability point of view, cork oak can prevent soil degradation, increase soil productivity, regulate the water cycle, fight desertification, bind and store carbon for very long periods of time, generate high levels of biodiversity, fight climate change and is a renewable resource (Pereira et al., 2008).

The interest in eco-materials has increased in recent years due to the expansion of the strategy of sustainable product design, which aims to replace non-renewable materials with natural or renewable materials (Sierra-Pérez et al., 2015). This aims to reduce the environmental impact of products when extracted, transformed, used and at the end of their lives. Cork is one of the eco-materials with great potential for application (Pereira, 2011). It is also claimed that the most innovative market for introducing cork is the furnishing and decorating sector. Dishes, lamps, hammocks and sofas are among the products in this sector. However, cork textiles are also an interesting market, as they are used in technological products, upholstery, shoes and bags (Sierra-Pérez et al., 2015). Most significantly, however, cork is considered a national heritage, almost synonymous with Portugal (Sousa, 2019). While cork is not officially designated as a "national heritage" in Portugal in the same way that some cultural and historical sites or traditions might be, it is undeniably an integral part of Portuguese heritage and a significant symbol of the country. When it comes to products that are part of a country's heritage and tradition, there are many that stand out such as Italy's Carrara marble (Primavori, 2015), Scotch whisky from Scotland (Reid et al., 2024), watches from Switzerland (Rech et al., 2023), olive oil from Spain (Parrilla-González & Ortega-Alonso, 2022; Rojas-Sola et al., 2012) and beer from Czechia (Olšovská et al., 2014), among others. Other examples seen from a fashion perspective include wool from Scotland (Keith & Silies, 2015), cashmere from India (Van Schoor, 2019), silk from China (Barron, 2021) and leather from Morocco (Nicholas, 2014), to name but a few. In these cases, the marketing strategies

of companies are similar to country-of-origin claims, helping them differentiate their products and gain competitive advantage through a favourable image.

In light of the above description, the research question is: "What are the positioning opportunities for fashion brands using cork products for brand value creation?" A search of the literature revealed few studies on the use of cork in fashion products, and no previous studies have investigated the positioning of fashion brands with cork products. Therefore, the next section reviews the literature on cork products, positioning and brand equity.

## 1 Literature Review

### 1.1 Cork

Cork, a natural, reusable, non-poisonous and renewable resource with superior technical properties, obtained from the bark of the cork oak, is the raw material used in the cork sector (Mestre & Vogtlander, 2013). Cork is a resource in a self-sufficient sector, where nothing is wasted and everything is valued (Sousa, 2019). All raw materials and production waste are reused in the production of cork agglomerates, from its forest origin to its extraction and subsequent industrial transformation for its optimized recycling process (Mestre & Gil, 2011; Mestre & Vogtlander, 2013). Terms such as renewable, responsible, environment, society, zero waste and financial viability automatically come to mind when we think of sustainability and sustainable development (Sousa, 2019).

Lobo et al. (2021) pointed out that cork can be seen as a product that is in harmony with various trends and may represent a shift in attitudes and habits when it comes to fashion design. Additionally, they claim that cork can evoke Portuguese identities, memories and stories, as well as sustainability. A recent and growing trend towards the use of new combinations of materials and patterns is also noted by other authors (Mestre & Gil, 2011). As a complement to the above, Niemeyer and Cantú (2016) said that the use of cork in the field of design has its rationalization. They said its properties can only contribute to the enhancement of developments whose use is suitable. To quote the authors, cork blends the opportunity for cultural expression with excellent chemical, physical, sensory and aesthetic properties. Mateus et al. (2017) went even further and stated that cork can be applied to high-quality goods with improved performance. Cork, the authors added, has attracted the attention of many creators over the last decade, from surfboards and designer clothes to extraordinary artworks. For them, creative ideas are the main limitation. In the same reasoning, Giardina (2017) declared that nature is a source of inspiration not only for the choice of materials but also for the development of innovative solutions in the field of sustainable design, referring to sustainable footwear design. Other applications for cork can be found in fashion accessories (Carvalho & Williams, 2014), handbags (Pashkevych et al., 2019), clothing, fashion items and decorative furniture (Teixeira, 2022), bags, backpacks, shoes, souvenirs and flooring (Slavova & Doneva, 2023), design apparel, cork handbags, furniture and cork clothing (Mourisco, 2016) and cork jewellery (Zhuang, 2020). As a matter of fact, cork is currently used in architecture, design, fashion and art (Genevaux & Bounoure, 2019).

## 1.2 Positioning

Positioning, the art and science of creating a distinct image and identity for a product, service or organization in the minds of target consumers, is a central concept in marketing and communications. The concept of positioning was first introduced by Al Ries and Jack Trout in their seminal work "Positioning: The Battle for Your Mind" (Trout & Ries, 1986). They explained that in a crowded marketplace, products and brands must hold unique and memorable places in consumers' minds through differentiation and relevance and should be grounded in a specific attribute, benefit or characteristic that sets the product on a superior level to its competitors. A key tenet of positioning is to be centred around the customer and what they need, which has an emotional connection and resonates with the target audience. Human social interaction relationships translate to consumer-brand interactions in ways that are useful for positioning and communicating brands, because consumers evaluate a brand's perceived intentions and capabilities and these perceptions elicit different emotions and behaviour (Kervyn et al., 2012). Positioning is not just about the physical attributes of a product. It is also about the intangible benefits and values that it provides (Trout & Ries, 1986).

Positioning is a multidimensional concept. Aaker and Shansby (1982) highlighted product attributes, where positioning implies emphasizing specific features or attributes of the product that differentiate it from competitors. Subsequently, Aaker (1997) added brand personality, stating that a brand, like a person, can have a personality, and creating a brand personality that aligns with the values and aspirations of the target audience can be the basis for positioning. On a more objective and tangible level, Zeithaml (1988) argued that brand positioning can be based on the perception of price and the perception of quality. In a more traditional vein, Keller (1993) stated that positioning can also be influenced by cultural and social values, and therefore brands can be aligned with social issues and values that affect their target groups. In addition, there is the competitive framework proposed by Kotler and Keller (2021), who pointed out that brands can position themselves as market leaders, challengers or niche players to create distinct market positions. One could argue that there are many other dimensions to brand and product positioning (Fuchs & Diamantopoulos, 2010).

Although it is a classic concept in marketing, positioning has been the subject of research and relevant advances have emerged continuously. From a broader perspective and with a focus on the identification of positioning dimensions, Rintamäki et al. (2007) identified four key dimensions of customer value: the economic dimension, the functional dimension, the emotional dimension and the symbolic dimension. These dimensions can be the basis for the development of competitive customer value propositions. Alexander (2009) also referred to the process of creating and maintaining brand auras through the affirmation of authenticity as being relevant to positioning. Another highly relevant contribution comes from Fuchs and Diamantopoulos (2010), who found that the four different positioning strategies influence a brand's positioning success in terms of consumer perceptions of brand favourability, differentiation and credibility. Their findings also showed that no single strategy outperformed all the others in all dimensions. The four different positioning strategies are features (concrete attributes) or abstract attributes, direct (functional) benefits, indirect (experiential/symbolic) benefits and surrogate positioning.

There has also been research into how positioning is developed. Traditional marketing research techniques, such as focus group discussions, surveys and in-depth interviews, can be used to determine consumers' ideas, perceptions or experiences about brands and competitors (Yılmaz & Altunay, 2023). However, traditional methods are limited. Moon and Kamakura (2017) showed that user comments can be used to define positioning, using perceptual mapping. In fact, they showed that the words used by users make it possible to identify positioning axes and choose the most valuable ones. Besides, Yılmaz and Altunay (2023) showed that text-mining techniques, including opinion mining and sentiment analysis, can be used to create perception maps from consumer product reviews.

Although limited in number, there are still references to the positioning of cork products. Cork products can be positioned as unique and premium (Costa et al., 2018; Lobo et al., 2020; Santos & Marques, 2019), which can be achieved by emphasizing sustainability, energy efficiency and innovative technological features (Gil, 2014).

As for the positioning of fashion products or brands, the literature is rich. Fashion brand positioning is the strategic placement of a brand in the marketplace to create a distinctive image and appeal to target consumers. Research suggests that successful brand positioning in the fashion industry requires a holistic approach that considers factors such as image attributes, marketing alignment and consumer perceptions (Newman & Patel, 2004; Parmentier et al., 2013; Sayman et al., 2002). Evidence highlights the importance of aligning brand image with consumer expectations, offering quality products and creating a unique atmosphere to attract and retain customers (Chang & Jai, 2015). Furthermore, market orientation strategies play a crucial role in enhancing brand performance, with positioning strategies effectively mediating this relationship (Gul et al., 2021). Other alternatives include visual merchandising and applying different strategies to effectively communicate their identity and market position (Nobbs et al., 2015). By using elements such as atmospherics, displays and signage, a distinctive store image can be created in the minds of consumers, which can enhance both loyalty and sales (Bist & Mehta, 2023). For other authors, lifestyle branding is also a possible brand-orientated positioning strategy (Pérez del Castillo et al., 2020). Most importantly, fashion brand positioning follows the brand-oriented school of positioning, which emphasizes the creation of a unique and desirable image in an effort to differentiate itself from competitors (Urde & Koch, 2014).

The fashion industry has seen a rise in interest in sustainable fashion in recent years, largely due to growing awareness of environmental and social issues. Sustainable fashion is concerned with the conception, production and marketing of socially and environmentally responsible fashion products (Ray & Nayak, 2023). Sustainable fashion is produced with a minimal environmental impact (Kim & Suh, 2022), includes the consumption of second-hand fashion products, is made in an environmentally friendly way (Jung & Jin, 2014), includes the reuse of fashion products, is made to last longer than conventional fashion, is produced according to fair trade principles (Barnes & Kozar, 2008), uses recycled materials and is made from organic materials (Almalki & Tawfiq, 2023; Lin et al., 2022). Therefore, the positioning of sustainable fashion brands comprises strategies used by fast fashion retailers to enhance perceived corporate social responsibility efforts, price value and brand equity, which ultimately influence purchase intentions (Chang & Jai, 2015). Brands strive to balance

sustainability with product-related aspects, highlighting the significance of branding in sustainable fashion. However, there is a lack of understanding regarding the positive impact of sustainability positioning (Kim & Oh, 2020). Nevertheless, they seek to reconcile ethics and aesthetics in brand positioning, concentrating on sustainability and product aspects to establish a distinctive market position (Bandyopadhyay & Ray, 2020). The positioning of sustainable fashion brands can also be influenced by cultural heritage (Zhang et al., 2023), or can be based on core values such as eco-friendliness, fair trade and animal protection (Kim & Suh, 2022), social and environmental responsibility (Velasco-Molpeceres et al., 2022), self-hedonistic, social image-conscious and sacrifice eco-conscious (McNeill & Moore, 2015), equity, authenticity, functionality, localism and exclusivity (Jung & Jin, 2014), quality over quantity, promoting longevity and integrating personal style (Bly et al., 2015), sustainable materials and recycling initiatives (Stål & Jansson, 2017).

### 1.3 Brand equity

Over the past few decades, one of the constructs that has come to attract the attention of branding scholars is brand equity (Rojas-Lamorena et al., 2022). Brand equity, a core concept in contemporary marketing theory and practice, is understood as the intangible assets of a brand. It encompasses the perceptions, attitudes and associations that consumers have with a given brand (Aaker, 1991). Because it exerts a significant degree of influence on consumer behaviour, purchase decisions and brand loyalty (Keller, 1993), the notion of brand equity is of utmost relevance. Aaker (1991) introduced a brand equity model with four dimensions: brand loyalty, brand awareness, brand associations and perceived quality. These dimensions form the basis for understanding the construct. They have been expanded and refined over time (Keller, 1993; Yoo & Donthu, 2001). The measurement of brand equity has evolved significantly, with both quantitative and qualitative approaches gaining prominence (Keller, 1993). Quantitative methods are often based on surveys and metrics, while qualitative methods are based on in-depth interviews and content analysis (Kapferer, 2012). Several measures have been developed to assess the strength and impact of brand equity, such as the brand equity index (BEI) and the customer-based brand equity, or CBBE, model (Aaker, 1996; Keller, 1993). The emotional connection between consumers and brands is central to the psychology of branding (Kapferer, 2012). Consumers attach personal and social meanings to brands and form relationships with them. This psychological dimension is critical to the explanation of how brand equity affects consumer decision-making (Keller, 1993). The economic aspect is also relevant. The economic significance of brand equity is undeniable and affects the financial performance and market valuation of companies (Simon & Sullivan, 1993). Brand equity is clearly one way that marketing creates value (Srinivasan & Hanssens, 2009) and it also affects employee attitudes (Ertz et al., 2022). High brand equity can lead to price premiums, reduced marketing costs and an increase in market share, all of which contribute to an increase in profitability (Keller et al., 2011). Brand equity also plays a role in mergers and acquisitions, influencing how a company is valued (Simon & Sullivan, 1993). The complex interplay of marketing, psychology and economics in the realm of brand equity is illustrated in the preceding sentences. As a result, companies must understand the psychological underpinnings of the consumer-brand relationship to develop effective brand strategies that enhance brand equity. They must also understand the economic implications that underscore the critical role of brand equity in driving financial performance. Moreover, according to Hoeffler and Keller (2002), brand equity can be built by (i) building brand awareness, (ii) enhancing brand image, (iii) establishing brand credibility,

(iv) eliciting brand feelings, (v) creating a sense of brand community, or (vi) eliciting brand commitment. Corporate social responsibility is also added (Tan et al., 2022).

Although the two brand equity models developed by Keller (CBBE and the brand resonance model) have significant academic recognition, there are a number of other models with a notable impact on industry and companies, of which the following are worth mentioning (Sousa, 2019): the WPP brand dynamics model, the brand asset valuator (BAV), Kapferer's brand identity prism, Aaker's brand value, the brand finance model, the research international equity engine and Interbrand's brand valuation model. Obviously, although brand equity is a fundamental topic in marketing and a valuable asset for companies, an academic consensus has yet to be reached on how to define it, the dimensions it encompasses and how to measure it (Rojas-Lamorenna et al., 2022). CBBE has been investigated by several authors who have proposed different constructs: brand awareness, brand associations, perceived quality, brand loyalty (Aaker, 1991, 1996); trust, customer satisfaction with the brand (Blackston, 1992); brand awareness, brand associations (Keller, 1993); brand awareness, brand image, relationships with customers (Sharp, 1996); brand awareness, brand meaning (Berry, 2000); brand benefit clarity, perceived brand quality, brand benefit uniqueness, brand sympathy, brand trust (Burmman et al., 2009). As mentioned by Netemeyer et al. (2004), the terms CBBE and brand equity have been used interchangeably. Nevertheless, the definitions and measurement scales proposed by Aaker (1991, 1996) and by Keller (1993) and Keller et al. (2011) have been applied and proven by many papers that take into account the multiple dimensions of brand equity (Rojas-Lamorenna et al., 2022). However, critics of this proposal argue that little systematic research has been done to establish a consumer-based brand equity scale (Yoo & Donthu, 2001). The authors suggest a new scale, called MBE (multidimensional consumer-based brand equity). Also, Pappu et al. (2005) proposed a consumer-based brand equity measurement scale. They confirmed and validated that, as conceptualized in the marketing literature, brand awareness and brand associations are two distinct dimensions of brand equity. Ren et al. (2023) provided a somewhat different approach. They claimed that brand personality and brand reputation are driven by brand equity, and customer experience, which is explained by service quality, shapes brand equity. Delgado-Ballester and Munuera-Alemán (2005) brought new constructs and relationships to the subject. They showed that brand trust is grounded in past interactions with the brand and is also positively associated with brand loyalty, which itself has a positive association with brand equity. It is also worth highlighting the construct of brand attachment, which is a concept that differs from brand attitude and provides better predictive capabilities for behavioural intentions (Park et al., 2010). A further relevant insight was provided by Cao (2022), who showed that brand equity reduces the warranty claim rate and the abnormal warranty accrual rate. Thus, brand equity increases firm value. A different opinion was shared by Christodoulides and De Chernatony (2010), however. They said that while the literature on brand equity is extensive, it is largely fragmented and inconclusive. One of the best studies on evaluating brands was done by Salinas (2009). The author described how brand valuation originated and evolved, the valuation process and methods, as well as the major models. No review would be comprehensive without mentioning the different models used by the main communication agencies: the Brand Dynamics™ from Millward Brown (Vasileva, 2016), the

BrandAsset Valuator® from Young & Rubicam (Khan, 2009) and Brand Valuation from Interbrand (Bagna et al., 2017).

Reflecting on the above, the literature is also inconsistent as to what is defined as fashion brand equity. Definitions abound, such as that fashion brand equity includes cognitive, sensory and affective associations such as mystery, sensuality and intimacy (Cho et al., 2015), is influenced by trust and brand loyalty (Kananukul et al., 2015), comprises brand awareness, perceived quality, emotional value and brand resonance (Kim & Brandon, 2010), is multidimensional, comprising authenticity, perceived quality, brand association, awareness and loyalty (Hyun et al., 2024), perceived brand awareness, perceived value, perceived quality, brand personality and organizational associations (Nigam & Singh, 2023), brand awareness, brand personality, perceived value, perceived quality, perceived value and brand loyalty (Su & Chang, 2018).

Brand equity in sustainable fashion brands is determined by several determinants. The most intriguing is a tangible element related to colour. The choice of a brand's colour scheme plays an important role, with iconic colours being more effective than green in sustainability strategies, particularly for brands with strong feminine characteristics (Sun & Kim, 2023). Additionally, the implementation of sustainable practices, such as product design for durability, cultural heritage and digital empowerment in fashion, positively influences consumer attitudes towards the brand (Adamkiewicz et al., 2022). Adopting circular economy principles, avoiding greenwashing and transparently communicating sustainable efforts can also enhance brand equity by building consumer trust and positive brand sentiment (Zhou et al., 2023). But even here, literature reveals a lack of coherence. Highlighting the most relevant ones, brand equity of sustainable fashion brands includes the design of products with a long lifespan (Zhang et al., 2023), responsible production, environmental initiatives and CSR practices (Thorisdottir & Johannsdottir, 2020), stakeholder trust, psychological and functional benefits and the delivery of sustainability outputs and outcomes through corporate sustainability practices (Winit et al., 2023), or include eco-friendly, recycled, vegan, upcycled, zero waste, local production, fair trade, women-owned, giveback and animal protection values (Kim & Suh, 2022).

## 1.4 Customer-based brand equity pyramid model

As noted earlier, Keller (2009) established a model that is more widely recognized and accepted. The following briefly summarizes it. To build a strong brand, four sequential levels consisting of six brand building blocks are required, according to the model (Keller, 2009). These are salience, performance, imagery, judgments, feelings and resonance.

- Salience is how easily and often customers think of the brand in different situations when buying or consuming.
- Performance is the degree to which the product or service is a good fit for the customers' functional needs.
- Imagery is the extrinsic qualities of the product or service, including how the brand appeals to customers' psychological or social needs.
- Judgments are at the heart of customers' own personal opinions and evaluations.
- Feelings are the emotional responses and reactions that customers experience regarding the brand.



- Resonance refers to how customers feel about the brand and the degree to which they feel they are aligned with the brand.

The initial level of brand building is brand identity, which involves both customer awareness and the cultivation of positive consumer perceptions towards the brand, resulting in the desired brand image. The second tier of branding encompasses the inherent meaning and values that a brand embodies. This level is closely intertwined with the consumer's perception and interaction with the brand's offerings, such that the products must deliver on the consumer's expectations and ideally surpass them. There are two primary aspects of this level: brand performance and brand image/symbolism. The third tier encompasses the assessing and affective dimensions of the brand. The assessment involves a rational evaluation of the brand's quality, perceived or real, credibility, relevance and superiority compared to competitors. On the other hand, the affective category is driven by emotional responses, encompassing six positive feelings: hospitality, fun, excitement, security, social approval and self-respect. The fourth and final tier of the brand resonance model is the relationship with the brand. This is the most difficult and desirable level to achieve, as it represents a deep psychological bond between customers and the brand. At this level, behavioural loyalty, attachment, a sense of community and active commitment are all exhibited. Behavioural loyalty is characterized by regular and repeated purchases, while attachment is demonstrated by a positive perception of the brand and a sense that purchasing the product is a special experience. A sense of community is felt when customers associate with other people who also consume the brand's products, and active commitment is exhibited when customers are involved with the brand even when they are not making a purchase. Resonance is a measure of the strength or degree of psychological bond that customers have with the brand, as well as the degree of the activity that results in loyalty (Keller, 2009).

Recent research has shown that CBBE is a significant tool for assessing brand equity in the fashion industry, supported by the findings of Khan and Khan (2017), Ekinci et al. (2017), Appiah-Nimo et al. (2023), Brandão and Magalhães (2023) and Hyun et al. (2024). The application of CBBE models in the fashion sector has revealed that perceived quality and behavioural loyalty are crucial predictors of brand equity. Moreover, the research highlights the significance of incorporating factors such as brand recognition to improve the dependability and accuracy of CBBE models in the fashion sector. As Ekinci et al. (2017) pointed out, the CBBE model is essential in linking brand positioning, competitive advantage, expansion and performance. In contrast, there has been less research into the application of CBBE in sustainable fashion, with applications restricted to luxury fashion (Brandão & Magalhães, 2023) and fast fashion (Blomberg & Furman, 2021). Currently, there is no research available into sustainable fashion with cork, using the CBBE model.

## 2 Methodology

The preceding section uncovered a paucity of literature that would identify and recommend appropriate positioning for cork fashion products to enhance brand value. The review discovered deficiencies in the literature and unequivocally exposed the existence of a gap. At present, there is a scarcity of information regarding the interconnectedness between cork

fashion products, positioning and brand equity. Considering the aforesaid, the present study employs a combination of qualitative and quantitative research methods to identify the most effective positioning for cork fashion products to enhance brand equity.

Consequently, the initial phase will adopt an exploratory, qualitative approach, with the objective of comprehending how managers of fashion product stores and brands utilizing cork materials appraise market trends. This is to gather information on the attributes of the products that the company aims to highlight, as well as the attributes that consumers value most, and serve as the foundation for the formulation of the positioning axes that will be included in the questionnaire, the second phase. Therefore, interviews will be conducted and then a questionnaire will be used. The questionnaire will be based on the customer-based brand equity pyramid, which is illustrated in Figure 1.

2.1 Qualitative research: interviews

Interviews are a valuable tool for collecting data that are not directly observable, such as consumer feelings, thoughts, intentions and meanings attributed to products (Burns & Veeck, 2020; Malhotra et al., 2020). Interviews with sales intermediaries for fashion products are particularly useful in gathering information about consumers, allowing marketers to draw conclusions about the target markets for these products. Additionally, interviews provide insights into market trends and how brands plan their marketing campaigns, allowing identification of the attributes of their products that are most valued by customers. This information is crucial for developing the positioning axes to be included in the questionnaire.

The decision to utilize semi-structured interviews was driven by the desire to include predetermined elements while also allowing for the exploration of additional subjects or areas of interest (Flick, 2022). The interview script, which was crafted to ensure consistency in the questioning across participants, maintained a focus on the primary objectives of the interviews. The literature review has indicated the need for a research focus on evaluating four distinct axes: (i) the company's positioning based on its technical characteristics, (ii) its positioning regarding ecology and sustainability, (iii) its positioning based on innovation and creativity and (iv) its positioning based on traditional or historical issues. The script presented to the interviewees is shown in Table 1.

Table 1 | Exploratory interview with retailers of cork fashion products

Questions
1. What are the best-selling cork products, or what types of cork products are most in demand?
2. Is the demand for cork products spontaneous (when customers go to the store, they already know what they want) or is it because of the presence of cork products in the store that they decide to buy them (only when they are in the store and see the cork products do they become interested in them)?
3. What is the profile of your customers? (age, gender, nationality (Portuguese/foreign) and social class)
4. According to your findings, what characteristics of cork products are most valued by customers? (being different, being fashionable, being Portuguese, being ecological, fitting in with their lifestyle, being light, aesthetic, being a souvenir, etc.)
5. In your opinion, what are the main barriers to buying cork products (e.g., price)?
6. Do you think people buy more for the utility/rationality aspects or the emotional aspects?
7. What arguments do you use to convince customers to buy?
8. Do customers usually buy only once or do they buy again?

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9. Do they buy more than one cork product in one visit?
  10. What is the average purchase price?
  11. Do you think cork products are well or poorly known?
  12. How could they become better known?
  13. Do customers buy them for themselves or as a gift?
  14. Do you think these products can be considered luxury products? Why?
  15. If you had to "defend" cork products against others in the same category, but made from another material, what arguments would you use?
  16. Do you think that the brand aspect is important in customers' decisions?
  17. Is there a particular time of year when these products sell more?
  18. Do you think the fact that bottle stoppers are made of cork can devalue other products?
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Source: Own elaboration

The five participants were selected from all the stores selling cork fashion products, covering both urban and rural areas in Portugal. The participants in the interviews were sales managers responsible for the stores. A non-random sampling technique, known as convenience sampling, was utilized in this study. This sampling technique was purposefully employed to ensure the most accessible and practical selection of participants for the study. The number of participants was not predetermined and the process was stopped when the responses reached saturation.

## 2.2 Interview outcomes

The five in-store interviews were conducted in shops located in the cities of Porto, Lisbon and Vila Real in Portugal and one of them is a purely online retailer (see results in Table 2).

**Table 2 | Qualitative research results**

Questions	Results
More products sold/wanted	Fashion products (bags, shoes, jewellery, coin purses, etc.)
Characteristics of valued products	Physical properties; natural; ecology; design; Portuguese; originality; biodegradable
Barriers to purchase	Price; lack of knowledge
Buying for utility or hedonic	Utilitarian and hedonic purchasing (repeated)
Arguments to persuade	Quality; ecological; physical properties; Portuguese
Average purchase value	30 to 100 euros
Products are too much or too little known	Portuguese: highly knowledgeable Foreigners: almost total lack of knowledge
Luxury products?	No

Source: Own elaboration

Firstly, there was a strong consensus among the interviewees that the best-selling cork fashion products were bags and shoes, although accessories such as jewellery and coin purses were already beginning to attract consumers. As to whether they buy rationally or affectively, the respondents' opinions differ. Nevertheless, they point to ecology, design, originality, physical properties and being Portuguese as the aspects most valued by consumers. The persuasive arguments emphasize the exceptionality of the products, the reputation of Portuguese products, defending national products and the physical properties. Furthermore, ecology and sustainability are emphasized because the products are biodegradable, 100% natural, ecological and reusable.

Purchases are typically impulsive, customers are typically drawn to the store upon recognition of the raw materials used in the products and the decision to purchase a specific item is determined by the display of the products within the store.

Considering the acknowledged limitations in the promotion of cork products, it is imperative to inquire about the significance of the "brand" factor in the purchasing decision of customers. All the interviewees concur that brand reputation is of utmost importance, even if customers are not familiar with the specific brand. They presume that the brand plays a crucial role in establishing the quality of the product and, consequently, influencing the customer's decision. These respondents maintain that a strong brand identity distinguishes quality cork products from the generic, low-quality products on the market.

### 2.3 Quantitative research: questionnaire

The following research hypotheses were developed, with the aim of identifying positioning axes by attributes that are most closely aligned with consumer expectations, following a comprehensive literature review and the results of the qualitative research.

Sustainable development requires a combination of sustainable product design and innovation, which involves the creation of new solutions that address economic, social and environmental concerns throughout the life cycle of a product. Cork is a promising material resource for achieving this goal, as it is an eco-efficient material that considers cultural, social, economic and environmental factors. Support by the works of Gil (2014), Stål and Jansson (2017), Costa et al. (2018), Santos and Marques (2019), Lobo et al. (2020) and Kim and Suh (2022), combined with the results of the interviews and the CBBE, we have the following hypotheses:

**H1.1:** *Sustainability assumes the first level of positioning.*

**H1.2:** *Ecology assumes the first level of positioning.*

**H1.3:** *Biodiversity assumes the first level of positioning.*

Cork possesses several distinct properties that are highly valued by consumers who seek it for its technical attributes. Based on the works of Gil (2014) and Jung and Jin (2014), combined with the results of the interviews and the CBBE, the following hypotheses are put forth:

**H2.1:** *Resistance assumes the first level of positioning.*

**H2.2:** *Lightness assumes the first level of positioning.*

**H2.3:** *Smoothness assumes the first level of positioning.*

**H2.4:** *Waterproofness assumes the first level of positioning.*

For historical and traditional reasons, there exists the possibility of acquiring this type of product. Such consumers are likely to perceive this raw material as an integral part of Portuguese culture and are aware that cork is a quintessentially Portuguese product. It is of utmost importance to the Portuguese economy as the country is currently the world's foremost producer and exporter of cork. This axis thus encompasses consumers who make purchasing decisions based on national identity considerations. Based on the works of Jung and Jin (2014), Adamkiewicz et al. (2022) and Zhang et al. (2023), combined with the interviews findings and the CBBE, the research hypotheses are:

**H3.1:** *Nationalism assumes the first level of positioning.*

**H3.2:** *Tradition assumes the first level of positioning.*

**H3.3:** *Portugal assumes the first level of positioning.*

**H3.4:** *Heritage assumes the first level of positioning.*

Given the exceptional qualities of cork as a material, it is expected to have an extensive range of applications and appeal to a diverse market. As such, this axis encompasses those who view cork fashion products as a natural resource with cutting-edge technological characteristics that has already been employed as a substitute for other materials. To evaluate whether this resource is perceived as distinctive and adding value, with a blend of creativity and sophistication, the following assumptions are proposed. They are supported by

the works of Gil (2014) and Sun and Kim (2023); joined with the outcomes of the interviews and the CBBE, the research hypotheses are:

**H4.1:** *Innovation assumes the first level of positioning.*

**H4.2:** *Creativity assumes the first level of positioning.*

**H4.3:** *Elegance assumes the first level of positioning.*

Some degree of controversy regarding the most efficacious type of green persuasion strategy persists. In the view of Park et al. (1986), brands should be positioned to appeal to one of two types of needs – either functional or symbolic – but not both, as doing so may lead to consumers failing to clearly associate the brand with their functional or symbolic requirements. The literature is, admittedly, inconclusive and it is enough to review the claims made by Gil (2014), McNeill and Moore (2015), Bandyopadhyay and Ray (2020) and Kim and Suh (2022).

A green brand with an exclusively functional positioning may prove insufficient for customers to perceive the benefits of the brand, assuming rational decision-making processes and limited capacity for brand differentiation, but a purely emotional green positioning can result in weaker attitudinal effects. Therefore, Keller and Lehmann (2006) suggested that the most effective brand strategy would be a green positioning centred on creating emotional benefits reinforced by information about the environmentally friendly functional attributes of the products. Along similar lines, Hartmann et al. (2005) proposed a set of strategic options for positioning green brands based on the brand's functional attributes and emotional benefits. This leads to the following research hypothesis:

**H5:** *Cork fashion product brands can be positioned as simultaneously symbolic and functional.*

## 2.4 Questionnaire outcomes

Following the identification of the potential positioning axes, which were appropriately linked to the customer-based brand equity pyramid, research hypotheses were formulated as outlined in the previous section. It is important to note that the objective of this research is to identify potential general and cross-cutting positioning axes for cork fashion products. To achieve this goal, a fictitious brand was created, with general cork fashion products, supported by images to anchor consumer perceptions. The questionnaire used in this research was not directed at existing brands and this approach was taken for the purpose of ensuring that the research was not influenced by any pre-existing branding or positioning strategies. Subsequently, the questionnaire was crafted and it was designed to measure the following constructs: brand salience, brand performance, brand imagery, consumer judgments, consumer feelings and consumer brand resonance.

The questions asked participants to rate their degree of agreement with each statement and to answer using a 7-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = partially disagree, 4 = neither agree nor disagree, 5 = partially agree, 6 = agree, 7 = strongly agree). The structure and outline of the questionnaire are shown in Appendix A.

A pre-test was carried out and no shortcomings were identified in the questionnaire. Potential participants were sourced through various channels, including social networks, university databases and customers of cork fashion product companies. The sample collected is non-

probabilistic in nature, and the sampling method employed was a combination of convenience and snowball sampling. The questionnaire was made available online between the months of June and August.

A total of 158 answers were collected and subjected to validation. Of these, 152 were accepted, representing an acceptance rate of 96.2%. The operations conducted to identify outliers in the variables with ratio scales did not yield any observations that required removal. The demographic composition of the sample was predominantly female, with 78.3% of respondents identified as female and only 21.1% male. Furthermore, the sample was characterized by a notable age imbalance, with approximately 88.8% of respondents falling within the group aged 40 and below and the overall average age was 28.5 years. It is important to acknowledge that the sample taken for this study may be unbalanced, but it can still be considered representative of the larger population, as evidenced by the data collected through interviews. Regarding professional occupation, 72% of respondents were employed, 17.1% were students or working students. The remaining respondents were unemployed or in another unidentified situation. As far as academic qualifications are concerned, 79% of the sample had a higher education degree, 2% had completed the 3<sup>rd</sup> cycle of basic education, 15.8% had secondary education and 3.3% had completed a technological/professional/other course. The sample was made up mostly of individuals whose net monthly household income was between €1,200 and €2,000 (28.3%); 23.3% of individuals had household incomes between €800 and €1,200; 20.8% of the responses come from individuals whose incomes were between €2,000 and €3,000; 10.7% had incomes of more than €3,000; the remainder had incomes of less than €800.

### 3 Results

#### 3.1 Analysis of questionnaire results

During the initial phase of the examination of the findings, each variable must be analysed independently, utilizing descriptive statistics to assess the saliency, performance, image, evaluation, emotions and resonance. To ensure the internal consistency of the measuring scales prior to data analysis, Cronbach's alpha is utilized to assess the reliability of each scale included in the questionnaire. This method, which is commonly employed for such assessments, is defined as the expected correlation between the scale used and hypothetical scales from the same universe with the same number of items measuring the same characteristic [62; 67]. According to the authors in question, the coefficient of this test varies between 0 and 1 and is considered acceptable if it is above 0.7, good if it is above 0.8 and excellent if it is above 0.9. Values below 0.6 generally indicate an unsatisfactory level of internal consistency. The following table contains the values for the internal consistency analysis.

**Table 3 | Internal consistency analysis (Cronbach's alpha)**

Block	Subdimension	Cronbach's alpha	Construct type
<b>Salience</b>	Salience	0.602	Reflective
<b>Imagery</b>	Imagery	0.936	Reflective
<b>Performance</b>	Performance	-	Formative
<b>Judgment</b>	Quality	0.641	Reflective
	Credibility	0.877	Reflective
	Superiority	0.819	Reflective
<b>Feelings</b>	Feelings	0.874	Reflective
<b>Resonance</b>	Loyalty	0.806	Reflective
	Attachment	0.914	Reflective
	Community	0.855	Reflective
	Engagement	0.915	Reflective

Source: Own elaboration

An analysis of the table above reveals that the values obtained for the measurement scales of the performance block and the "quality" sub-dimension of the evaluation block are considered weak (0.60–0.70), but still acceptable. The remaining variables of each construct have Cronbach's alphas higher than 0.8, which is a value indicative of good to very good internal consistency. Overall, these results demonstrate the psychometric quality of the scales used and warrant further investigation.

The Student's t-test is a parametric test that enables the formulation and testing of hypotheses regarding the means of variables (Pestana & Gageiro, 2014). When the sample size is less than 30, the application of the t-test requires that the group or groups under examination have a normal distribution. To verify whether this prerequisite is met, the Kolmogorov-Smirnov adherence test can be employed. Given that the sample size exceeds 30, the central limit theorem takes effect and it is presumed that the variables follow a normal distribution. Consequently, the Student's t-test for paired samples was applied.

The t-test for two paired samples is applied when comparisons are to be made between two populations, from which two paired samples have been drawn, regarding a quantitative dependent variable under the two-sided null hypothesis that the difference between the observations is zero. This test requires a correlation between the two groups; otherwise, the pairing is not meaningful and the t-test for independent samples must be conducted (Malhotra et al., 2020; Pestana & Gageiro, 2014). The non-parametric alternatives for comparing two paired groups are the Wilcoxon test and the sign test.

The results are obtained by applying the test to the different pairs of sub-dimensions for each block. Table 4 provides a clear and concise representation of the overall performance of each sub-dimension, highlighting which ones performed better or worse compared to others.



**Table 4 | Summary of results obtained for different levels of positioning**

Level of positioning	Positioning description
<b>First level</b>	Portugal
	Sustainability
	Ecology
<b>Second level</b>	Nationalism
	Heritage
	Lightness
	Creativity
	Biodiversity
<b>Third level</b>	Softness
	Innovation
	Waterproofing
	Resistance

Source: Own elaboration

The results presented in the previous table bring into focus the need to re-evaluate the research hypotheses formulated earlier, as they diverge significantly from the findings, and the following conclusions can be drawn. The following research hypotheses cannot be rejected:

**H1.1:** Sustainability assumes the first level of positioning.

**H1.2:** Ecology assumes the first level of positioning.

**H3.3:** Portugal assumes the first level of positioning.

**H5:** Cork fashion product brands can be positioned simultaneously as symbolic and functional.

The same analysis was performed to determine the emotions evoked by the brand, which involved comparing averages between the emotions aroused by the brand. The findings are summarized in the ensuing table.

**Table 5 | Summary of results obtained for feelings provoked by the brand**

Levels	Feelings provoked by the brand
<b>First level</b>	Support for the Portuguese economy
<b>Second level</b>	Respect for nature
<b>Third level</b>	Comfort

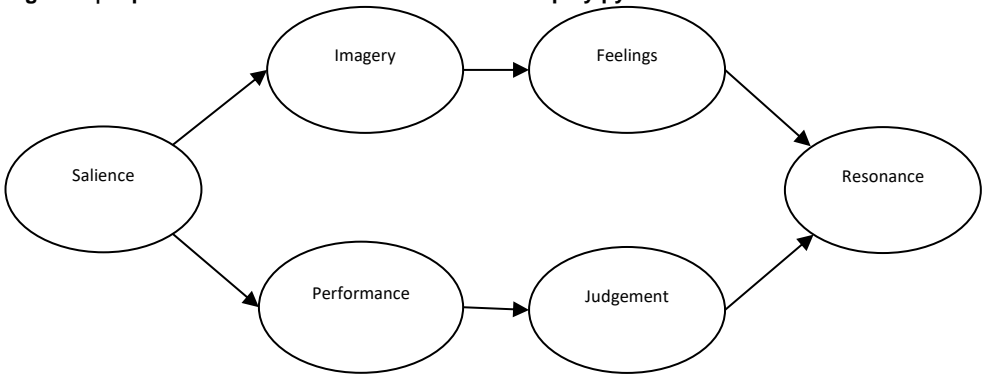
Source: Own elaboration

Of the feelings listed, only three are relevant: support for the Portuguese economy, respect for nature and comfort. The only emotion that is not relevant is the feeling of belonging to a group.

### 3.2 Results of partial least squares structural equation modelling

Given the identification of the positioning axes, it is imperative to demonstrate how their use affects the construction of brand equity. To accomplish this, we used the customer-based brand equity pyramid model and employed structural equation modelling to help validate our findings. Specifically, we used partial least squares structural equation modelling (PLS-SEM). The following constructs were used: salience, performance, imagery, judgments, feelings and resonance. Utilizing the customer-based brand equity pyramid model, a hypothetical representation was constructed, as depicted in Figure 1, based on the considerations.

**Figure 1 | Implementation of customer-based brand equity pyramid model in PLS-SEM**



Source: Own elaboration

As depicted in Table 3 and previously mentioned, the constructs of salience, imagery, judgments, feelings and resonance are reflective, while the performance construct is formative. The initial process involved calculating the Mahalanobis distance, which enables identification of multivariate outliers within the dataset (Hair, 2019). No outliers were identified in the sample and it should also be noted that there were no missing values. While PLS-SEM does not impose any distributional assumptions, it is crucial to ensure that the data are not significantly deviant from normality, as extremely non-normal data can hinder the determination of parameter significance (Hair et al., 2022). The skewness and kurtosis of the variables were assessed and no variables with an asymmetrical distribution or a distribution that was overly peaked were detected.

The procedure for the systematic assessment of the outcomes of the PLS-SEM comprises two stages (Hair et al., 2022). The initial phase involves the evaluation of the measurement model, while the second stage involves the evaluation of the structural model. The evaluation of the measurement model involves the assessment of both reflective measurement models and formative measurement models. Reflective measurement models also examine the reliability of individual indicators, the internal consistency of the instrument, convergent validity and discriminant validity. The formative measurement models comprise the evaluation of convergent validity, collinearity between indicators, significance and relevance of external weights. Last of all, the evaluation of the structural model comprises the assessment of collinearity (VIF), significance and relevance of the structural model relationships (path coefficients) and explanatory power (coefficients of determination,  $R^2$ ). The process follows the guidelines provided by Hair et al. (2022).

### 3.3 Reflective measurement models

Examining the external loadings of the indicators is the first step in evaluating a reflective measurement model. Outer loadings lower than 0.40 are removed; those greater than or equal to 0.7 are retained; between the above values, the reliability of internal consistency and the convergent validity of the construct are analysed. No indicator had a value lower than 0.40. The following constructs had values in the range requiring analysis: feelings: 3 indicators; judgement: 1 indicator; salience: 1 indicator. Following a rigorous examination of the internal consistency and convergent validity of the constructs with indicators with values ranging between 0.4 and 0.7, those indicators were removed.

The second criterion for assessment typically involves internal consistency reliability. In a formal setting, Cronbach's alpha is typically utilized as the standard for measuring internal consistency reliability. According to Hair (2019), it is considered appropriate to use values ranging from 0.60 to 0.70 in exploratory research, while values between 0.70 and 0.90 are deemed satisfactory in more advanced research stages. Convergent validity is the degree to which an indicator correlates positively with other indicators assessing the same construct. Table 6 contains the values for Cronbach's alpha, reliability coefficient, composite reliability and average variance extracted (AVE).

**Table 6 | Construct reliability and validity**

Construct	Cronbach's alpha	Reliability coefficient	Composite reliability	Average variance extracted (AVE)
<b>Feelings</b>	0.882	0.881	0.914	0.681
<b>Imagery</b>	0.882	0.889	0.915	0.684
<b>Judgements</b>	0.908	0.919	0.927	0.646
<b>Resonance</b>	0.961	0.962	0.966	0.685
<b>Salience</b>	0.609	0.613	0.836	0.719

Source: Own elaboration

The construct reliability values indicate that all the constructs are dependable, apart from the salience construct, which is at the lowest permissible limit, yet still allows further analysis of the model.

As for the average variance extracted (AVE), all the values are higher than 0.5, and therefore an AVE of 0.50 or higher means that all the constructs, on average, explain more than 50% of the variation in their indicators.

Discriminant validity is a crucial aspect of establishing the uniqueness of a construct. It refers to the degree to which a construct can be differentiated from other constructs through empirical evidence. A construct that has been validated in terms of discriminant validity is considered to be distinct and exclusive in its representation of phenomena that are not accounted for by other constructs within the model. As mentioned in Hair et al. (2022), the Fornell-Larcker criterion should be replaced by the heterotrait-monotrait ratio (HTMT). An HTMT value greater than 0.90 is an indication of inadequate discriminant validity and

a lower and more cautious threshold of 0.85 seems justified for path models with more conceptually distinct constructs (see Table 7).

**Table 7 | Discriminant validity**

Constructs	Original	Sample mean	2.5%	97.5%
Imagery → Feelings	0.695	0.696	0.583	0.797
Judgements → Feelings	0.763	0.763	0.665	0.850
Judgements → Imagery	0.837	0.836	0.755	0.906
Performance → Feelings	0.688	0.688	0.574	0.788
Performance → Imagery	0.766	0.766	0.677	0.844
Performance → Judgements	0.833	0.832	0.765	0.889
Resonance → Feelings	0.734	0.734	0.636	0.816
Resonance → Imagery	0.758	0.757	0.660	0.839
Resonance → Judgements	0.784	0.782	0.697	0.851
Resonance → Performance	0.649	0.648	0.550	0.734
Salience → Feelings	0.434	0.437	0.239	0.638
Salience → Imagery	0.751	0.751	0.571	0.923
Salience → Judgements	0.806	0.810	0.649	0.974
Salience → Performance	0.704	0.708	0.553	0.852
Salience → Resonance	0.496	0.494	0.297	0.678

Source: Own elaboration

As shown in the table above, all the values are less than 0.85, which confirms that the constructs of the model are measuring different phenomena.

Having verified the validity of the results and analysis of the reflective measurement models, we proceed to the results and analysis of the formative measurement models.

### 3.4 Formative measurement models

Convergent validity is a metric that assesses the degree to which a particular measure exhibits positive correlations with other, alternative measurements of the same underlying construct when utilizing diverse indicators.

Convergent validity can be simply evaluated by incorporating a question that captures the overall construct, as outlined in Sarstedt et al. (2016). However, in the present study, the questionnaire did not allow a question that measured the performance construct, making the convergent validity impossible to verify.

Strong collinearity among formative indicators greatly affects the calculation of weights and the determination of statistical significance, so its presence is paramount. When evaluating the performance of a model, it is important to ensure that the VIF (variance inflation factor)

value of each indicator is within an acceptable range. A VIF value higher than 3 indicates potential multicollinearity, which can negatively affect model performance. If the VIF value of an indicator is higher than 5, it is strongly recommended to take corrective action such as eliminating the indicator, merging indicators into a single index, or creating higher-order constructs to treat collinearity issues. Because one indicator exhibited a value surpassing 5, leading to multicollinearity, it was deemed necessary to exclude it from the model. Two indicators were found to have a VIF ranging between 3 and 5, necessitating their merging.

To conduct the significance test for the outer weights, we utilized an algorithm that performed bootstrap sampling with 10,000 subsamples. All indicator weights were found to be significant, providing empirical support for retaining the indicator. There is empirical support for retaining the indicators as all indicator weights are significant.

3.5 Structural model evaluation

To evaluate the collinearity, it is crucial to examine the construct of each indicator separately for every subset of the structural model. It is imperative to scrutinize the high levels of collinearity for every set of construct indicators (see Table 8).

Table 8 | Inner VIF values

Constructs	Feelings	Imagery	Judgements	Performance	Resonance	Salience
Feelings					1.905	
Imagery	1.000					
Judgements					1.905	
Performance			1.000			
Resonance						
Salience		1.000		1.000		

Source: Own elaboration

Based on the results, where the values of VIF for all predictor constructs are well below the threshold of 5, we can confidently conclude that collinearity is not a meaningful problem in the structural model. Therefore, it is possible to proceed with analysing the structural model.

The standardized path coefficients that depict the hypothesized relationships among the constructs in the structural model usually range from -1 to +1, although they can occasionally be lower or higher. A coefficient of 1 implies a robust positive correlation, while a coefficient of -1 signifies a substantial negative correlation. Constructs with coefficients closer to zero have weaker relationships and are less significant in explaining other constructs in the structural model (see Table 9).

**Table 9 | Path coefficients**

Constructs	Original sample	Sample mean	Standard deviation	t-statistics	p-values
<b>Feelings → Resonance</b>	0.313	0.317	0.063	4.961	0.000
<b>Imagery → Feelings</b>	0.618	0.621	0.051	12.055	0.000
<b>Judgements → Resonance</b>	0.531	0.528	0.062	8.575	0.000
<b>Performance → Judgements</b>	0.786	0.789	0.027	28.899	0.000
<b>Salience → Imagery</b>	0.555	0.552	0.073	7.567	0.000
<b>Salience → Performance</b>	0.539	0.539	0.067	8.092	0.000

Source: Own elaboration

Based on the above table, the statistically significant values of the path coefficients confirm the existence and significance of the relationships between the constructs. An examination of the path coefficients reveals the following insights with respect to the magnitude of their relationships. The salience construct and the two constructs situated in the second position of the pyramid (performance and imagery) exhibit a medium magnitude. As one traverses the pyramid, the magnitude of the path coefficients increases on both sides but diminishes as one approaches the top of the pyramid. This suggests that the relationships between the constructs at the intermediate levels of the pyramid are stronger. Additionally, when comparing the two sides of the pyramid, it is observed that the rational side consistently boasts relationships with a greater magnitude than the emotional side.

After analysing the significance of the relationships, it is vital to evaluate the relevance of significant connections between the constructs in the model. This information is displayed in Table 10, which provides the observed values for the total effects.

**Table 10 | Total effects**

Constructs	Original sample	Sample mean	Standard deviation	t-statistics	p-values
<b>Feelings → Resonance</b>	0.313	0.317	0.063	4.961	0.000
<b>Imagery → Feelings</b>	0.618	0.621	0.051	12.055	0.000
<b>Imagery → Resonance</b>	0.193	0.197	0.044	4.371	0.000
<b>Judgements → Resonance</b>	0.531	0.528	0.062	8.575	0.000
<b>Performance → Judgements</b>	0.786	0.789	0.027	28.899	0.000
<b>Performance → Resonance</b>	0.417	0.417	0.054	7.676	0.000
<b>Salience → Feelings</b>	0.343	0.343	0.056	6.166	0.000
<b>Salience → Imagery</b>	0.555	0.552	0.073	7.567	0.000
<b>Salience → Judgements</b>	0.424	0.426	0.060	7.096	0.000
<b>Salience → Performance</b>	0.539	0.539	0.067	8.092	0.000
<b>Salience → Resonance</b>	0.332	0.334	0.050	6.659	0.000

Source: Own elaboration

An analysis of the data presented in the table above has led to a confirmation of the statistical significance of the scores, underscoring the correlation between the constructs. The table serves to confirm and further elucidate the validity of the CBBE model conceptualization. Specifically, it demonstrates the verifiability of the model constructs through the comparison of their effect values. The relationship values between the salience construct and those immediately above it are always greater than those with constructs located at levels three or four of the pyramid. This underscores the importance of considering the hierarchical nature of the model when evaluating its validity.

There is one more stage in the evaluation of the structural model, which is to assess its explanatory power. This pertains to the ability of the model to accurately fit the data and quantifies the strength of the association indicated by the model. The most used metric for evaluating the explanatory power of a structural model is the coefficient of determination or  $R^2$ . This value is calculated as the squared correlation between the actual and predicted values of an endogenous construct. In other words,  $R^2$  represents the proportion of variance in the endogenous construct explained by all the exogenous constructs linked to it. The  $R^2$  value ranges from 0 to 1, with higher values indicating greater explanatory power of the model and acceptable values may vary depending on the specific field and the nature of the problem being addressed.

**Table 11 | Coefficient of determination, R<sup>2</sup>**

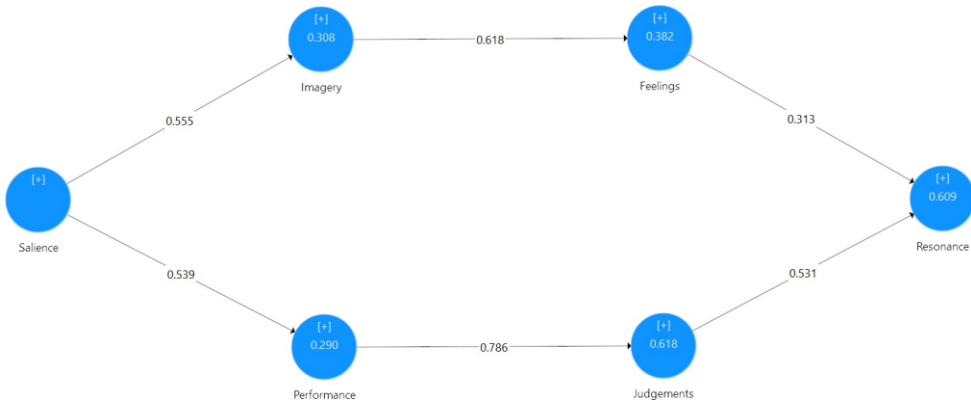
Constructs	R squared	R squared adjusted
Feelings	0.382	0.378
Imagery	0.308	0.304
Judgements	0.618	0.615
Performance	0.290	0.286
Resonance	0.609	0.604

Source: Own elaboration

The table shows the values of the coefficient of determination for the constructs in the model, with some constructs having moderate values, while others show less acceptable values. Considering the results, it can be inferred that the coefficient of determination for the resonance and judgment constructs is of moderate value. This suggests that the model is suitable for explaining these two constructs. However, the coefficient of determination for the feelings, imagery and performance constructs is relatively low. Thus, these constructs are not well-explained by the preceding constructs.

The following figure presents the most crucial results of this study. It depicts the model with its respective constructs, the interrelationships between the constructs based on the customer-based brand equity pyramid model, the coefficient of determination and the path coefficients.

**Figure 2 | CBBE pyramid model, coefficient of determination and path coefficients**



Source: Own elaboration

What is striking about the figure is the ease with which it depicts the clear path between the initial construct, saliency, and the final construct, resonance, bringing out the two sides of the pyramid and the relevance of each construct, and the importance of each side of the pyramid.

## Discussion and Conclusions

Previous research has emphasized the significance of positioning and the potential consequences of failing to do so, namely the creation of an implicit positioning that may not



align with the brand's intended image. Therefore, positioning is of utmost importance. The present study aimed to identify appropriate positioning axes for cork fashion brands; however, there is a scarcity of literature on this topic. The findings of our questionnaire reveal that brands can position themselves on three levels, with multiple axes on each level. This is consistent with the literature review, which suggests that consumers are able to distinguish and differentiate between cork fashion brands.

The available positioning are sustainability, Portugal, ecology, nationalism, heritage, lightness, creativity, biodiversity, softness, innovation, waterproofness and resistance. It is also shown that the positioning axes indicated by the consumers fall into the four groups that have been identified in the literature. They are physical properties, sustainability, innovation and creativity and traditional or historical associations. It is imperative that sustainability, ecology and Portugal be applied as the primary axes for positioning cork fashion brands on the first level. The use of sustainability, ecology and Portugal serves to highlight the versatility and innovative nature of cork as a raw material. Cork, as a raw material, offers exceptional functional advantages that are unparalleled on the market, making it an ideal choice for fashion brands seeking to make a lasting impact. However, it is important to note that positioning based solely on rational axes is inadequate, as emotions play a critical role in establishing a connection and fostering engagement with consumers. Emotions are especially crucial in the decision-making process, making it imperative for fashion brands to consider the symbolic and emotional value of their positioning in addition to the functional benefits of the material.

Based on these findings, cork can have a comparable association to the mentioned materials, such as Carrara marble (Primavori, 2015), cashmere (Van Schoor, 2019), silk (Barron, 2021) or leather (Nicholas, 2014), and thus evoke a country. Cork can therefore be positioned on an axis labelled Portugal. The same is true of the nationalism and heritage axes, proving the point made by Jung and Jin (2014), Adamkiewicz et al. (2022) and Zhang et al. (2023). These three alternatives fall into the traditional or historical axes group. From the literature reviewed, the axis of positioning based on sustainability is the most agreed upon, according to Gil (2014), Stål and Jansson (2017), Lobo et al. (2020) and Kim and Suh (2022). This positioning has been shown to be not only feasible, but also recommendable. Alongside sustainability, there are similar axes, in particular ecology and biodiversity. Having heavily highlighted the physical properties of cork and the advantages that this material has to offer, multiple axes were also found to prove the claims made by Gil (2014) and Jung and Jin (2014). These axes are lightness, smoothness, waterproofness and resistance. The final set of positioning axes includes the innovation and creativity provided by cork, which supports the statements of Gil (2014) and Sun and Kim (2023).

Surprisingly, three positioning axes are related to physical properties. What is even more surprising is that these axes are relevant at the highest level, resonance. Often physical properties are associated with cognitive decisions. If hypothetically this is the case, then it goes against a significant amount of evidence found in the literature, as suggested by Parmentier et al. (2013), Lobo et al. (2020), Pérez del Castillo et al. (2020) or Sun and Kim (2023), among many others. However, when considering other positioning axes, such as

sustainability, ecology and biodiversity, consumer responses consistently align with findings of Bly et al. (2015) and McNeill and Moore (2015).

As the use of cork as a fashion material gains popularity, it is crucial to establish a distinct and appealing positioning that not only identifies but also enhances the brand equity of cork fashion products. The use of positioning that ensures the distinction and superiority of cork fashion products is not sufficient in itself. The aim of this research was not solely to determine a positioning that guarantees the superiority of cork fashion brands, but rather to identify a positioning that contributes to the growth of brand equity. By applying the consumer-based brand equity (CBBE) pyramid model, it was established that the chosen axes significantly contribute to increasing brand equity. Additionally, partial least squares structural equation modelling (PLS-SEM) was applied to CBBE, highlighting the possibility for brands to utilize the identified axes in a sequence that includes salience, imagery and performance, feelings and judgments, and finally resonance. In the particular instance of cork fashion brands, functional positioning is found to be more highly valued by consumers. This is due to the inherent physical properties of cork and, as Amorim (2014) points out, it is challenging to reproduce so many characteristics simultaneously in a single product. Yet, the positioning axes identified in conjunction with the CBBE resonate with the findings of Hyun et al. (2024) that fashion brand equity is multidimensional in nature. The applied method allowed identification of positioning axes which, when applied to the CBBE, are in line with what has been mentioned in the literature, wherein Adamkiewicz et al. (2022) points to heritage, Adamkiewicz et al. (2022) and Zhang et al. (2023) to longevity and Thorisdottir and Johannsdottir (2020), Kim and Suh (2022), Zhou et al. (2023), Zhang et al. (2023) and Winit et al. (2023) to sustainability. It is interesting to realize that this approach performs remarkably well in all the various CBBE settings, as it reveals positioning axes for brand performance and consumer judgements (lightness, softness, waterproofness and resistance), for brand imagery and consumer feelings (sustainability, Portugal, nationalism, heritage, biodiversity and creativity).

It is imperative to acknowledge the limitations of this study, despite its relevance. The utilization of non-random samples is a noteworthy limitation. It was not feasible to employ random sampling for either the interviews or the questionnaire. While we endeavoured to ensure that the sampling process obtained a representative sample of the population for both methods, it is impossible to guarantee that this was achieved. This limitation provides an opportunity for future studies to replicate our findings and expand upon them. Another important limitation of this study is the use of a fictitious brand to assess brand positioning and equity. The use of fictitious brands in research is often controversial, as it can lead to distortions and may result in consumers being unable to express their true thoughts or opinions. This is unequivocally a limitation of the study, and the results therefore reflect consumer expectations rather than perceptions. Nevertheless, given the limitations of alternative approaches, the use of a fictitious brand was deemed the most appropriate option. It is imperative to note that applying a single brand equity assessment model, specifically the consumer-based brand equity pyramid model, may be insufficient for comprehensive assessment purposes. Therefore, it is recommended that this limitation be addressed.

The paper concludes with a discussion of the contributions made by the research. From an empirical standpoint, this study provides a number of noteworthy contributions to the cork product fashion sector. It can also be used on products that symbolize the heritage, tradition

or symbolism of a country or region. Specifically, it delivers the first comprehensive assessment of potential positioning axes for brands marketing this type of product. Furthermore, it establishes a quantitative framework that ensures that the positioning axes are contributing to the strengthening of the brand equity. As a whole, this is the first study to have this framework and its applicability to this industry, which is one of its strengths.

Despite the aforementioned limitations, this research also brings valuable insights and relevant contributions to the body of research that integrates the concepts of positioning and brand equity. Our results demonstrate that the consumer-based brand equity pyramid model can be constructed from positioning axes identified and validated through a quantitative methodology (questionnaire) that must be preceded by a qualitative methodology (interviews). This sequence ensures that the developed framework finds positioning axes that ensure brand equity.

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## ARTICLE

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# Appendix A

No.	Question	Description															
1	<p>The first question asked for information on which products made from cork participants could name, and this was used as a selection question.</p> <p>This was followed by a presentation of the brand and its characteristics including an image of the products.</p>	<p>What products made from cork can you name? (Name the products or answer "none" if applicable.)</p> <p>CorkFashion will be a fashion accessories brand that focuses on design, innovation and sustainability. With the quality of Portuguese raw materials and workmanship, this will be a brand that will offer you delicate, sophisticated and environmentally friendly pieces, made by our artisans from 100% natural, recyclable and biodegradable cork. The extraordinary raw material that is cork comes from the cork oak forest, a characteristic ecosystem of the Alentejo and has unique characteristics. Browse the gallery below and see some of the various products from this brand that you could buy. Based on this description, answer the following questions.</p>															
2	<p>Regarding the performance of the CorkFashion brand, please express your degree of agreement or disagreement with the following statements:</p>	<p>CorkFashion would satisfy the basic needs of the product category.</p> <p>This brand would have special characteristics.</p>															
3	<p>Regarding the performance of the CorkFashion brand, please express your degree of agreement or disagreement with the following statements:</p>	<p>I would like people to use this brand's products.</p> <p>This brand would be easy to place on the market.</p> <p>This brand would be elegant.</p> <p>I would like the appearance and other design aspects of this brand.</p> <p>This would be a brand that I could use in a variety of situations.</p>															
4	<p>Express your degree of agreement or disagreement when completing the sentence: The CorkFashion brand is...</p>	<table><tr><td>elegance</td><td>ecology</td><td>heritage</td></tr><tr><td>innovation</td><td>resistance</td><td>lightness</td></tr><tr><td>tradition</td><td>biodiversity</td><td>softness</td></tr><tr><td>nationalism</td><td>Portugal</td><td>impermeability</td></tr><tr><td>sustainability</td><td>creativity</td><td></td></tr></table>	elegance	ecology	heritage	innovation	resistance	lightness	tradition	biodiversity	softness	nationalism	Portugal	impermeability	sustainability	creativity	
elegance	ecology	heritage															
innovation	resistance	lightness															
tradition	biodiversity	softness															
nationalism	Portugal	impermeability															
sustainability	creativity																
5	<p>Regarding the CorkFashion brand, please express your degree of agreement or disagreement with the following statements:</p>	<p>I believe that the products of the CorkFashion brand would have quality.</p> <p>CorkFashion would offer good value.</p> <p>Its manufacturers would be innovative.</p> <p>I think I would like this brand.</p> <p>I would admire this brand.</p> <p>I would respect this brand.</p> <p>This brand would be unique.</p> <p>This brand would offer advantages that other brands in the same product category cannot.</p>															

6	When it comes to feelings, the CorkFashion brand gives you the feeling of...	fun safety social approval self-respect	respect for nature belonging to a group comfort support for the Portuguese economy
7	Express your degree of agreement or disagreement when completing the sentence: If this brand existed...	and it wasn't available, it would make little difference to me if I had to use another brand. I would be loyal to it. I would buy it whenever I could. I would buy as many products as I could. I would feel that it was the only brand in the category that I needed. it would be the one I would prefer to use/buy.	
8	Still with the CorkFashion brand in mind, please indicate your degree of agreement or disagreement with the following statements:	This brand would be special to me. This brand would be more than a product to me. I would identify with people who use this brand. This brand would be used by people like me. I would enjoy talking about this brand with others. I would be interested in learning more about this brand. I would be proud if others knew I wore this brand. I would enjoy visiting this brand's website.	
9	Demographical questions	Gender Age Education Professional occupation How many people make up your household? Net monthly salary of your household District of residence	

Source: Own elaboration