
INNOVATION IN SPORTS BRANDS

THE ROLE OF PRODUCT INNOVATION

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Abstract

This thesis examines how sustainability plays a crucial role in influencing customer behavior and boosting brand performance in the competitive sports market. The study explores the impact of product innovation, corporate sustainability, green communication strategies, and green brand positioning on customer needs/preferences and brand loyalty using a mix of empirical research, literature review, and analysis of major industry trends.

When making purchases, consumers in the sports industry are giving sustainability a greater significance. They value the usage of environmentally friendly materials and a sports brand's reputation for sustainability as key criteria. Consumers are more likely to choose and remain loyal to brands that exhibit a sincere commitment to social and environmental responsibility. The importance of incorporating sustainability into sports brand strategies is emphasized. Product innovation that uses environmentally friendly components and production methods benefits society and the environment, in addition to giving businesses a competitive edge. The development of a brand's reputation and the encouragement of consumer loyalty is significantly influenced by effective green communication methods. Transparently communicating sustainability goals and engaging consumers with compelling messaging build a relationship with environmentally conscious consumers and create positive brand perceptions.

To learn more about consumer opinions and actions regarding sustainability in the sports business, a survey was carried out as part of this research. Consumer preferences for sustainable materials, the impact of a brand's sustainability reputation on purchasing decisions, and the importance of green communication strategies were among the themes covered in the survey. The findings demonstrated the significance of a brand's sustainability reputation, the rising demand for sustainable goods, and the value of effective communication in advancing sustainable practices. These results add to a greater understanding of sustainability in the sports industry and offer important information to assist the research aims.

Overall, the relevance of sustainability in the sports sector and its impact on consumer behavior and brand performance are generally highlighted by this thesis. Sports brand businesses may adopt sustainable practices, put into operation efficient communication strategies, and establish themselves as leaders in the fight for a more sustainable future by following the insights and suggestions gleaned from this research.

Keywords: sustainability, consumer behavior, green strategies

Resumo

Esta tese analisa a forma como a sustentabilidade desempenha um papel crucial na influência do comportamento do consumidor e no aumento do desempenho da marca no mercado competitivo do desporto. O estudo avalia o impacto da inovação do produto, da sustentabilidade corporativa, das estratégias de comunicação sustentáveis e do posicionamento da marca sustentável nas necessidades/preferências dos consumidores e na fidelidade à marca, utilizando uma combinação de investigação empírica, revisão da literatura e análise das principais tendências do sector.

Ao comprar algo, os consumidores da indústria do desporto estão a dar cada vez maior importância à sustentabilidade. Valorizam a utilização de materiais sustentáveis e a reputação de sustentabilidade de uma marca desportiva como critérios-chave. É mais provável que os consumidores escolham e se mantenham fiéis a marcas que demonstrem um compromisso sincero com a responsabilidade social e ambiental. É salientada a importância de incorporar a sustentabilidade nas estratégias das marcas desportivas. A inovação de produtos que utilizam componentes e métodos de produção amigos do ambiente beneficia a sociedade e o ambiente, para além de proporcionar às empresas uma vantagem competitiva. O desenvolvimento da reputação de uma marca e o incentivo à lealdade do consumidor são significativamente influenciados por métodos eficazes de comunicação sustentável. A comunicação transparente dos objectivos de sustentabilidade e o envolvimento dos consumidores através de mensagens convincentes constroem a relação com os clientes preocupados com o ambiente e, dessa forma, criam percepções positivas da marca.

Para saber mais sobre as opiniões e acções dos consumidores relativamente à sustentabilidade no sector do desporto, foi realizado um inquérito no âmbito desta investigação. As preferências dos consumidores por materiais sustentáveis, o impacto da reputação de sustentabilidade de uma marca nas decisões de compra e a importância das estratégias de comunicação sustentável foram alguns dos temas abordados no inquérito. Os resultados demonstraram a importância da reputação de sustentabilidade de uma marca, o aumento da procura de bens sustentáveis e o valor de uma comunicação eficaz na promoção de práticas sustentáveis. Estes resultados contribuem para uma maior compreensão da sustentabilidade na indústria do desporto e oferecem informações importantes para apoiar os objectivos da investigação.

De um modo geral, a relevância da sustentabilidade no sector do desporto e o seu impacto no comportamento dos consumidores e no desempenho das marcas são destacados por esta pesquisa. As empresas de marcas desportivas podem adotar práticas sustentáveis, pôr em

prática estratégias de comunicação eficientes e estabelecer-se como líderes na luta por um futuro mais sustentável, seguindo as ideias e sugestões recolhidas nesta investigação.

Palavras-chave: sustentabilidade, comportamento do consumidor, estratégias sustentáveis

Index

Acknowledgments.....	ii
Resumo	v
Index of Tables.....	ix
Index of Figures	x
1. Introduction.....	1
1.1 Motivation	1
1.2 Introduction to the topic	1
2. Literature review	5
2.1. Introduction.....	5
2.2. Corporate Sustainability	5
2.3. Product Innovation.....	7
2.4. Green Communication	11
2.5. Brand Positioning	13
2.6. Conclusion	17
3. Methodology	19
3.1. Introduction.....	19
3.2 Model	21
3.3. Conclusion	22
4. Analysis of results	25
4.1. Results.....	25
4.2 Survey's results	25
5. Conclusion	45
5.1 Answering the Research Question	45
5.2 Main Theoretical and Managerial Contributions	45

5.3 Limitations and suggestion for Future Research	47
References	49
Annex.....	53

Index of Tables

Table 1: “How familiar are you with the concept of sustainability in the context of sports brands?”	25
Table 2: “How important is sustainability to you when buying sports gear and accessories, on a scale of 1 to 5?”	27
Table 3: “How likely are you to purchase sports products that are made from sustainable materials (e.g. recycled plastic, organic cotton)?”	28
Table 4: “Which sustainable product attributes are most important to you when purchasing sports products? ”	29
Table 5: “To what extent do you agree, on a scale of 1 to 5, with the following statement: Sports brands have a responsibility to prioritize sustainability in their business practices.”	31
Table 6: “To what extent do you agree, on a scale of 1 to 5, with the following statement: "I am more likely to consider buying a company's products that are environmentally friendly when it effectively communicates its environmental sustainability efforts?"	32
Table 7: “Which of the following alternatives best captures your perspective on the link between sustainability and financial success in the market for environmentally friendly products?”	33
Table 8: “Do you think that sports brands that use sustainable methods have a market advantage? ”	35
Table 9: “Do you consider a sports brand's reputation for sustainability when buying?” ...	36
Table 10: “Age range”	36
Table 11: “Gender”	37
Table 12: "Level of Education”	37
Table 13: “Professional situation”	38
Table 14: “Geographic Location”	38

Index of Figures

Figure 1: Model	21
Figure 2: Hypothesis 1 p-value	40
Figure 3: Hypothesis 2 p-value	41
Figure 4: Hypothesis 3 p-value	43
Figure 5: Hypothesis 4 p-value	44

1. Introduction

1.1 Motivation

The theme of Sara's thesis is the intersection of sustainability and the sports brands' world. She is inspired to investigate how sports brands may promote good change by applying sustainable practices to her love of sports, which was developed during the pandemic and increased when she started working at NIKE. She wants to understand how consumers perceive sustainability and how much weight they give it when making selections about sports goods. To create a more sustainable future where sports and environmental conscience go hand in hand, Sara's ultimate goal is to promote collaboration among sports enthusiasts, industry stakeholders, and sustainability activists.

1.2 Introduction to the topic

The topic of sustainable development has been elevated to the forefront of business concerns in recent years. Businesses are coming under more and more pressure to lessen their influence on the environment and adopt sustainable practices throughout their operations. Product innovation, which involves creating more consumer-friendly products that fulfill environmental standards, is one approach for businesses to do this. However, it is still unclear how product innovation and positioning for green brands are related. Therefore, the goal of this thesis is to investigate what is the impact of product innovation on the positioning of green brands and to provide guidance to businesses looking to improve their sustainability through strategic positioning of their green brands, being the research question **"What is the impact of product innovation on green brand positioning?"**.

The notion of "green branding," which refers to the practice of promoting environmentally conscious products and services, serves as the foundation for this study. The innovation diffusion concept, which describes how consumers embrace new items, will also be used in this study. By examining customer perceptions of green products and the contribution of product innovation to those perceptions, the research will investigate how product innovation affects green brand positioning.

The examination of the connection between product innovation and green brand positioning is a theoretically interesting aspect of this topic. The study will draw on several theoretical perspectives, including the concept of sustainable innovation, since innovation should not just give businesses a competitive edge but also help the environment and promote social

well-being. Innovation diffusion theory aims to clarify how novel concepts, goods, or technologies get accepted and transcend an organization or society.

The concepts of green branding and green communication are, possibly, the most important concepts since a company's total sustainability strategy should include both green communication and green branding. Companies may distinguish themselves from their rivals and establish lasting relationships with their stakeholders by clearly articulating their environmental sustainability strategies and promoting themselves as socially responsible firms. This relationship is important to understand, as it has implications for businesses looking to improve their sustainability and environmental impact.

This subject also has a lot of practical applications. Businesses are becoming more and more aware of the value of sustainability and the necessity of minimizing their environmental effect. Additionally, consumers are becoming more conscious of sustainability-related issues and seeking companies and goods that share their beliefs. Therefore, for companies aiming to increase their sustainability and customer appeal, knowing the connection between product innovation and green brand positioning is crucial. The positioning of a green brand may enhance the performance of a company, according to certain empirical research. For instance, a Nielsen (2015) study indicated that consumers are willing to pay more for ecologically friendly products. In addition, a Cone Communications survey from 2017 revealed that 87% of consumers would buy a product if they knew the manufacturer supported a cause they were passionate about.

There will be multiple chapters in this thesis, each of which will concentrate on an individual aspect of the study subject matter. A thorough overview of the pertinent literature on sustainability, product innovation, green communication, and brand positioning will be provided via the literature study. This chapter will assist in developing the study's theoretical framework and setting the research topic in context.

The thesis model, which outlines the study's research design and methodology, will be presented in the next chapter. A review of the research methodology, including the procedures used for data collecting and analysis and the overall research design, will be provided in this chapter.

The study's results and a discussion of the findings will be presented in the fourth chapter. To address the research question, this chapter will present the data gathered throughout the study, and an analysis will be performed. Additionally, the research will go into how the results affect businesses and offer suggestions for further study.

The research will be concluded in the fifth chapter, which will provide a summary of the key findings and their consequences. Additionally, this chapter will go through the study's weaknesses and recommend topics for additional investigation. Overall, the goal of this thesis is to offer a thorough examination of how product innovation affects the positioning of green brands and to offer actionable advice for companies aiming to increase their environmental impact and sustainability.

2. Literature review

2.1. Introduction

The interaction between sustainability, product innovation, green communication, and brand positioning is the main topic of this literature study. It analyzes the effects of sustainability on product innovation as well as how organizations integrate sustainable practices into their operations. The assessment additionally glances at the methods used to represent businesses as socially responsible and the function that green communication plays in alerting consumers about a company's sustainability efforts. The review's overall goal is to offer insights into the tactics used by companies to embrace sustainability, create cutting-edge products, publicize green activities, and position their brands in a market dominated by people who care about the environment.

The literature review will be divided into four sections: 2.2 Corporate Sustainability, 2.3 Product Innovation, 2.4 Green Communication, and 2.5 Brand Positioning. Section 2.6 will present a summary of the content presented above.

2.2. Corporate Sustainability

In order to become sustainable, everyone's aims must be attained without compromising the potential of future generations to do the same. Environmental awareness is only one aspect of sustainable living. Most definitions of sustainability also take social equality and economic development into account (Ali & Danish, 2019).

Sustainability is defined by the World Commission on Environment and Development as a development that satisfies current demands while preserving the ability of future generations to satiate their own needs. Furthermore, the European Commission Measuring Eco-Innovation (MEI) defines eco-innovation as the incorporation or implementation of a new product, production process, service, management, or business approach that, in comparison to similar options, reduces environmental risks, pollution, and other negative outcomes of resource utilization or supports environmentally friendly goals (Loučanová & Šupín, 2021).

Although the interaction between humanity and the natural world has been a subject of study since antiquity, increased awareness of environmental concerns in recent decades has led some to suggest that society's alienation from nature is the primary factor contributing to unsustainable development (Kitsios et al., 2020). Even though it frequently refers to environmental protection, the term can also be used to describe social and economic sustainability. It is a comprehensive strategy that takes into account how various facets of

society and the environment are interconnected. As the globe faces several environmental and social concerns, including climate change, the loss of biodiversity, and inequality, sustainability has gained importance in recent years (Maier & Maier, 2020).

According to some, for businesses to be competitive, they must make sustainability-focused "changes" to the current state of their value chain, product/service offerings, and business strategy (Kantabutra & Ketprapakorn, 2020).

Corporate sustainability has exploded over the past few decades, which has only exacerbated the misunderstanding already present (Cillo et al., 2019).

Theoretically, corporate sustainability is characterized as a set of corporate management principles that still acknowledges the need for businesses to expand and make money but places a lot more emphasis on the three-domain outcomes (social, environmental, and economic) and the public disclosure of them (Ashrafi et al., 2020). It may also be described as the leadership and management style that a company adopts to enable it to expand commercially while also producing social, environmental, and economic benefits (Kantabutra & Ketprapakorn, 2020). Resources used and emissions produced as a result of population and economic growth are placing an increased load on the environment (Barbier & Burgess, 2020). There is more external pressure on businesses to respond to and address issues related to climate change and environmental degradation as a result of this trend's negative repercussions and unfavorable social and environmental implications (Cai & Li, 2018). In addition, businesses are under increased pressure to become more sustainable as a result of globalization and new technologies, according to Cai and Li (2018). Due to these combined pressures, businesses are placing a greater emphasis on creating green and sustainable value, increasing interest in sustainability innovations that can simultaneously boost sustainability and competitiveness (Ashrafi et al., 2020).

Given the considerable rise in consumer interest in sustainability, many businesses are attempting to expand their sustainable offerings or create new standards for the future (Shazad et al., 2020). By giving information about sustainable activities or product levels, fashion companies attempt to improve the effectiveness of their communication with consumers to mature and keep up with market trends. Skepticism is the inclination of consumers to question whether a product is sustainable when they stumble across it (Shazad et al., 2020). Regulations on multiple ecological pollutants, the institutionalization of legislation, and the standardization of certification have all gained prominence globally to increase consumer trust in sustainability (Kim & Oh, 2020).

If consumers are not sufficiently informed about a product, they are more likely to misinterpret it, and businesses may use tactics like "greenwashing" to trick customers (Zhang & Berhe, 2022). Greenwashing is the practice of deceiving customers about a company's environmental policies or the environmental advantages of a good or service, which can lower the product's quality, effectiveness, and safety. According to Kim and Oh (2020), there is a continual condemnation of sustainability initiatives because they make up one-fourth of the "greenwashing" used in the fashion business, which makes it challenging to instill customer confidence.

Given how many people and the environment are impacted by sportswear firms' business operations, they bear a significant portion of the responsibility for sustainability (Barbier & Burgess, 2020). Additionally, younger generations are highlighting more and more that they are willing to pay more for goods that have a lower impact on the environment (Karste & Guzmán, 2020). In response to consumer demands for radical change, sportswear stakeholders are working toward meaningful behavior and regulatory compliance (El-Kassar & Singh, 2019).

Recently, well-known sports businesses like Nike, Adidas, and Under Armour have begun implementing marketing communication initiatives to support their green brand image and introduce diverse, sustainable products (Ashrafi et al., 2020). Through the Nike 2020 Future Forum, Nike unveiled the Move to Zero campaign, pledging to work toward a future without carbon emissions and waste (Kim & Oh, 2020). To reduce their negative effects on the environment, Move to Zero campaign (Nike) uses sustainable cotton and recycled polyester in the production of all of their products. Adidas also declared that starting in 2024, all plastic-using products would be replaced with recycled polyester (Kim & Oh, 2020). The business takes part in several environmental protection programs, including raising the usage of sustainable materials, reducing waste emissions, and recycling used goods (Ashrafi et al. 2020).

2.3. Product Innovation

Innovation, as a result, emphasizes the desired output, such as new products, processes, marketing strategies, business models, supply chains, and organizational structures (Cillo et al., 2019). To properly materialize innovation and enjoy its advantages, one must first understand that innovation is three distinct things: innovation is an outcome, innovation is a process, and innovation is a mindset (El-Kassar & Singh, 2019). Continuous innovation is now essential for gaining an advantage over competitors. The importance of innovation in

handling issues related to sustainable development has been extensively acknowledged (Shazad et al., 2020). To be profitable and competitive and perform better overall in the current socioeconomic environment, businesses must overcome substantial challenges and create new, superior methods (Chen et al., 2020). Businesses have long recognized the need to invest in new product design (NPD) to prosper and gain a competitive edge in an increasingly global and competitive business environment. This is because innovation has been crucial to corporate success for a long time (Cillo et al., 2019). Nowadays, and with technology evolving every day, digital media helps to make it feasible to communicate product information more effectively by substituting static pictures with interactive models that let viewers engage with the product as they would in real life (Akoglu & Ozbek, 2022). We can also call it **Product Innovation**.

Product innovation is focused on new market offers like goods, services, or initiatives. Even though it's described as product innovation, the phrases "service" or "initiative" might just as easily be substituted (Qiu et al., 2020). A variety of product innovations are feasible because innovation can take many different forms, from incremental to radical offerings (Qiu et al., 2020). There are seven common categories of product innovations, according to Gwin and Gwin (2015) and Cherrafi et al., (2018).

- **Cost reductions:** The goal of the cost reduction is to set the product apart from rival products in terms of price or to maintain the product's price competitiveness.
- **Product improvements:** Upgrades to items are frequently presented as "new and improved" or "better" models, which frequently involve improvements to shape or functionality.
- **Line extensions:** When new features or options are added to an existing product, it is referred to as a product update. These features or options improve the overall utility and functionality of the product, which are lacking in the original product or the present set of product offerings.
- **New markets:** Current products expanded into new markets with little product modification.
- **New uses:** Original items with little to no alterations to the product that are positioned in new markets.
- **New category entries:** Products that are revolutionary for the business but not unique for consumers as a whole.

- **New-to-the-world products:** Innovations that create new markets where none previously existed and are regarded as revolutionary in nature.

Innovation can be seen in any type of brand/business, and sports brands are no exception. New technologies, gear, and apparel, new training methods, fresh consumer goods and services, fresh media and format creation, and the emergence of new sports are all examples of innovation in sports (Yusuf, 2021).

Innovation diffusion theory plays an important role in this type of business. According to the idea, the pace and scope of innovation adoption can be predicted and influenced by some different variables. Everett Rogers created the theory in the 1960s, and it has since been extensively used in industries like marketing, technology, and public policy (Chu et al., 2018). The five stages of innovation diffusion, according to Rogers, are awareness, interest, evaluation, trial, and adoption (Chu et al., 2018). People learn about innovation at the awareness stage, and during the interest stage, they develop a curiosity to find out more about it (Saricam, 2022). In the evaluation stage, people weigh the advantages and drawbacks of adopting the innovation, and in the trial stage, they give it a limited try. Individuals finally decide to completely adopt the innovation and incorporate it into their daily life during the adoption stage (Yuhon & Cai, 2020).

The comparative benefit of the innovation over existing options, its alignment with existing values and practices, its level of complexity, and the extent to which it can be witnessed and communicated to others are all factors that Rogers identified as having an impact on adoption speed and degree (Yuhon & Cai, 2020). The theory also underlines how crucial interpersonal communication and social networks are to the diffusion process since people are more likely to adopt a new idea if they witness others in their social network doing so (Chu et al., 2018).

The fashion business typically faces many challenging issues related to sustainability. The notion of "fashion" often refers to the adoption of particular behaviors and aesthetics by different groups of people over the course of a limited amount of time (Chu et al., 2018). The fashion industry strives for novelty constantly, developing new products in response to rapidly shifting consumer demand (Chen et al., 2020). This is so that fashion, which depends on the pressure to change constantly and to be perceived as new, can thrive. The term "sustainable", in contrast, refers to something that can endure for a long time or be kept at a certain level. It originates from the ability of natural ecosystems to support themselves through time (Lin et al., 2021).

Numerous social and personal barriers prevent consumers from engaging in sustainable consumption. On a personal level, it could be challenging to satisfy hedonistic requirements due to a need for novel or supposedly original experiences and objects, such as impulsive or recreational buying (Cillo et al., 2019). Peer groups have a significant social influence on consumers as well, particularly younger ones who compare themselves to their peers and reference groups and feel inferior and dissatisfied as a result (Chen et al., 2020).

Cultural obstacles to sustainable consumption include unavoidable triggers, a wide range of fashion promotion and merchandising strategies, and the need to appear in the most recent trends. In order to promote sustainable consumption, it is crucial to link it to personal requirements and aspirations or provide incentives for eco-friendly behavior, according to Melovic et al., (2020). Additionally, assistance is required to progress initiatives in alternative marketing and merchandising as well as to inform society and culture about the difficulties associated with sustainable consumption (Yusuf, 2021).

Better decision-making is facilitated by improved communication design, says Kitsios et al., (2020). Communication between the fashion business and consumers is quite significant. When made aware of environmental factors, people frequently reflect on their behavior and are motivated to improve it, according to Gwin and Gwin (2015).

Overall, sustainability and product innovation are intertwined in various ways, and sustainability must be taken into account at every stage of the innovation process.

Product innovation can first assist sustainability by creating more environmentally friendly products or processes that reduce waste, energy use, and greenhouse gas emissions (Kantabutra & Ketprapakorn, 2020). Second, sustainability may promote the creation of new products and services in response to the needs of environmentally conscious consumers.

Lastly, according to Loučanová & Šupín (2021), new business models that prioritize sustainability can be created by integrating product innovation with sustainability. For instance, several companies are testing out circular economy models, in which products are designed to be reused or recycled once their useful lives are through, reducing waste and resource consumption.

In the end, there is a strong link between product innovation and sustainability, and companies that place sustainability at the top of their innovation priorities will likely be better positioned to meet the evolving requirements of both consumers and the environment (Adamkiewicz et al., 2022).

2.4. Green Communication

With the help of improved eco-labels and environmental management systems, many companies are seeking to position their brands as environmentally friendly to strengthen their competitive advantages and financial success (Qiu et al., 2020). Nevertheless, others fall short in keeping their environmental obligations, and "greenwashing" is more prevalent (Zhang & Berhe, 2022). Such transgressions may jeopardize green buying intentions as well as brand loyalty and green trust.

In order to dissipate any potential consumer skepticism of green businesses, good communication is required. Green marketing communications describe an advertiser's attempts to engage target audiences by presenting compelling pro-environment messages and information to increase the likelihood that consumers would make green purchases (Chen et al., 2020). In a nutshell, it refers to the strategic communication methods employed by businesses to promote their fidelity to social responsibility and environmental sustainability. It entails effectively communicating sustainability goals, projects, and successes to stakeholders, such as customers, staff, investors, and the general public (Adamkiewicz et al., 2022).

After all, to effectively use environmental messaging in their green communication strategy, green brands must find ways to encourage consumers to do so, says Lin et al., (2021).

Recent marketing research indicates that consumers are getting more concerned about how consumer goods affect the environment (Tewari et al., 2022). Consumer concern for the environment is growing in a multitude of industries, including food, travel, cosmetics, and services (Luo et al., 2021). Given that the fashion industry has a reputation for being extremely costly in terms of energy-polluting and wasteful, it shouldn't come as a surprise that it has begun to produce eco-friendly clothing and other items to draw consumers (Luo et al., 2021).

By providing consumers with information about their green policies, plans, production, and practices, as well as their influence on the environment, green brands participate in persuasive communication when using the green transparency technique (Lin et al., 2017). The information provided to consumers on eco-labeling, sustainability ratings, and low-carbon reports, which show how much green brands appreciate the environment, is one of the green messages used in this strategy (Liao et al., 2020). Thus, by emphasizing the value that green companies offer to consumers, this communication strategy can strengthen ties between consumers and brands (Lin et al., 2017). In contrast, green competence enhancement refers

to green communications that encourage customers to use products from green brands to achieve their environmental goals. Green companies market their products as a way for consumers to demonstrate their proficiency in managing environmental tasks and attaining environmental goals in this communication strategy (Zhang & Berhe, 2022). As a result, consumers are encouraged to use green brands and co-create value with them. Consumers are more likely to be satisfied with and devoted to green brands if they believe their brand consumption has enhanced their perceived level of green competence (Zhang & Berhe, 2022).

The capacity of two green communication strategies—green competence improvement and green transparency—to influence customer relational outcomes depends on the ability of their respective compelling green messaging to foster consumer attachment to the green brand, according to Lin et al., (2021). Green Competence improvement can be defined as the process of advancing one's abilities in the area of environmental sustainability and fostering sustainable business practices in a particular field or industry. It requires learning a range of skills, including the capacity to analyze environmental impacts, comprehend sustainable development principles, find and use sustainable solutions, and effectively communicate sustainability (Lin et al., 2021). On the other side, Green Transparency refers to how much information businesses publish about their environmental activities and effects. It entails giving stakeholders, including clients, investors, staff, and regulators, open and understandable information about an organization's environmental policies, objectives, and performance (Chen et al., 2020). Information on the disposal of waste, greenhouse gas emissions, energy and water use, and additional environmental effects can all be disclosed, according to Chen et al., (2020). Green transparency may facilitate the switch to a more sustainable economy by fostering stakeholder confidence and trust. In other words, green brand attachment may serve as a potential mediator between the two green communication tactics and the results of consumer connections (Qiu et al., 2020).

For sports businesses, Green Communication is essential for promoting sustainability and encouraging innovation while developing new products. Organizations may build confidence and trust among stakeholders by being open and honest about their environmental policies, practices, and performance. They can also pinpoint areas for improvement that could inspire new concepts and competitive advantages (Liao et al., 2020).

Additionally, it is crucial to actively include stakeholders in sustainability efforts through green communication. Organizations can better understand stakeholder concerns and ambitions by fostering feedback, communication, and collaboration, which generates a sense

of shared responsibility (Gull & Idrees, 2022). Sports businesses may build deeper relationships and make sure that their sustainability activities take into account the requirements and values of their stakeholders by coordinating communication with those expectations.

According to Gull and Idrees (2022), another crucial component of green communication is increasing green competency. Companies can improve their knowledge and skills in environmental sustainability by creating a set of competencies that enables firms to critically evaluate environmental consequences, discover sustainable solutions, and communicate about sustainability successfully. Sports businesses are now more equipped to provide cutting-edge, ecologically friendly products that satisfy consumer demand thanks to this improvement in green competency (Tewari et al., 2022).

Long-term gains could result from initiatives in Green Communication. They can promote growth, lower risks, and improve brand reputation. Sports businesses may strengthen relationships, gather insightful information, and promote a sense of group responsibility for sustainability by actively involving stakeholders (Liao et al. 2020). As a result, green communication has become a crucial part of sustainable business practices in the sports industry.

Overall, incorporating green communication into sports businesses' operations helps them achieve sustainability goals while also fostering innovation, increasing stakeholder participation, and advancing the creation of environmentally friendly products. It gives businesses the ability to satisfy consumer expectations and contribute to a more sustainable future while effectively communicating their commitment to environmental responsibility (Gull & Idrees, 2022).

2.5. Brand Positioning

A brand's positioning aims to create a long-lasting competitive advantage on one or more product feature(s) in the eyes of the consumer (Gwin & Gwin, 2015).

Technology's advancement and broad adoption, as well as Internet technologies, have changed the ways society communicates in both personal and professional contexts. Businesses that operate in contemporary digital contexts also adhere to this rule (Karste & Guzmán, 2020). Since the internet is one of the most influential technologies of the 20th century, it has emerged as a critical component or a strategic tool. On the contrary, in quickly changing business contexts, good planning and exact analysis can be crucial in choosing the

"correct" IT investment strategies and putting any new technology into use (Karste & Guzmán, 2020).

Over the past ten years (and, likely, in the upcoming ten), effective messages and good communication skills have become crucial to the promotion and improved positioning of a brand to thrive in a cutthroat business environment and satisfy client demands and wants (Loučanová & Šupín, 2021). Brand loyalty, brand trust, and perceived quality are all positively impacted by brand experience. It has been established that perceived quality and brand trust play a crucial mediating role in the relationship between customers' brand experiences and brand loyalty (Akoglu & Ozbek, 2022).

According to Karste and Guzmán (2020), **brand identity** describes how a business wants its consumers to view it. Six aspects of brand identity are defined as benchmarks for measuring brand identity. Physical characteristics, personality, culture, interpersonal interactions, reflection, and self-image are some of these dimensions. A brand serves as a symbol of a company's principles and ethos and forges an emotional connection between the business and its clients. Consumers establish impressions about a brand based on its identity, values, and reputation, says Karste and Guzmán (2020). The brand's origin is less important than the qualities and values it stands for.

Brand personality is described as the distinctive quality that sets one brand apart from another. Several scholars have described brand personality as the emotional heart of the brand. According to Bairrada et al., (2019), there are three ways to develop a brand's personality: self-expression, interpersonal connections, and functional rewards.

Bernarto et al., (2020) define **brand awareness** as a combination of brand recognition, recall, and being top-of-mind for consumers. The level of brand awareness has a significant impact on consumer perception, which in turn affects their brand choice mentioning specific criteria for measuring overall brand awareness.

The planning of the structural elements of products and the psychological elements of services that influence consumers' impressions are referred to as brand communication. For businesses to reach their audience, they use a variety of communication channels, including advertising, sponsorships, campaigns, direct marketing, trade shows, word-of-mouth advertising, radio commercials, and print media, among others (Karste & Guzmán, 2020).

Brand image is the sum of impressions, associations, and beliefs about a brand's physical, functional, and psychological features, according to Ali and Danish (2019). The primary

element of brand positioning that businesses cannot control is the brand image, which is comprised of the consumer's internal and external perceptions.

Brand salience refers to the degree to which a brand is perceived or noticed by customers when they are contemplating a purchase (Bairrada et al., 2019). Brands that are more prominent in the market tend to have greater salience, while weaker brands may have little or no salience. This explains why larger brands tend to be more successful than smaller ones. If consumers do not consider the brand during the purchase process, it will not be recognized and will not offer any opportunity for positioning (Ali & Danish, 2019). Four key factors are used to measure brand salience: Prominence, Distinctiveness, Familiarity, and Propensity of the Brand. Improving brand salience can lead to more effective advertising and a higher position in the consumer's consideration set, according to Bernarto et al., (2020). To assess consumers' positive or negative perceptions of a brand based on these factors, the following questions can be included in the measurement instrument (Ali & Danish, 2019):

- Superiority of brand in a buying situation
- Distinctive of a brand while purchasing
- Source of familiarity with the brand
- Curiosity to use the brand

The global sportswear market is expanding significantly as a result of rising product demand and the launch of a variety of suppliers to satisfy these high and diversified wants. Due to both consumers' propensity for more casual and informal attire and the COVID-19 pandemic's effect on this product category's demand, consumers are now buying sportswear products for daily usage as casual fashion ensembles (Saricam, 2022).

Also, the volume and diversity of demand for practical and stylish sports products have expanded as a result of health and wellbeing-conscious consumers adopting sports as a lifestyle (Lin et al. 2021). Sportswear products are evaluated for their innovativeness and product quality. Thus manufacturers have begun to use novel materials and incorporate technological advancements into their production methods to compete with their rivals (Saricam, 2022).

The core product, the expected product, the augmented product, and the potential product are the four levels of products that the sportswear industry adopts in marketing terms. The benefits of augmented products, which are a combination of goods and services, are numerous and meet consumers' needs (Gwin & Gwin, 2015). To create a positive experience

and forge enduring relationships with their clients, sportswear stores must offer exceptional service as a component of an upgraded product.

In the sportswear industry, good customer service plays a significant role in building a great reputation. Long-term research has been done on the impacts of service quality on consumer happiness and loyalty in the retail industry, as well as the connections between the issues (Saricam, 2022).

Brand positioning and sustainability are interrelated, and one influences the other in different ways. A company's brand positioning and reputation can be strongly impacted by its sustainability policies and values, and brand positioning techniques can also influence a company's sustainability practices (Gull & Idrees, 2022).

The brand strategy of a business may be fundamentally influenced by its commitment to sustainability. A business can stand out from rivals and draw in clients who value environmental concerns by integrating sustainability into its branding and marketing strategies (Adamkiewicz et al., 2022). This can require emphasizing the usage of environmentally friendly materials or displaying initiatives to lower carbon emissions and the ecological imprint (Karste & Guzmán, 2020).

On the other hand, a company's sustainability policies may have an adverse effect on how customers perceive it. A company's brand may suffer, and it may lose customers if it is thought to be harming the environment or using up natural resources (Zhang & Berhe, 2022). On the opposite, a company's reputation and brand image can benefit from a strong commitment to sustainability.

A company's sustainability initiatives may also be influenced by its brand positioning (Yusuf, 2021). A business may purposefully promote itself as a sustainability leader to stand out and beat out competitors. A business can draw environmentally conscientious investors and consumers by highlighting its sustainability credentials (Kitsios et al., 2020). This posture may encourage the business to make additional investments in environmentally friendly procedures and equipment.

In conclusion, brand positioning and sustainability are intertwined ideas that are essential to the success of organizations today (Zhang & Berhe, 2022). Companies may stand out in the market, draw in environmentally sensitive customers, boost their reputation, and make a beneficial impact on the environment and society by incorporating sustainability into their brand positioning strategies (Bairrada et al., 2019). Consumer goals and brand offers that are compatible result in greater brand loyalty and enduring market presence (Ali & Danish,

2019). Additionally, employing sustainable brand positioning strategies can encourage favorable consumer perceptions and actions, promoting the widespread adoption of sustainable habits and producing advantageous environmental and social results (Tewari et al., 2022).

2.6. Conclusion

Sustainability is a complex notion that includes social, economic, and environmental components. It involves handling immediate demands while preserving the capacity of future generations to address their own needs. Although environmental awareness is essential, sustainability also encompasses economic growth and social equity.

Environmental and social issues, as well as globalization and technical breakthroughs, are pressuring businesses to become more sustainable. Corporate sustainability involves implementing management practices that put social, environmental, and financial repercussions first and keeping those practices transparent (Kitsios et al., 2020). Alongside that, consumer demand for sustainability is expanding: As a result of consumers' increased interest in sustainability, businesses are expanding their sustainable product and service offerings. Building customer confidence in sustainability projects, however, is difficult due to consumer mistrust and greenwashing (false environmental claims).

For businesses to remain competitive and handle sustainability issues, product innovation is crucial. It requires developing fresh goods, services, and projects that lower environmental hazards and promote sustainability objectives. Sustainability can be improved through a variety of product innovations, including price drops, product upgrades, and new market entrants. The perceived benefits of the innovation, its compatibility with current practices, complexity, and social influence are just a few of the variables that might affect how quickly and how widely sustainability adoption occurs.

To promote sustainable branding and green purchasing intentions, effective green communication is crucial. Consumer mistrust can be reduced via strategic communication of a brand's approach to social responsibility and environmental sustainability. Positive consumer involvement can be promoted by transparent and appealing communication, which can increase brand loyalty and consumer trust.

The fashion market, which is known for its innovation and frequent change, faces particular sustainability issues. Barriers in the industry that are cultural, social, and personal affect

sustainable consumption. Improved communication, creative design, and tying sustainability to individual objectives are crucial tactics for promoting sustainable consumption.

In conclusion, sustainability concerns in the fashion market are intertwined with corporate sustainability, consumer demand, product innovation, innovation diffusion, green communication, and sustainability issues. Businesses are likely to acquire a competitive edge and satisfy changing consumer needs if they promote sustainability, encourage innovation, and effectively communicate their environmental initiatives. The goal is to establish a more sustainable fashion market, specifically the sports brands market, by concentrating on innovation diffusion, green communication, and sustainable product development.

3. Methodology

3.1. Introduction

A scientific methodology can be described as a collection of academic work processes or as a collection of inquiry process methods. The scientific rigor of the research is ensured by the correct and transparent implementation of the scientific process. It steers research to develop true scientific information and shields it from subjectivity. It is required to select strategies from the approach, nature, research aims, and technical methods to theoretically characterize the scientific technique.

A defined research question, inclusion and exclusion criteria for publications, and, most importantly, a thorough analysis of the chosen literature are all necessary for literature reviews. To investigate the analysis of the literature that has been influenced by ongoing research concerns, an analysis of this sort of selection is required, incorporating ideas like character development analysis and quality analysis.

There are many reasons why an author might perform a literature review, according to Aromataris & Pearson (2014):

- Demonstrate a general understanding of a subject.
- Trace the evolution of knowledge on a subject over time.
- Recognize any areas where the evidence might be weak, conflicting, or ambiguous.
- Determine whether there is agreement or disagreement over a topic.
- Identify traits or connections between significant themes from prior research that are pertinent to the topic.
- Explain why a situation deserves more research.

Typically presented on paper or online, questionnaires are made up of a series of questions that each participant must answer. They can be easily distributed to a large number of people. However, having a large number of participants also means there will be a lot of data to analyze. Depending on the topic under investigation, it may be beneficial to begin with a questionnaire and then follow up on some specific points with an experiment, a collection of interviews, or both to fully explore a particular aspect of the phenomenon under study or to begin with interviews and then move on to questionnaires to validate certain findings.

This is a study that aims to understand what impact product innovation can have on green brand positioning. To sustain this essay, it will be used the quantitative methodology. This type of methodology contributes to the understanding of logical and essential aspects of a fact or phenomenon studied. In the quantitative approach, the emphasis is on the analysis of collected data. This is a method very suitable because it shows very representative and objective data from reality nowadays (Mussi et al., 2019) since it needs a large number of questions and the presence of a problem.

This type of research presents some advantages, according to Mussi et al. 2019):

- **Objectivity:** The foundation of quantitative research is numerical data, which is both objective and readily quantifiable, and measurable. This is crucial for examining how product innovation affects a brand's sustainability posture since it enables a more accurate and exact evaluation of the data.
- **Generalizability:** Because quantitative research may be used to investigate huge sample sizes, its results can be applied to a wider range of people. Understanding how product innovation affects a brand's sustainable positioning within the sports industry as a whole is vital.
- **Replicability:** Since quantitative research methods are simple to replicate, other researchers can confirm and validate the findings. This is crucial for making a compelling argument for how well-positioned a brand's sustainability is as a result of product innovation.
- **Statistical analysis** is a tool that can be used in quantitative research to assist in finding patterns and trends in the data. This can be especially helpful for figuring out the elements that make product innovation successful in enhancing a brand's sustainable positioning.

Overall, quantitative analysis is the best method for this thesis issue since it may offer a trustworthy and unbiased technique to assess what impact product innovation can have on green brand positioning.

An organized survey generated on the Google Forms platform was used to gather the data for this investigation. Through well-known social media sites like Facebook, Instagram, and Twitter, the questionnaire was made available to people living in Portugal and also around other parts of the world who were between the ages of 18 and 60.

This particular questionnaire's design was developed because it encompasses all the issues, questions, and data required to examine product innovation in the context of sustainability, particularly concerning sports brands. The study aims to capture subtle insights into how people perceive and prioritize sustainability in their purchase decisions across different life phases by involving participants across a wide age range, ranging from 18 to 60 years.

Because of their widespread use and quick dissemination ability, social media networks, including Facebook, Instagram, and Twitter, were chosen to distribute the questionnaire. These platforms offer an effective and practical way to connect with a wide range of participants, including people from different age groups, backgrounds, and social networks, gathering, this way, a total of 130 answers.

This study aims to gather information that will contribute to a more thorough understanding of consumer's attitudes and behaviors regarding sustainability in the context of buying from sports brands.

3.2 Model

The assessment of the literature offers a thorough examination of several subjects that are essential to comprehending sustainability in the context of the sports business. The following diagram seeks to illustrate how many themes discussed in the literature namely, product innovation, product sustainability, green communication strategy, and green brand positioning are interrelated. We can learn a lot about the possible effects of sustainable practices on product development, marketing plans, and overall brand positioning by looking at the connections between these subjects.

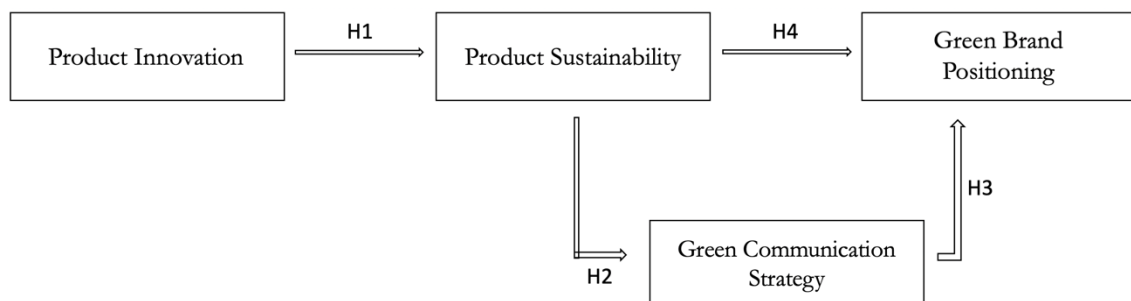


Figure 1: Model

This hypothesis argues that incorporating sustainability practices into a sports brand's operations can have positive effects. Brands can satisfy the increasing demand from consumers for eco-friendly and socially responsible products by integrating product

innovation with sustainability. Brands can effectively communicate their sustainability initiatives and interact with consumers that care about the environment by implementing green communication methods. Additionally, implementing green brand positioning strategies can improve a brand's general sustainability performance and help the environment and society. The goal is to demonstrate the potential value of sustainable business practices in the sports sector and to assist sports organizations in making strategic decisions by testing and validating this hypothesis.

Hypothesis 1: Consumer perception of market advantage for sports firms implementing sustainable practices and the weight consumers give to sustainability when choosing sports equipment and accessories are not positively correlated.

Hypothesis 2: Consumers' agreement with the statements "Sports brands have a responsibility to prioritize sustainability in their business practices" and "I am more likely to consider buying a company's environmentally friendly products when it effectively communicates its environmental sustainability efforts" are not positively correlated.

Hypothesis 3: Sports brands that use effective green communication techniques can raise their profile, reputation, and consumer loyalty while simultaneously encouraging environmental sustainability.

Hypothesis 4: Consumers' familiarity with the idea of sustainability in the context of sports brands influences their willingness to buy sports products made from sustainable materials.

3.3. Conclusion

In this chapter, the methodology of science is introduced, and the significance of research rigor is emphasized. It highlights the necessity of having a clear research topic, inclusion and exclusion standards, and a thorough literature assessment. The chapter also covers the use of surveys and quantitative research to examine how product innovation affects the positioning of green brands.

To comprehend how product innovation affects brand sustainability, the benefits of quantitative research, such as objectivity, generalizability, replicability, and the use of statistical analysis, are discussed. The chapter explains how data for the study was gathered using a planned survey that was distributed over social media.

The thesis's model demonstrates how green brand positioning, green communication strategy, and green product innovation are all interconnected. It puts out theories that support the benefits of using sustainable practices in the business operations of sports

businesses. According to the hypothesis, sustainable practices can give businesses a competitive advantage, increase brand loyalty, enhance their reputation, and improve their sustainability performance all around.

As a result, this chapter establishes the groundwork for understanding how sustainability and green brand positioning relate to one another in the sports business. The presented assumptions and use of quantitative methods aim to offer sports organizations useful insights and help with strategic decision-making. Sports brands can embrace sustainable practices to improve their financial performance as well as acquire a competitive edge and contribute to the well-being of society and the environment.

4. Analysis of results

4.1. Results

The results chapter offers insights into survey respondents' thoughts on sustainability in sports brands through an in-depth study of the survey data. It investigates their attitudes, preferences, and actions while putting a focus on the connections between sustainability, brand reputation, consumer loyalty, and market competitiveness. To identify potential differences in sustainability perspectives, the chapter also takes into account demographic aspects including age, gender, education level, employment status, and region. Discussions of the practical ramifications include a focus on ways that businesses might stand out from the competition, draw in consumers who care about the environment, and advance sustainability. The chapter identifies potential future research areas and lays the groundwork for arriving at relevant conclusions.

Along with this first evaluation of each survey question, a test of hypotheses will be presented to determine whether or not they are valid. A statistical technique known as hypothesis testing is used to make assumptions about a population based on sample data. A null hypothesis (no effect or association) and an alternative hypothesis (the opposite of the null) must be developed. Examining the evidence in opposition to the null hypothesis is the aim.

The statistic test counts how far the observed data deviates from what would be predicted by the null hypothesis. If the null hypothesis is true, the p-value represents the likelihood of receiving a test statistic that is as extreme as the one that was observed. Strong evidence that the null hypothesis should be rejected is indicated by a low p-value. A higher p-value indicates that there is not enough data to rule out the null hypothesis. This hypothesis test was performed with the help of the statistics program JAMOVl.

4.2 Survey's results

1. How familiar are you with the concept of sustainability in the context of sports brands?

Table 1: "How familiar are you with the concept of sustainability in the context of sports brands?"

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
Not familiar at all	29	22,3	22,3
Somewhat familiar	83	63,8	86,1
Very familiar	18	13,9	100

According to the survey results, a sizeable majority of participants (63,8%) claimed to be at least moderately knowledgeable about sustainability in regard to sports brands. This degree of awareness indicates that a sizeable fraction of the general public has a basic understanding of sustainability. This heightened awareness of sustainability across a variety of businesses, including sports brands, probably plays some role in it. Positive evidence of sustainability-related activities in the sports industry can be found in the fact that the majority of people are aware of them.

Even though the majority of respondents said that they were familiar with sustainability in the context of sports brands, there is still a need for continued education and awareness campaigns. A sizeable portion (22,3%) of the respondents indicated they were less aware, underscoring the value of ongoing initiatives to spread information and encourage ethical business practices in the sports industry. These programs may aid in closing the knowledge gap and promoting improved communication among consumers and business personnel.

It's encouraging to see that 13,9% of respondents said they were extremely aware of sustainability as it relates to sports brands. It suggests that a sizeable portion of the population is more knowledgeable about the topic, maybe showing a growing interest in sustainability and how it might be used in the sports business. This group might work as promoters and catalysts for advancing sustainable practices.

In addition, the study's findings point to a chance for sports brands to profit from the public's growing interest in and understanding of sustainability. Brands can gain competitive benefits by embracing and supporting sustainable practices that align with the ideals of environmentally conscientious consumers. Sports brands can stand out in a market that is becoming more and more concerned with sustainability by incorporating sustainability into various aspects of their operations, such as brand messaging, product design, supply chain management, etc.

The findings also highlight the necessity for educational programs and potent communication tactics to close the knowledge gap between those who are familiar with sustainability in the context of sports brands and those who are not. Creating a clear and succinct message that can reach a larger audience, clear up common misconceptions, and encourage sustainable practices within the sports sector is crucial. Although a considerable section of the population is familiar with sustainability, there is still space for development in terms of educating and engaging this group. Sports brands must therefore continue to

work to promote sustainable behaviors and effectively communicate their sustainability activities.

The study's conclusion emphasizes the significance of education, participation, and effective communication as crucial elements in promoting sustainable habits and satisfying the changing demands of environmentally conscious consumers.

2. How important is sustainability to you when buying sports gear and accessories, on a scale of 1 to 5?

Table 2: “How important is sustainability to you when buying sports gear and accessories, on a scale of 1 to 5?”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
1	6	4,6	4,6
2	13	10	14,6
3	38	29,2	43,8
4	45	34,6	78,4
5	28	21,5	100,0

A significant 34,6% of survey participants gave sustainability a score of 4, indicating that they give it a lot of consideration when purchasing sports equipment and accessories. Furthermore, 21,5% of respondents assigned sustainability a score of 5, highlighting the importance of sustainability in their purchase choices even more. This indicates that a sizable portion of customers are actively searching for ecologically friendly choices in the sports sector.

According to the scores of 3 (29,2%) and 2 (10%), a sizable portion of respondents place a moderate value on sustainability. For these people, it may not be of the utmost importance, but it nevertheless influences their choices. Even if sustainability may not be the main factor driving their shopping decisions, this implies that consumers are becoming more aware of and interested in the topic.

Respondents who gave the lowest scores of 1 (4,6%) indicated that a small percentage of people did not think that sustainability was a big deal while buying athletic apparel and accessories. This group may prioritize additional variables, including price, brand, or performance, more than sustainability issues.

The findings offer a chance for manufacturers of sports equipment and accessories to address the growing consumer demand for eco-friendly goods. Brands can adapt to the

desires of a sizable consumer sector and gain a competitive edge in the market by integrating sustainability into product design, sourcing, and manufacturing processes. It's crucial to effectively communicate sustainability activities to clients who care about the environment if you want to keep them. Brands must prioritize efficient and concise dissemination of their sustainability initiatives if they want to capitalize on the rising sustainability consciousness. Brands can draw in and keep environmentally conscientious consumers by openly disclosing their sustainable initiatives. In the sports sector, consumer purchase decisions are significantly influenced by sustainability, emphasizing the necessity for brands to embrace sustainable practices and publicize their initiatives. By doing this, businesses may help the sports sector become more ecologically responsible while also meeting the changing needs of environmentally concerned customers.

3. How likely are you to purchase sports products that are made from sustainable materials (e.g. recycled plastic, organic cotton)?

Table 3: “How likely are you to purchase sports products that are made from sustainable materials (e.g. recycled plastic, organic cotton)?”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
1	2	1,5	1,5
2	4	3,1	4,6
3	35	26,9	31,5
4	42	32,3	63,8
5	47	36,2	100,0

A sizable portion of respondents, 36,2%, gave the highest possible score of 5 for their probability of buying sports equipment developed from sustainable materials. This suggests a high preference for ecologically friendly products and a readiness to give sustainability top priority when making purchases.

A sizable portion of participants – 32,3% - gave a score of 4, indicating a sizable possibility of buying sports goods made of environmentally friendly materials. Furthermore, 26,9% of respondents gave their chance of using sustainable materials a score of 3, suggesting a moderate interest in them. Together, these findings show that most respondents had a discernible propensity to take sustainability into account when making purchases.

A tiny percentage of survey participants – 3,1% - gave their likelihood of buying sports equipment manufactured from sustainable materials a score of 2, suggesting a little lower interest. Additionally, 1,5% of respondents gave sustainability a score of 1, indicating a lack of interest or priority in their purchase choices.

The results show an increasing desire for sports brands' equipment made of environmentally friendly materials, which reflects consumers' increased awareness of and preference for such products. Sports apparel companies now have a great chance to meet this need by using recycled plastic, organic cotton, and other eco-friendly materials in their production. Sustainable sourcing and manufacturing processes can improve brand reputation and consumer loyalty when they are effectively communicated. The findings also highlight the need to spread knowledge and understanding about the environmental advantages of sustainable materials, inspiring customers to give sustainability top priority when making purchases.

4. Which sustainable product attributes are most important to you when purchasing sports products?

Table 4: “Which sustainable product attributes are most important to you when purchasing sports products? ”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
Use of recycled materials	42	32,3	32,3
Use of organic materials	2	1,5	33,8
Reduction of carbon emissions	35	26,9	60,7
Use of environmentally-friendly manufacturing processes	47	36,2	96,9
Social responsibility initiatives	4	3,1	100,0

The results of the survey show that when buying sports goods, respondents (36,2 %) place a high value on ecologically friendly manufacturing practices. This result indicates that people appreciate sustainable manufacturing techniques as well as the finished product beyond only the previous. This is in line with the increased focus on environmentally friendly industrial practices.

The widespread use of recycled materials (32,3%) is yet another important quality that respondents value. This preference shows a strong desire for goods made from resources obtained from post-consumer trash, which supports the circular economy. It also shows a desire to encourage resource conservation and lessen dependency on virgin resources.

A sizable portion of respondents (26,9%) also rated the reduction of carbon emissions as an important quality. This demonstrates a preference for goods that have taken steps to reduce their carbon footprint and a rising knowledge of the negative environmental effects linked to carbon emissions. It demonstrates a desire to back businesses that are actively pursuing a future that is low-carbon and sustainable.

Although to a little lower extent, the use of organic materials (1,5%) and social responsibility activities (3,1%) also appeared as important factors for respondents, but not as significant as the other ones. The choice of organic materials reflects a desire to support environmentally beneficial agricultural practices and minimize exposure to dangerous chemicals. The emphasis on social responsibility projects draws attention to the rising awareness of and need for ethical behavior from businesses, including fair labor, secure working conditions, and involvement in the community.

Some conclusions:

- **Importance of Environmentally Friendly Manufacturing:** People appear to value the full lifetime of sports products, from sourcing raw materials through production, as evidenced by the high emphasis placed on environmentally friendly manufacturing techniques. Sustainable production methods can help brands stand out in the marketplace and draw in customers that care about the environment.
- **Recycled Materials and the Circular Economy:** The importance placed on the usage of recycled materials reveals a market for goods that support the circular economy and cut down on waste. Companies that use recycled materials in their sports goods can satisfy this demand and draw in consumers looking for eco-friendly substitutes.
- **Carbon Emissions Reduction:** Increasing worries about climate change and a desire to support products with a lower environmental impact are reflected in the priority given to decreasing carbon emissions. Consumers that care about the environment will be drawn to and loyal to brands that actively monitor, disclose, and reduce their carbon footprint.

- **Organic Materials and Social Responsibility:** Although at a little lower level, consumer expectations for ethical and sustainable practices are reflected in the consideration of organic materials and social responsibility programs. Brands can improve their reputation and attract consumers that appreciate openness and ethical business methods by prioritizing organic materials and participating in social responsibility activities.

5. To what extent do you agree, on a scale of 1 to 5, with the following statement:

"Sports brands have a responsibility to prioritize sustainability in their business practices."

Table 5: "To what extent do you agree, on a scale of 1 to 5, with the following statement: Sports brands have a responsibility to prioritize sustainability in their business practices."

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
1	0	0	0
2	4	3,1	3,1
3	21	16,2	19,3
4	50	38,5	57,8
5	55	42,2	100,0

There is a high expectation for sports businesses to prioritize sustainability in their business activities, as evidenced by the fact that the majority of respondents (42,3%) strongly agreed with the statement. A further 38,5% of respondents agreed with the statement, indicating a sizable degree of agreement regarding the significance of sustainability for sports businesses.

However, just 16.2% of respondents took a neutral attitude, indicating that there may be some ambiguity or doubt regarding the obligation of sports brands to prioritize sustainability. 3,1% of those polled disagreed or strongly disagreed with the statement, representing a small minority opinion that sports companies may not have a big responsibility to advance sustainability.

According to the survey results, a large majority of respondents agreed that sports brands had a duty to give sustainability a top priority in their operations. This represents the widely held notion that organizations in the sports sector should actively support social and environmental sustainability objectives. The large percentage of respondents who strongly agreed with the statement suggests that there is an increasing demand for sports businesses to go above and beyond typical business practices in their approach to sustainability. It's important to point out that a sizable portion of respondents stated a neutral or disagreement, demonstrating various degrees of knowledge and comprehension

regarding the role of sports brands in promoting sustainability. This demonstrates the need for additional education and efforts to raise public understanding of the advantages of sustainable practices. Giving sustainability top priority can be a great way for sports brands to improve their reputation and stand out from the competition. Brands may increase trust, loyalty, and favorable perception of their company by delivering on consumer expectations and adhering to their values. The assumption that sports brands embrace sustainability also suggests opportunities for stakeholder cooperation. Brands can collaborate with consumers, business associations, and regulatory organizations to create and advance sustainable business practices. To achieve sustainability goals, this cooperative method can encourage innovation, information exchange, and group accountability.

6. To what extent do you agree, on a scale of 1 to 5, with the following statement: "I am more likely to consider buying a company's products that are environmentally friendly when it effectively communicates its environmental sustainability efforts?"

Table 6: "To what extent do you agree, on a scale of 1 to 5, with the following statement: "I am more likely to consider buying a company's products that are environmentally friendly when it effectively communicates its environmental sustainability efforts?"

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
1	2	1,5	1,5
2	6	4,6	7,5
3	20	15,4	22,9
4	48	35,6	58,5
5	54	41,5	100,0

According to the survey's findings, influencing consumers' purchase decisions significantly depends on effective communication of environmental sustainability efforts. An overwhelming majority of responders (41,5%) strongly agreed with the statement, and another 36,9% agreed, highlighting the significance of open communication.

Consumers enjoy openness and demand that businesses share information about their efforts to promote environmental sustainability. Transparent communication gives consumers the knowledge they need to make decisions that are in line with their values. Additionally, it enables businesses to stand out from the competition, draw in eco-aware clients, and foster customer loyalty and brand trust.

However, a percentage of respondents (15,4%) indicated they had no opinion, demonstrating that there are different levels of awareness or power over how to effectively communicate sustainability activities. A small percentage (4,6%) disagreed with the statement, suggesting that consumers' opinions may not be significantly influenced by successful communication.

Companies should invest in education and awareness programs, focus on open communication, and stress the benefits of sustainability initiatives to address these findings. Companies can improve their brand image, acquire a competitive edge, and satisfy consumer expectations by properly communicating their environmental sustainability initiatives.

The survey findings emphasize the significance of effective communication in influencing consumers' propensity to think about buying products from environmentally friendly businesses. Transparent communication increases consumer trust, helps businesses stand out in the marketplace, and supports customer values. Businesses should place a high priority on open communication and devote resources to raising consumer awareness of and understanding of sustainable business practices.

7. Which of the following alternatives best captures your perspective on the link between sustainability and financial success in the market for environmentally friendly products?

Table 7: “Which of the following alternatives best captures your perspective on the link between sustainability and financial success in the market for environmentally friendly products?”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
In this industry, there is no correlation between sustainability and financial performance.	4	3,1	3,1
The financial performance of this sector may be negatively impacted by sustainability.	12	9,2	12,3
The financial performance of this sector may benefit from sustainability.	54	41,5	53,8

Financial performance in this industry is positively impacted by sustainability.	32	24,6	78,4
I'm not certain.	28	21,6	100,0

According to the study results, the majority of participants (41,5%) think that sustainability and the success of the market for environmentally friendly goods are positively correlated. Additionally, 24,6% of respondents said that sustainability had a favorable influence on this industry's financial success. 9,2% of respondents said they were worried about possible negative effects, while 3,1% said they didn't think there was a connection. It's noteworthy that 21,5% of respondents weren't sure whether sustainability and financial performance in this sector were related.

Positive Perception: The majority of respondents believe that sustainability and financial success in the market for environmentally friendly products are positively correlated. This demonstrates a conviction that sustainable business practices can enhance the financial success of organizations engaged in this sector.

Potential Financial Benefits: According to respondents' opinions, sustainability may have positive financial effects on market performance and profitability. This is in line with the understanding that eco-friendly goods and methods can draw consumers, boost brand reputation, and increase sales.

Negative Impact Awareness: Fewer respondents express worries about possible adverse effects on financial performance. This implies an understanding of the difficulties or expenses involved in putting sustainability measures into practice.

The presence of respondents who are still unsure of the relationship between sustainability and financial success underlines the need for further knowledge and awareness. People might be better able to appreciate the possible advantages and difficulties of sustainability in this sector with more knowledge and research.

Potential Sources of Competitive Advantage: The impression that sustainability has a favorable effect on financial performance suggests that putting sustainability first can help businesses stand out from the competition and obtain a competitive advantage. Putting a focus on the financial advantages of sustainability may draw in investors and clients who care about the environment.

8. Do you think that sports brands that use sustainable methods have a market advantage?

Table 8: “Do you think that sports brands that use sustainable methods have a market advantage?”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
YES	99	76,2	76,2
NO	31	23,8	100,0

According to the survey findings, respondents overwhelmingly agreed that sports brands that employ sustainable practices have a competitive edge. A larger percentage (76,2%) believes that sports brands that use sustainable practices have a competitive advantage, whereas a smaller percentage (23,8%) disagrees.

The survey's findings demonstrate how widely acknowledged sustainability is as a key element in the sports business. Consumers and respondents are generally of the opinion that sports brands that use sustainable practices have a competitive advantage and a market advantage.

Because consumers are becoming more conscious of environmental and social issues, they have more expectations for sports brands to include sustainable practices in their operations. Sustainability is a strategy that brands may use to improve their reputation, develop customer loyalty, and draw in environmentally concerned customers.

Sports brands are encouraged to invest in innovation and the development of environmentally friendly technologies by the competitive advantage associated with sustainable practices. This encourages product differentiation and fosters creativity within the industry.

The realization of market advantages for sports brands implementing environmentally friendly practices points to the potential for expansion and financial success. Brands may expand their consumer base and tap into a rising market segment by catering to the desire for sustainable goods and activities.

In conclusion, the survey findings provide solid evidence in favor of the idea that sports brands that use sustainable practices have a competitive advantage. Brands may stand out, develop a reputation, satisfy consumer expectations, and contribute to a more sustainable future for the sports sector by placing a strong emphasis on sustainability.

9. Do you consider a sports brand's reputation for sustainability when buying?

Table 9: “Do you consider a sports brand's reputation for sustainability when buying?”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
YES	96	73,8	73,8
NO	34	26,2	100,0

The survey's findings show that consumers give a sports brand's reputation for sustainability a lot of thought when making purchases. A larger percentage of respondents (73,8%) said they do take into mind a sports brand's sustainability reputation, while a lower percentage (26,2%) said they do not.

The survey's findings provide insight into how consumer behavior is influenced by a sports brand's sustainable reputation. Consumers give higher priority to companies that exhibit a dedication to social and environmental responsibility and are consistent with their personal beliefs. A strong sustainability reputation gives brands a competitive edge, allowing them to stand out from the competition and win consumers' trust. Brand loyalty is also increased by a positive reputation for sustainability, as consumers are more likely to stick with companies that regularly put sustainability first. The results highlight how crucial it is to educate the public about sustainable measures and improve brand reputation to sway consumer purchasing behavior. In conclusion, consumers prioritize a sports brand's sustainability reputation when making judgments about what to buy, emphasizing the importance of sustainability in determining consumer preferences and brand loyalty.

10. Age range

Table 10: “Age range”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
Less than 21y	13	10	10
21-29y	46	35,4	45,4
30-39y	18	13,8	59,2
40-49y	27	20,8	80
+50y	26	20	100,0

The age distribution of the survey respondents offers important information on the viewpoints of various study age groups. The bulk of participants - 35.4% - of the respondents were between the ages of 21 and 29. Another significant section of the sample was made up of people aged 50 and older, who made up 20% of the participants. Respondents under the age of 21, those between the ages of 30 and 39, and those between the ages of 40 and 49 made up 10%, 13,8%, and 20,8% of the sample, respectively.

With such a wide range of ages, it is possible to have a thorough grasp of how different age groups feel about sustainability in the sports business. Researchers and practitioners

can take into account potential differences in attitudes and behaviors toward sustainable practices based on generational cohorts and their perspectives on these issues.

11. Gender

Table 11: “Gender”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
Male	36	27,7	27,7
Female	94	72,3	100,0
Other	0	0	0

The gender distribution of the survey respondents offers important information about the points of view of the various genders in the study. The majority of participants - 72.3% - of the respondents identified as female, while men made up 27,7% of the sample.

This gender distribution makes it possible to fully comprehend the viewpoints and interests of various genders concerning sustainability in the sports business. It allows for the consideration of potential gender-based differences in attitudes, actions, and purchasing choices connected to sustainable practices.

12. Level of Education

Table 12: "Level of Education"

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
2 ND Cycle	0	0	0
3 rd Cycle	5	3,8	3,8
Highschool	25	19,2	23
College	86	66,2	89,2
Other (master's degree, post-graduation)	14	10,8	100,0

The distribution of education levels among survey respondents offers insightful information on the respondents' educational backgrounds. 66,2% of the sample, which is made up of participants, had a college degree. 19,2% of respondents were respondents with a high school diploma, while 10,8% of the sample had an advanced degree, such as a master's or postgraduate diploma. 3,8% of those surveyed claimed to have finished the third cycle of education.

Designing targeted strategies and interventions aimed at encouraging sustainable behaviors and boosting awareness within various educational segments requires an understanding of the distribution of education levels among survey respondents. It enables scholars, decision-makers, and industry participants to take into account how education affects people's views,

thought processes, and engagement with sustainability activities in the sports business. Also, this data contributes to a thorough knowledge of the impact of education in establishing attitudes and actions towards sustainability in the sports business by recognizing the educational variation among survey respondents. To encourage sustainable practices across all educational segments, it offers insightful information that will be used for future study, policy development, and targeted interventions.

13. Professional situation

Table 13: “Professional situation”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
Student	27	20,8	20,8
Worker	84	64,6	85,4
Working student	10	7,7	93,1
Unemployed	2	1,5	94,6
Retired	6	4,6	99,2
Others	1	0,8	100,0

The survey participants' range of professional conditions offers insightful information about the respondents' varied origins and circumstances. 64,6% of participants identified as workers, representing the majority of the sample. 20,8% of the respondents were students, while 7,7% of the sample were working students. Few respondents (1,5%), retirees (4,6%), or those in other professional categories (0,8%) reported being unemployed.

The survey results are enhanced by the participation of participants from a range of professional contexts, which also enables a more thorough knowledge of sustainability-related behaviors and decision-making processes. It emphasizes how crucial it is to customize sustainability programs to the particular requirements and conditions of various professional groups within the sports business. Besides that, understanding the distribution of professional situations improves the thoroughness of the survey results, allowing stakeholders to address the unique demands and difficulties of various professional groups and create interventions that are relevant to their circumstances. It emphasizes how crucial it is to take professional diversity into account while encouraging sustainable behaviors and advocating for a more sustainable future in the sports business.

14. Geographic Location

Table 14: “Geographic Location”

LEVELS	COUNTS	% OF TOTAL	CUMULATIVE %
Região Norte	80	61,5	61,5

Região Centro	4	3,1	64,6
Lisboa e Vale do Tejo	6	4,6	69,2
Alentejo	1	0,8	70
Algarve	1	0,8	
Other (US, UK, AS, Netherlands, Brazil, Germany, Austria)	38	30	100,0

The distribution of survey respondents across various geographic regions offers insightful information on the diversity and regional representation of the sample. 61,5% of responders, who make up the majority, are from Região Norte. 3,1% of the sample comes from the Região Centro, and 4,6% comes from Lisboa e Vale do Tejo. Algarve and Alentejo participants account for 0,8% of the total. A percentage of 29,2% of responders are also from different countries, such as the United States, United Kingdom, Brazil, Australia, the Netherlands, and others.

The results of the survey are enhanced by the inclusion of participants from various geographic places since they reflect distinct cultural, economic, and environmental circumstances. It emphasizes how crucial it is to take into account regional specificities when promoting sustainable practices and bringing about change in the sports business.

4.2 Test of Hypothesis

Hypothesis 1: Consumer perception of market advantage for sports firms implementing sustainable practices and the weight consumers give to sustainability when choosing sports equipment and accessories are not positively correlated.

This research study included two essential questions to thoroughly investigate and develop the hypothesis:

- "Do you believe that sports brands implementing sustainable methods enjoy a market advantage?"
- "On a scale of 1 to 5, how significant is sustainability to you when making sports gear and accessories purchases?"

These thoughtfully constructed questions served as the basis for developing the hypothesis. Using the statistical program JAMOV, a thorough crossover analysis of the answers to these questions was then carried out. This research concentrated on identifying significant findings and, most significantly, calculating the p-value resulting from the dataset. The resulting p-

value is very crucial since it offers a quantitative way to evaluate the reliability and strength of the observed correlation.

Based on the results of the analysis, it is possible to confidently reject the null hypothesis that there is no correlation between consumer perception of the market advantage appreciated by sports companies implementing sustainable practices and the importance consumers attach to sustainability when selecting sports gear and accessories. There is a statistically significant association between these variables, as indicated by the computed p-value of 0.020.

The results of the research showed that there is, in fact, a positive association between consumers' perceptions of the competitive advantage obtained by sports businesses adopting sustainable practices and the importance they ascribe to sustainability when making decisions about buying sporting goods and accessories. This indicates that consumers who believe sustainable sports brands have a competitive advantage also favor sustainability when making purchases.

Sports businesses can and should strategically align their product offerings, marketing plans, and brand positioning to meet the rising demand for sustainability by recognizing and taking advantage of this favorable association. Their ability to compete in the market, draw environmentally conscious consumers, and build positive brand views can all be improved by highlighting and marketing their sustainable initiatives.

χ^2 Tests			
	Value	df	p
χ^2	11.6	4	0.020
N	130		

Figure 2: Hypothesis 1 p-value

Hypothesis 2: Consumers' agreement with the statements "Sports brands have a responsibility to prioritize sustainability in their business practices" and "I am more likely to consider buying a company's environmentally friendly products when it effectively communicates its environmental sustainability efforts" are not positively correlated.

Two key questions were included in the survey to fully investigate and develop the hypothesis:

- "To what extent do you agree, on a scale of 1 to 5, with the following statement: "I am more likely to consider buying a company's products that are environmentally friendly when it effectively communicates its environmental sustainability efforts?"
- "Sports brands have a responsibility to prioritize sustainability in their business practices?"

These carefully thoughtout questions provided essential cues for developing this specific hypothesis. The statistical program JAMOVl was then used to carefully analyze the similarity of the answers to these questions. This investigation sought to gather insightful information and, most importantly, to establish the p-value generated from the gathered data. The resulting p-value has significant implications since it offers a quantitative way to assess the reliability and strength of the observed connection.

The study's findings offer compelling support for the claim that consumers who think sports brands have the responsibility to prioritize sustainability are also more likely to consider buying environmentally friendly goods when the brand effectively promotes its environmental sustainability initiatives. According to the correlation research, consumer support for companies that openly disclose their sustainability measures rises as customer agreement with the idea of brand responsibility for sustainability does.

This data demonstrates that consumers value sports brands' commitment to sustainability in addition to giving good environmental communication a high priority when making purchases. A brand that prioritizes sustainability and successfully communicates its efforts is likely to acquire a competitive edge by recruiting and engaging environmentally conscientious consumers, according to the strong positive correlation.

The finding has more relevance than just its theoretical ramifications. It has real-world ramifications for sports companies and marketers, underscoring the value of incorporating sustainability into daily operations and putting in place effective environmental communication plans. By doing this, brands may improve their market position, brand loyalty, and image while also satisfying consumer expectations.

χ^2 Tests			
	Value	df	p
χ^2	90.3	12	<.001
N	130		

Figure 3: Hypothesis 2 p-value

Hypothesis 3: Sports brands that use effective green communication techniques cannot raise their profile, reputation, and consumer loyalty while simultaneously encouraging environmental sustainability.

The analytical approach included the addition of two important inquiries:

- “Do you consider a sports brand's reputation for sustainability when buying?”
- "How important is sustainability to you when buying sports gear and accessories, on a scale of 1 to 5?"

These carefully constructed questions served as a foundation for the development of hypotheses, creating a profound awareness of consumer perspectives. To uncover the data's complex details, a thorough crossover analysis was then carried out within the domain of JAMOV. This meticulous investigation was centered on closely examining the p-value produced from the data, a symbol of statistical significance.

The results of this study provide compelling evidence to disprove the hypothesis and show that sports brands can indeed increase their profile, improve their reputation, foster consumer loyalty, and simultaneously promote environmental sustainability. The employment of green communication methods and the targeted results of brand elevation, reputation enhancement, and customer loyalty are significantly positively correlated, according to the analysis performed.

These findings imply that when sports businesses successfully convey their dedication to environmental sustainability, consumers will see them favorably and are more likely to turn into loyal customers. The results highlight the potential for green communication to positively affect consumers' views, attitudes, and behaviors, ultimately resulting in the success of the brand and environmentally friendly corporate practices.

It's crucial to remember that the support of this hypothesis by a p-value of less than 0.001 shows a highly significant correlation between successful green communication strategies and the desired goals of brand elevation, reputation enhancement, and customer loyalty. The robust statistical analysis and almost significant sample size help make these results more reliable and generalizable.

χ^2 Tests			
	Value	df	p
χ^2	31.2	4	<.001
N	130		

Figure 4: Hypothesis 3 p-value

Hypothesis 4: Consumers' familiarity with the idea of sustainability in the context of sports brands influences their willingness to buy sports products made from sustainable materials.

Two important questions were added to this research strategy to carefully investigate and progress this hypothesis:

- "How familiar are you with the concept of sustainability in the context of sports brands?"
- "How likely are you to purchase sports products that are made from sustainable materials (e.g. recycled plastic, organic cotton)?"

These well-designed questions were fundamental foundations in determining how this research would go. A carefully constructed hypothesis was created based on the feedback received, opening the door for significant findings. The next step was to dive into the data to discover its profound intricacies, conducting a comprehensive crossover study within the statistics program JAMOVI.

It is possible to infer from the analysis that was done and the p-value of 0.291 that there is insufficient evidence to support the claim that consumers' familiarity with the concept of sustainability in the context of sports brands influences their willingness to purchase sports goods made from sustainable materials. The observed association between consumers' knowledge of sustainability and their propensity to buy sustainable sports products may have happened by chance, according to the p-value, which is above the generally recognized significance level of 0.05.

These findings imply that other variables, such as cost, quality, brand reputation, or individual preferences, may have a greater influence on consumers' decisions to buy sports equipment made from sustainable materials. Sports brands must take a comprehensive marketing approach and explain not only the sustainability component but also other value propositions that appeal to consumers.

To study additional variables or aspects that may potentially affect consumers' willingness to buy sustainable sports products, more investigation and analysis may be required. Sports businesses may effectively engage and attract environmentally concerned consumers by developing a better understanding of their preferences and motivations, which will ultimately lead to a more sustainable market.

χ^2 Tests			
	Value	df	p
χ^2	2.47	2	0.291
N	130		

Figure 5: Hypothesis 4 p-value

5. Conclusion

5.1 Answering the Research Question

The research project was designed around a challenge that was identified as a gap in the literature.

“What is the impact of product innovation on green brand positioning?”

The results of the study show that product innovation significantly affects green brand positioning in the sports sector. Sports brands may boost their competitiveness and improve their green brand positioning while offering consumers the best product innovation by implementing sustainable processes, communicating environmental sustainability initiatives effectively, and using sustainable materials. According to the survey results, consumers' perceptions of the market advantage that sustainable business practices provide for the sports industry and how much importance they accord to sustainability when selecting sports gear and accessories are positively correlated.

This implies that product innovation can distinguish sports companies in the market and draw in environmentally concerned consumers, especially when it is in line with sustainability aims. The study also emphasizes the significance of clearly disclosing environmental sustainability initiatives to consumers, as doing so increases their propensity to purchase environmentally friendly goods.

Additionally, consumer propensity to purchase sports goods created from sustainable materials is positively influenced by consumers' acquaintance with sustainability concepts in the context of sports businesses. This highlights how important it is to increase consumer knowledge of and education about sustainability in the sports business. In conclusion, the study supports the notion that product innovation is critical to green brand positioning and provides insightful information for sports businesses looking to strengthen their sustainability initiatives and market positioning.

5.2 Main Theoretical and Managerial Contributions

This thesis has significantly advanced management theory and understanding of how product innovation affects the positioning of green brands in the sports sector.

By creating a thorough theoretical framework that analyzes the connections between product innovation, sustainability, green communication tactics, and green brand positioning, theoretical advances were made. This paradigm offers a comprehensive viewpoint on how

these variables interact and affect sports businesses overall sustainability performance. The theoretical contributions of the thesis are strengthened by the careful data analysis used to validate the hypothesis. Consumer perception, brand loyalty, communication tactics, and the impact of sustainability on consumer behavior are just a few of the topics covered by the proven hypotheses. The thesis contributes to the body of knowledge and offers empirical proof of the correlations between these variables by empirically verifying these hypotheses.

Insights into consumer behavior are provided by the survey results, which are useful for understanding how consumers feel about sustainability in the sports sector and what they prefer. These results highlight the vital part that sustainability plays in influencing consumers' choices and the significance of good communication in forming consumer attitudes toward environmentally friendly products. Sports brands looking to match their strategy with consumer preferences have tangible advantages from understanding consumer behavior with respect to sustainability.

From a managerial standpoint, this thesis provides numerous useful advances. First of all, it offers recommendations for strategic choices in fields like brand positioning, marketing, and product development. Sports brands can gain a competitive edge, draw in eco-aware consumers, and improve their brand image by incorporating sustainable processes, communicating environmental sustainability initiatives effectively, and using sustainable materials.

Second, the case highlights the significance of consumer devotion and brand reputation. It emphasizes how important it is to prioritize sustainability in business operations to win over consumers' trust and loyalty. Sports brands may stand out from rivals and improve their connection with consumers that care about the environment by implementing sustainable practices and openly disclosing their efforts.

The research additionally highlights the importance of employing efficient marketing and communication techniques. It underlines the need to use green communication tactics to inform consumers about a brand's sustainability goals. Consumer impressions and purchasing decisions are significantly shaped by open and straightforward communication. These insights can be used by sports brands to create communication plans that appeal to consumers that care about the environment and effectively promote their sustainability initiatives.

The thesis further emphasizes how crucial product innovation is to advancing green brand positioning. Sports businesses may show their dedication to sustainability and attract

consumers looking for eco-friendly solutions by incorporating sustainable materials and methods into the innovative manufacturing process, for brands looking to establish themselves as industry leaders in sustainability, incorporating sustainability into the innovation process becomes a strategic need.

As a result, this thesis enhances managerial techniques as well as theoretical knowledge in the sports sector. Together, the theoretical framework, supported hypotheses, consumer behavior insights, and managerial ramifications offer sports brands invaluable advice on how to improve their sustainability efforts, draw in environmentally conscious consumers, and gain a competitive edge in the market. Sports brands may contribute to a more sustainable future while succeeding in a market driven by conscientious consumer choices by embracing product innovation and incorporating sustainability into their business strategies.

5.3 Limitations and suggestion for Future Research

In conclusion, this thesis has contributed significantly to the understanding of the influence of product innovation on green brand positioning. However, it's critical to recognize certain limitations. The survey's relatively small sample size is a key drawback that may restrict how broadly the results may be applied. The use of self-reported data also raises the likelihood of bias and errors in responses. For a deeper understanding, future studies might take into account using bigger, more varied samples as well as adding observational or longitudinal data.

The emphasis on consumer attitudes and behaviors is another drawback because it may not fully account for all the variables driving green brand positioning. A deeper understanding would result from investigating stakeholder views, industry dynamics, and competitive strategies. The theory also mainly focuses on the impact of product innovation and might benefit from examining additional elements like pricing, quality, and brand history.

Last but not least, it's critical to acknowledge the inherent constraints in the research design, data-gathering procedures, and analysis approaches used. By using more thorough study techniques, taking into account a wider range of factors, and improving the validity and generalizability of the findings, future studies can solve these shortcomings.

Various potential directions for future research could expand the understanding of sustainability in the sports sector in addition to the findings and conclusions reached from this study. Investigating the long-term effects of sustainability projects, comprehending

consumer motives and behavior, assessing the sustainability of the supply chain, and looking at multi-stakeholder cooperation are a few of these.

Future studies might examine the long-term effects of sustainability initiatives in the sports sector, for example. It is possible to gain insights into the sustainability impact of practices, including how they affect brand performance, consumer loyalty, and environmental results, by monitoring their development and assessing how successful they are over time.

Another crucial area for future research is comprehending the underlying motives and factors behind consumers' desire for sustainable sports brands. Key elements that affect consumer behavior in the sports business, such as the influence of values, social conventions, and personal views, can be uncovered by examining the psychological and behavioral components of sustainable purchasing decisions.

Another significant area for future research is examining the sustainability practices and difficulties throughout the full supply chain of sports brands. Insights into lowering environmental impacts and guaranteeing ethical procedures can be gained by looking at sourcing, manufacturing, and distribution processes. This study can indicate areas for development and the function of stakeholders in advancing sustainable practices.

The effectiveness and impact of cooperative projects, including sports brands, consumers, policymakers, and NGOs, could also be the subject of future research. A wider adoption of sustainable practices within the sports business can be triggered by examining the results of such multi-stakeholder collaborations. This can help to highlight best practices, uncover implementation challenges, and encourage better practices.

It is possible to improve the comprehension of sustainability in the sports sector and contribute to the creation of successful strategies and initiatives that support environmental responsibility, social impact, and long-term sustainability by dealing with these areas of future research.

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Annex

Annex 1: Questionnaire

The purpose of this survey is to understand consumer preferences and habits about innovation in sports brands as part of my Master's program in Innovation and Technological Entrepreneurship at the University of Porto. The data acquired from this questionnaire will be a useful addition to my research on sports brand innovation and assist in providing insights into the needs and preferences of customers in this quickly developing market. Your participation in this completely anonymous survey is highly appreciated.

Thank you so much.

Sara Rocha

1. How familiar are you with the concept of sustainability in the context of sports brands?

- Not familiar at all
- Somewhat familiar
- Very familiar

2. How important is sustainability to you when buying sports gear and accessories, on a scale of 1 to 5?

1 (not all important)	2	3	4	5 (very important)
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3. How likely are you to purchase sports products that are made from sustainable materials (e.g. recycled plastic, organic cotton)?

1 (very unlikely)	2	3	4	5 (very likely)
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4. Which sustainable product attributes are most important to you when purchasing sports products?

- Use of recycled materials
- Use of organic materials
- Reduction of carbon emissions
- Use of environmentally-friendly manufacturing processes
- Social responsibility initiatives

5. To what extent do you agree, on a scale of 1 to 5, with the following statement: "Sports brands have a responsibility to prioritize sustainability in their business practices."

1 (strongly disagree)	2	3	4	5 (strongly agree)
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6. To what extent do you agree, on a scale of 1 to 5, with the following statement: "I am more likely to consider buying a company's products that are environmentally friendly when it effectively communicates its environmental sustainability efforts?"

1 (strongly disagree)	2	3	4	5 (strongly agree)
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7. Which of the following alternatives best captures your perspective on the link between sustainability and financial success in the market for environmentally friendly products?

- In this industry, there is no correlation between sustainability and financial performance.
- The financial performance of this sector may be negatively impacted by sustainability.
- The financial performance of this sector may benefit from sustainability.
- Financial performance in this industry is positively impacted by sustainability.
- I'm not certain.

8. Do you think that sports brands that use sustainable methods have a market advantage?

- Yes

- No

9. Do you consider a sports brand's reputation for sustainability when buying?

- Yes
- No

10. Age range

- Less than 21years old
- 21 – 29 years
- 30 – 39 years
- 40 – 49 years
- +50 years

11. Gender

- Male
- Female
- Other

12. Level of education

- 2nd cycle
- 3rd cycle
- Highschool
- College
- Other

13. Professional situation

- Student
- Worker
- Working student
- Unemployed
- Retired
- Other

14. Geographic location

- Região Norte
- Região Centro
- Lisboa e Vale do tejo
- Alentejo
- Algarve
- Other