



Consumer identity and the sustainable market: the greenwashing effect across multi-brand consumption

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*"People are going to want, and be able, to find out about the citizenship of a brand,
whether it is doing the right things socially, economically and environmentally."*

**- Mike Clasper President of Business Development,
Proctor and Gamble (Europe)**

Abstract

Title: “Consumer identity and the sustainable market: the greenwashing effect across multi-brand consumption.”

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Slowly but surely, consumer's imperatively green markets shape the marketing agenda progressively. The requirement of environmental concerns led to developments in approaches to launching a sustainable offering, either driven by companies wanting a contribution to environmental issues and green identity pursuing or by companies which befriend the need of keeping up with their market share. Nonetheless, apart from taking an interest in sustainable living, brands started to use its parent-brand to enter new categories and markets: brand extensions. This strategy has not only the goal of increasing awareness for the brand name but also enhancing profitability from offerings in more than one product category. As a purpose, this paper approaches how consumer identity influences consumer considerations regarding green scales of green contribution according to their environmental fit perceptions, comparing from the greenwashing impact of a whole parent brand to only a brand extension.

To a better evaluation, it was elaborated a survey concerning brand and brand extension within purpose-driven brands that advocate sustainability and the brands that repudiate the greenwashing effect. Through the understanding of data manipulation, the goal is to comprehend, within the factors that affect green brand perception, at which extend consumer identity influences the decision on grading both parent brand and brand extensions as well as at what measure this happens.

Keywords: sustainability; corporate social responsibility; greenwashing; green brand; brand extensions; multi-brand; parent brand; brand extension evaluation; consumer behaviour; consumer identity; self-identity; green brand extensions; green strategy

Abstract

Versão Portuguesa

Título: “A identidade do consumidor e o mercado ecológico: o efeito *greenwashing* no consumo de multímarcas.”

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Progressiva e imperativamente, os mercados verdes do consumidor têm vindo a moldar a agenda de marketing. A exigência de preocupações ambientais levou a desenvolvimentos nas abordagens para o lançamento de uma oferta sustentável, quer impulsionada por empresas que desejam uma contribuição para as questões ambientais e a busca de uma identidade verde, quer por empresas cuja necessidade se sustenta em manter a sua quota de mercado. No entanto, além de se interessarem por uma vida sustentável, as marcas começaram a utilizar a sua marca-mãe para entrar em novas categorias e mercados: extensões de marca. Esta estratégia tem não só o fundamento de realçar o conhecimento do nome da marca, mas também de aumentar a rentabilidade das ofertas em mais do que uma categoria de produtos. Como objetivo, este documento aborda a forma como a identidade do consumidor influencia as suas considerações em relação às escalas verdes de contribuição das marcas de acordo com as suas perceções de adequação ambiental, comparando-as desde o impacto do *greenwashing* numa marca-mãe a apenas numa extensão de marca.

Para uma melhor avaliação, foi elaborado um inquérito relativamente à marca e à sua extensão dentro do mercado orientado para fins que defendem a sustentabilidade e que se opõem ao *greenwashing*. Através da compreensão da manipulação de dados, o objetivo é compreender, dentro dos factores que afetam a perceção da marca verde, a identidade do consumidor influencia melhor a decisão de classificar tanto a marca mãe como as extensões de marca e em que medida isto acontece.

Keywords: sustentabilidade; responsabilidade social corporativa; greenwash; marca sustentável; extensões de marca; multímarcas; marca mãe; avaliação de extensão de marca; comportamento do consumidor; identidade do consumidor; auto; extensões de marca sustentáveis; estratégia sustentável

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Table of Contents

1.	Introduction	1
1.1.	Topic presentation	1
1.2.	Problem statement	1
1.3.	Scope of Analysis	2
1.4.	Academic and Managerial Relevance	3
1.5.	Dissertation Outline.....	3
2.	Literature Review	4
2.1.	Conceptual Framework	4
2.2.	The term Greenwash and marketing implications.....	5
2.3.	Consumer identity and green branding	9
2.4.	Green Multi-brands to consumer's eye.....	13
2.5.	Research Purpose & Hypothesis Development.....	17
3.	Methodology	20
3.1.	Online Questionnaire.....	20
3.1.1.	Participants	20
3.1.2.	Stimulus Materials.....	20
3.1.3.	Procedure.....	24
3.1.4.	Design.....	25
4.	Data Analysis	26
4.1.	Characterization of the Quantitative Analysis	26
4.1.1.	Sample Characterization	26
4.1.2.	Low and High Profiles Median Split analysis.....	26
4.1.3.	Manipulation Checks Data Scenarios (bias).....	27
4.1.4.	Controls	27
4.2.	Quantitative Analysis Consumer Brand Sustainability Perception	27
4.2.1.	Heat Map Secondary Analysis	27
4.2.2.	3 Way ANOVA Analysis.....	29

5.	General Discussion.....	34
5.1.	The moderating effect of consumer sustainability profile	34
5.2.	The impact of Brand Infomation.....	35
5.3.	Value transferring within Multi-Brand Hierarchy	36
5.4.	Hypothesis testing overview	38
6.	Limitations and Future Research.....	39
7.	Conclusion.....	41
	References	44
	Appendix	49

List of Figures

Figure 1 - Brand identity prism Source: Azoulay, A., & Kapferer, J.-N. (2003).....	10
Figure 2: The four sustainability consumer archetypes (Ackerley, 2019)	12
Figure 3: Conceptual Framework.....	17
Figure 4: Shampoo presented on survey Source: Love Beauty and Planet (2020)	21
Figure 5: Questionnaire Cross-Sectional Design Matrix	25
Figure 6: Heat Map Low brand intention care level.....	27
Figure 7: Heat Map High brand intention care level.....	28
Figure 8: 3-Way ANOVAs on Brand Sustainability Perception.....	30

List of Tables

Table 1: Stimuli presented to different groups of respondents	22
Table 2: Descriptive statistics on the 3-Way ANOVA's Factors.....	32
Table 3: Results from Hypothesis Testing	38

Appendix Table of Contents

<i>Appendix</i>	49
1. Survey.....	49
2. Graphs and Figures.....	56
2.1. Sustainability Profile Construct Cronbach Alfa.....	56
2.2. Descriptive Statistics of High and Low Sustainability Profiles	57
2.3. Box-plot on Bias for both Brand Extension and Parent Brand	58
2.4. Dimension 1 Brand Extension and Parent Brand	59
2.4.1. Brand Extension	59
2.4.2. Parent Brand Analysis.....	64

1. Introduction

1.1. Topic presentation

Due to contemporary events of global warming, pollution, resource exhaustion, deforestation, and species of extinction, the trend of marketing sustainability, as well as the claims on corporate environmental performance, have been growing at a frenetic pace on the marketer's eyes and in consumer's hearts.

As a consequence of harmful circumstances, the political and business world started to react. Brands rose to discern that they were hardly mistaken, assuming that wasteful and infinite resource usage had zero environmental impact. Additionally, consumers were starting to take these factors into account. The aforementioned being acknowledged, marketers started to comprehend that the green term and its implications were arising in consumer's identity and changing and creating whole new customer segments within the market, a new consumer identity. These sustainable and ecological imperative brand and product characteristics forced markets worldwide to change their agenda.

Nevertheless, this determination by customer desire on sustainable offering has raised gaps within the ethical green ideology: transparency.

1.2. Problem statement

As consumers inquire progressively ethical and sustainable guarantee tickets from brands in exchange for bigger market shares, transparency grows as a mandatory factor. This thesis problem statement revolves around answering such imperatives, aspiring to demystify how consumers react to sustainable brand knowledge, whether positive or negative (that impacts sustainability brand level), and how far such effects strike brand reputation, either positively or negatively. In this manner, and following the above established, springing the structure of this study emerged the first research question, as presented below:

RQ1: Do all consumers react the same way towards sustainability or do they react differently to brand information regarding their care and attitudes towards sustainable motives?

However, there was still a need to understand to which extent this access to sustainable information on the brand from consumers affects overall brand perception negatively — like greenwashing — and positively — concerned attitudes as brand structural changes or ecological contributions. Should brands try to be sustainable for reputation and financial purposes instead of authentic and ethical CSR decisions? Does brand reputation persist the same way for good than for the bad?

RQ2: Do brand ecological concerns have an equal gain on brand reputation proportionally to CSR practicing greenwashing has on negative impact? Does a positive reputation endure as much as a negative one?

Following such a quandary, there was a further key focus - how multi-brands are affected by reputation. Consumers often judge brands by their attitudes, causing their preferences to change, but do the practices of brands belonging to the same group affect each other?

RQ3: Does brand reputation spread to other related brands? Furthermore, assuming it does, does it do it unidirectionally or bidirectionally?

This rationale led to the final statement of this study, crossing sustainable motives with consumer knowledge and multi-brand reputation: "consumer identity and the sustainable market: the greenwashing effect across multi-brand consumption".

1.3. Scope of Analysis

The aim of these study is, as above manifested, to demystify consumer reaction to sustainability knowledge across multi-brand hierarchies. Therefore, and throughout the analysis, two different types of personas (low and high sustainable level) will be considered. In an introductory phase, the focus will be on understanding in what sense and proportion brand knowledge affect decisions and considerations about brand reputation and willingness to buy. Afterwards, a secondary approach will be evaluated between related brand osmosis concerning sustainable reputation. Thus, it will be possible to understand if this reputation transfer occurs in the same way as in the first dimension of the study.

Additionally, it should be mentioned that the present study will address a small representative proportion of the Portuguese market given the majority of the participants'

nationality. Nevertheless, sustainable emergence is global, and consequently, this research aims to contribute to CSR's brand and multi-brand study areas.

1.4. Academic and Managerial Relevance

The already addressed transparency factor and its growing need progressively demand more attention from brands, continually avoiding scrutiny given the financial advantage of brands joining green purposes.

The findings provided in this dissertation hope to encourage brands to understand that there is a need for greater seriousness and that seldom the risks of betting on sustainability, if not taken with due responsibility and ethics, may result in the scrutiny and fall of the brand and its products. Additionally, it is also expected that the insights drawn from this study may contribute to future research on this subject, which is still underdeveloped due to the abrupt rise and growing offer in market shares. Finally, it is also hoped that sustainability stakeholders and even the participants of this study may also realise the dimension behind brand intentions and perhaps contribute to a fairer sincerity requirement, fetching higher awareness to the issue.

1.5. Dissertation Outline

Upon introduction, this dissertation structure is followed by Chapter 2, Literature Review. This chapter includes a theoretical approach to all matters worth including in this study, such as implications of the greenwashing term in the marketing world; consumer identity and reactions to sustainable branding; and how consumers perceive brand extensions and parent brands within multi-brands and respective reputations.

In tandem with providing a more solid understanding of previous research on the topic and what to expect from the present research, this is an essential chapter to be attentive to since it led to the shaping of the research hypothesis, later used in the statistical experiment.

The third chapter on Research Methodology clarifies the methods used in data capture and the remaining processes that will allow, through further analysis (chapter 4), to support and answer the hypotheses previously established.

Throughout the fourth chapter, the analysis of the methods used contributes to the presentation and organisation of the results obtained within the qualitative and quantitative inquiries, illustrated by several charts and graphs. These same results will then be discussed in Chapter 5, granting further conclusions on the proposed hypothesis.

Lastly, Chapter 6 and 7 corresponding to "Conclusions" and "Limitations and Future Research", respectively, achieving the purpose of the study and proposing further analysis and suggestions that were not achievable within this dissertation on needed topics from the sustainability field.

2. Literature Review

2.1. Conceptual Framework

According to the Cambridge English Dictionary (n.d.), green is not only an adjective of colour (composed by the mixture of blue and yellow) but also has a political component related to the "protection of the environment". For example, the expression "go green" has its connotation: "to do more to protect nature and the environment" and it is growing its language in the business world. Moreover, aforementioned green connotation has been part of many brand strategies on environmentally friendly marketing strategies to obtain positive gains either on brand equity or brand identity, making the "going green" take stage on company's boardrooms all around the world.

In the 1960s, following an environmentally conscious lifestyle was a very fringe phenomenon. The book "Silent Spring" (Carson, 1962) set in motion this pathfinder movement with her book, that sentenced society for leading themselves to a 'quiet future', by bringing attention to the dangers of pesticides placed on products, not only for people but also for planet earth as a whole (Glausiusz, 2007). Carson additionally condemns the chemical industry of proclaiming disinformation and high entities of accepting the industry's marketing claims without any question. To this end, the gain of conscience built progressively with concerns on pollution, resource exhaustion and population growth by the 1970s, impacting this way vital industries such as oil, chemicals and cars.

Even though the term Green Marketing came into prominence in the late '80s and early '90s, its concept developed in the 1970s, where brands like Ben & Jerry's and The Body Shop pioneered green markets before Corporate Social Responsibility (CSR) became widely supported.

Between the mid to late 1980s and 1990s, a renewal concern about the knowledge on environmental disasters (like the ozone layer hole, and consequences of deforestation) as well as leaks on oil spills and gas at worldwide levels, led to the gain of global conscience regarding the negative impact on production and careless behaviours towards planet earth — including household products, cosmetics, tourism and food industries.

People and consequently consumers were starting to take a joint stand in pro-environmental movements, changing their consumption habits, making the so-called 'green' consumer develop as a potential target market for companies and the marketing atmosphere. There was a haste to introduce environmentally 'friendly' or 'friendlier' goods, all too often based on unattested or unrealistic claims. Is it environmentally beneficial, or is it not? Green had gone mainstream, and from then on, it has been changing the rules of the marketing game dashing and massively.

In 2011, Ottman (2014) described green as "mainstream", sympathizing the growth of sustainable lifestyles, since 83% of consumers, from every generation, are some shade of green. "Moreover, there are now finely defined segments of green consumers". Additionally, the author defends that today sustainable choices are fair, required, and attractive to consumers which only possible due to technology and materials advancement. The green revolution has a growing impact on how customers perceive brands, from its intentions, through manufacturing, unto its reputation — "businesses are their philosophies". Being green is now a consumer need: "green is no longer a simply a market position. Products need to be green. Brands need to be socially responsible. Period."

Inevitably, according to Terrachoice (UL, 2020) green advertising grew almost 300% between 2006 and 2009, and they projected that green products and services sales to climb from \$230 billion in 2009 to \$845 billion by 2015 (Delmas & Burbano, 2011).

As previously mentioned, top managers and stakeholders have noticed the potential of this impact on brands taken an interest in the subject, as well as academics. Consequently, it is natural their interest in where the lines end and begin in executing well and evil regarding brand prudence to the consumer.

2.2. The term Greenwash and marketing implications

Ages ago, "responding to environmental problems has always been a no-win proposition for managers" (Walley & Whitehead, 2017), where it was unmanageable being a sustainable company without harming the business,. Nowadays, however, opportunities, where both business and the environment can win, are rising. "Being green is no longer a cost of doing

business; it is a catalyst for innovation”, new market opportunity, and wealth creation (Clarke & and Others, 1994).

The European Union announced a new Investment Plan called "Green Deal" (European Commission, 2020), presenting together their transition mechanism. This strategy presents a drawn path for companies to become economically sustainable by 2050, by qualifying businesses and governments for a circular economy and motivating remaining companies and stakeholders to follow, conferring a series of potential profits (Strietman, 2020). Having legal and tax advantages; reduce green waste within business efficiency; improving and educating green workplace environment; outstanding consumer acknowledgement as well as better engagement; and overall sustainability improvement, should be some of the reforms.

According to (Rozin & Royzman, 2001), even though the human brain captures more negative than positive information, this bias can generate more attention and weight in decisions (Ito et al., 1998). Called "negativity bias", this mechanism can often affect consumer decisions. Moreover, Hilbig (2012) sustains that “negative news is more likely to be perceived as truthful”, gathering more of psychological attention.

Studies (Winchester & Winchester, 2009) suggest that such presence of negativity against what consumers believe are the brand values, may be "a future indication of brand switching by current brand users". It is therefore essential that brand managers pay close attention to brand associations, especially negative ones.

Increasing numbers of people would prefer to buy from companies that care about sustainable issues and that pursue environmental dimension in their portrait (Kotler, 2011). Additionally, there is also evidence that even though consumers adhere more promptly and efficiently to green products that have the same price as non-ones, consumer's willingness to pay also increases if a particular product corresponds to their sustainable ideologies (Smil & Diamond, 2005). As an example, are electricity companies that charge a little more per kilowatt-hour than their competitors because their energy is sourced more from solar and wind. Even though "companies are increasingly swimming in a highly transparent fishbowl" (Kotler, 2011) there are still a lot of unclear situations to consumer's eyes where companies try to benefit from greenwashing.

The first result on Google for the hashtag #StopGreenwashing, (n.d.) displays the union of 50 NGO's that are trying "to boost the development of fully sustainable economic activities and reduce the risk of greenwashing", displaying the punch line "green or greed?". These ONG's state that brand perceptions are often misleading: "Currently fund managers are at liberty to define what is 'sustainable'. As a result, not a day goes by without a new greenwashing scandal making the news".

Greenwash is undoubtedly a term that is more commonly used when evaluating the level and trustworthiness of companies' sustainable movements/strategies, and that differs according to consumer identity, corporation, stakeholders, and even academics. There are indeed various convictions regarding the delimitations the term.

Antecedent knowledge, classified the greenwashing as "corporate disinformation" (de Jong et al., 2020) , with the intention of "seeking to repair public reputations and further shape public images" (Laufer, 2003) , while more recent investigations impose a broader and less direct definition — "the intersection of two firm behaviours: poor environmental performance and positive communication about environmental performance", (Delmas & Burbano, 2011). Further research focused on persistently broader definitions and emerging new perspectives on greenwashing strategies from corporate firms, mostly related to comparisons between brand image/attitudes and brand intentions and how these match together. All the contributions above included approach the "misleading" agent of greenwashing, which clarifies that there are numerous versions worth defining greenwashing and that these effects can hardly harm stakeholders and green consumers.

"The skyrocketing incidence of greenwashing can have profound negative effects on consumer and investor confidence in green products"

— *Delmas and Burbano, (2011)*

There are even books on the effect (see Greer & Bruno, 1997) that do not present the term within a final and specific definition. Accordingly, scholars have attempted to precise what constitutes Greenwash correctly, but it has been a broad discussion (Lyon & Maxwell, 2011). Although there is even a book-length scholarly study of greenwashing (Bowen & Aragon-Correa, 2014), to date there is no consensus, which challenges the analysis for a formal analysis

of the phenomenon. If even the academics deviate on the boundaries of doing or not greenwash, how can consumers not follow?

Ethics are non-objective and extensive learning, including deontology; utilitarianism; rights; and virtues. The subject has, thus, various branches into several philosophical theses of multiple authors. However, "research into the effects of greenwashing focuses on stakeholders' reactions to discrepancies between an organization's environmental communication and its behaviors, regardless of the origins of such discrepancies" (de Jong et al., 2020). Hence, and as an attempt to explain this origin, according to this literature review and the previously presented theoretical positions, the term greenwashing might dissent on meaning and limits depending on considerations of each academic and on whom the customer is based on individual consumer identity.

Given our broad conception of greenwash, the perspective of this thesis agrees that, similarly to Lyon & Montgomery, (2015), any "major mechanism of misleading communications can be a variety of greenwash if applied to environmental communications". The dilemma here is that consumers and stakeholders are not so plain that they consider truths to be absolute. The individual green level and how much this factor is present in consumers' lives, supports green terminologies and consequent conceptions of brand sustainability. Additionally, the idea of deceptive and opaque management is also dependent on what one considers to be the ground rules of misleading - when does it start. Therefore, greenwashing is undoubtedly a complex matter concerning transparency between brands with their respective stakeholders and consumers.

Consequently, and nevertheless a broad vision of the term, the definition presented on this research upon greenwashing is presented finally. *An act of non-transparency occurring in the communication of an organization regarding environmental behaviour and intentions, which may affect the perception of the consumer or stakeholder influencing them beyond reality, despite their deontological and ethical framework.*

2.3. Consumer identity and green branding

"Marketing is the process through which economy is integrated into society to serve human needs", a definition from Drucker (1958). Although there might be emerging general imperatives, each consumer has individual tastes, single beliefs, unique backgrounds, and distinct social identity. Allison & Uhl (1964), evaluated the magnitude of the marketing influence for various brands, gathering that customers commonly do not have the ability to discriminate the taste between two products if not given any other data. This outcome leads to the consideration that consumers are significantly influenced by labels/brands and their associations when evaluating a product.

On the authority of antecedent conclusions (Belk, 1988; Chan et al., 2012; Escalas & Bettman, 2005; Ferraro et al., 2011; Forehand & Deshpandé, 2001; Kettle & Häubl, 2011), consumers do prefer purchasing products that fit or reflect their desired self, within factors as social, economical, well-being, among others. Which suggests that, as favoured by Park et al. (1991), "fulfilling internally generated needs for self-enhancement, role position, group membership, or ego-identification" nurtures a meaningful relationship between brand image and symbolic demands/consumption concerning consumers as well as their ideal link with a desired group, role, or self-image. As self-image has the concept of the total reflection of one's thoughts towards himself/herself as an object (Hawkins & Mothersbaugh, 2019), the personal meaning that a brand has to the consumer provides, according to previous studies, self-expressive or symbolic benefits for the consumer" (J. L. Aaker, 1999).

Consumers frequently look for their self-reflection when purchasing products according to how they would like their self-image to be, which leads brands to advertise campaigns that "highlight a connection between one aspect of the consumer's social identity and the brand", (White & Argo, 2009). E.g., are the tagline from Secret - "Strong like a Woman" or Molson's slogan - "I am Canadian". Following this logic, one might assume that as consumers increasingly demand more sustainable brands and products, brands will respond with green branding in spite of matching their costumer's self-image. One strategy of brand differentiation is targeting different personas through different brand architectures. Aaker (1997) established brand personality as "the set of human characteristics associated with a brand", proffering, as an illustration, the product Absolut Vodka - favours being portrayed as a *cool, hip, new 25-year-old* persona. Keller, (1993) also contrasts "product-related attributes", enhancing that

despite its utilitarian role for consumers, brand personality tends to obey a symbolic or self-expressive function. This hedonic feature empowers consumers to follow the fitting "you are what you *buy*".

Since this thesis will consider self-reflection and personality branding on the analysis of the relationship linking brands and consumers — regarding sustainability issues — it is significant to reflect upon the 'Brand Identity Prism' (Azoulay & Kapferer, 2003). As declared by Kaferer, "strong brands are capable of weaving all aspects (of the prism) into an effective whole in order to create a concise, clear, and appealing brand identity." The diagram (Fig.1) helps understand how the brand (sender) tries to be perceived by the consumer (receiver), through the communication on their set of values, and consequently, how this might affect consumer decision-making. Composed of external perceptions — physique, relationship, and reflection — and internal perceptions — personality, culture, and self-image, Kapferer's model can help structure transparent and sharp brand identity communication.

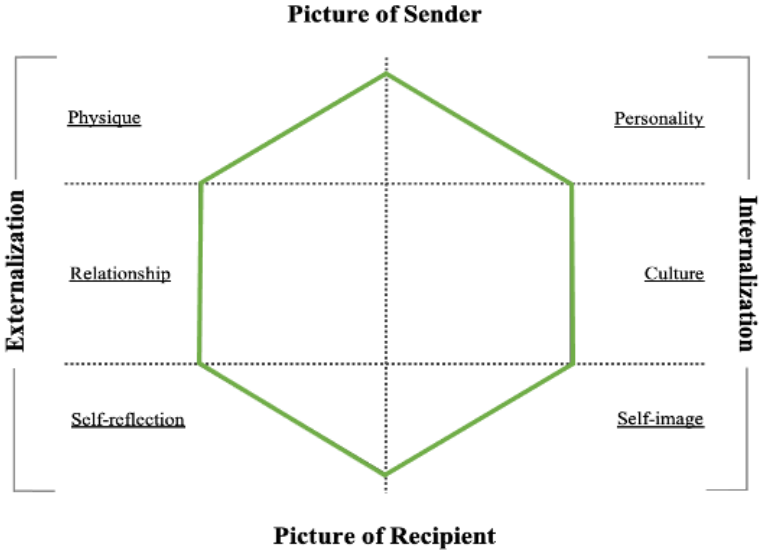


Figure 1 - Brand identity prism (Azoulay, A., & Kapferer, J.-N., 2003)

While consumers increase their willingness and desire to embrace more social causes, either for ethical motives or intentions of integration in society, brands also seek, in line with what consumers are looking for, to align their communication and brand image to these emerging values. According to (Haller et al., 2020), approximately "6 in 10 consumers surveyed are willing to change their shopping habits to reduce environmental impact", and "nearly 8 in 10 respondents indicate sustainability is important for them". Additionally, "57% of consumers are

willing to change their purchasing habits to help reduce negative environmental impact". Over 70% of those participants consider green products significant enough so that they are willing to pay premium prices for guarantees of sustainable values and responsible environmental productions.

Even though these preferences might have to do with two separate value segments — value-driven (brand selection based on money's worth and convenience), or purpose-driven consumption — the goal here will be to evaluate purpose-driven consumers. Purpose-driven consumption consists of product and brand selection based on how well they align with consumers personal values — their self-reflection.

Joshi & Rahman (2015) research shows that the market share of green products remains in the 1-3% of the entire market, supporting why 15% of Cromwell and Perkins (2021) considered sample does not feel comfortable deciding on sustainability issues or practicing “environmentally driven behaviours” due to the lack of enough information. Moreover, the report adds that “1 in 3 consumers claimed to have stopped purchasing certain brands or products because they had ethical or sustainability concerns about them”.

Gen Z is the leading generation on sustainability and the previous ones follow right behind on adopting environmental behaviors (Cromwell & Perkins, 2021), developing a need for brands to be transparent and to accompany the growing ethical and sustainable values for future generational lines.

Although Pickett-Baker & Ozaki (2008) sustain an *attitude-behavior gap*, pro-environmental attitude has been proven to be a good moderator for sustainable behaviors (Dunlap et al., 2000). As consumers attempt to achieve their self-desirable self, if green is a key self-perception, environmental goals and purchase behaviours will surface within consumers attitudes.

As "green consumer" is a single definition and not detailed enough towards pro-environmental attitudes analysis, several authors try to illustrate the various types of sustainable consumer. “The diverse needs of sustainability can’t be addressed with a one-size-fits-all solution” (Ackerley, 2019). The author thus attempts the creation of a framework determined

by the effort level consumers are willing to give sustainability, as well as their knowledge level on environmental *nuances*: "The four sustainability consumer archetypes" (see fig 2).

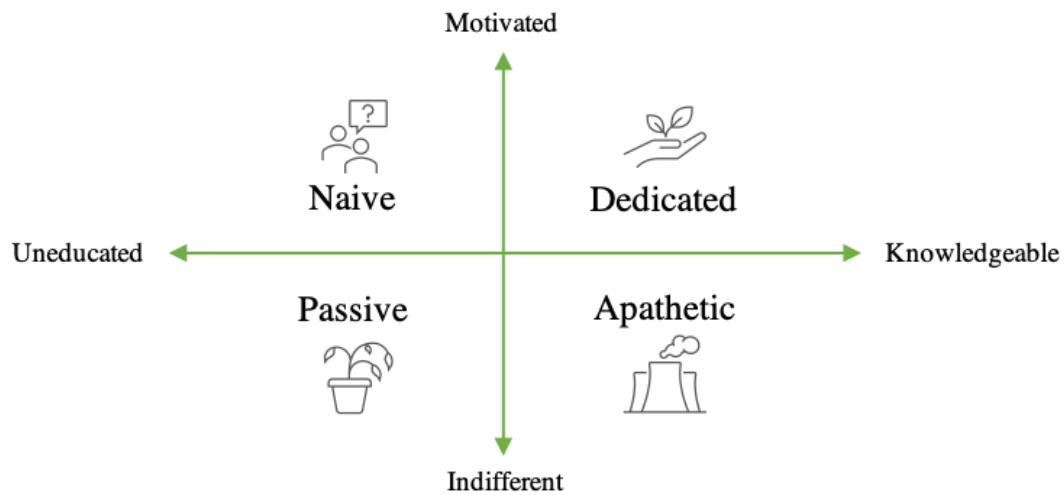


Figure 2: The four sustainability consumer archetypes (Ackerley, 2019)

There is however a possible distinction of green consumers within pro-environmental attitude (Pickett-Baker & Ozaki, 2008), where those who are more likely to identify and follow green marketing messages fit in within a higher sustainability level. The same rule is applied inversely if the pro-environmental attitude of the consumer is low. This attitude may also affect their purchase intentions.

Furthermore, this choice might require a brand willing to lead and stand for sustainability through transparent and ethical behaviors. When a brand pleases consumer required sustainability level, it will provide the consumer with hedonic satisfaction and contentment, enabling greater openness to premium payments for brands that communicate clear sustainable values and higher consumer pressure for corporate social responsibility.

As society shifts, consumers' needs are evolving proportionally. That is why, long since, scholars and companies have been analysing consumer identity and its processes. Barton et al. (2018) maintained on consumer concerns toward brand purpose, declaring a growing number on customers that would care for purpose-driven brands. The study, executed through a global survey with nearly 30,000 consumers, concluded that "62% of costumers want companies to take a stand on current and broadly relevant issues such as sustainability, transparency and fair

employment practices". Consumers also demand their brand expectations to match their ideologies and personal values, since "brands are now community property belonging to shareholders, employees and customers" (Barton et al., 2018).

Finally, and despite today's attentive, informed, and demanding consumer, regarding prices, ingredients, delivery options, production methods, and several others, it can be established that consumers' sustainability level under their self-reflection varies according to individuality and background. Hence, it also makes the levels of acceptance and rigidity of sustainable brand values divergent, as much as the preference for them.

Therefore, brands urging onto adapting and communicating clearly and consistently their core values are emergent, especially sustainable ones. Such is why, in this exposition, one of the focuses will carry through evaluating the congruency between potential buyers and their sustainable self-perceptions and their reactions on regards to brand communication and its perceived image, whether with positive or negative effects. Although, and to provide a further reliable indicator to brands, marketers, and scholars, there is still a supplementary component to cross with sustainability and consumer identity: brand extensions and how its related brand hierarchy interacts with sustainable consumer perceptions.

2.4. Green Multi-brands to consumer's eye

Rajagopal and Romulo (2004) asserted that brands play a significant role in developing marketing strategies for specific product categories in a firm. The coherence level of brand architecture is crucial for the outcome and response of a brand's overall market strategy.

Brand architecture, mostly defined as a brand-building process, outlines inner and outer brand relationships and branding within the surrounding competitive environment. To expedite the process of firms using entering the markets, brands use their equity, "value of the brand in the marketplace" (Keller, 2002), to launch new products and enter new markets. This allows an easier way to develop profitable products since these extend from previously trusted brands, leveraging on their equity (Morein, 1975). This strategy can be supported by line extension and by brand extension — ordinarily supported by an umbrella brand, a chiefly adopted strategy by companies with positive brand equity (Pullig, 2008), likewise Starbucks; Virgin; Procter & Gamble; and so forth.

An example of a product line extension that uses the same brand name to enter a new market segment within the same product class is Coca-Cola (D. Aaker & Keller, 1990) — a well-known beverage, that created a variance of its existing product and leveraged it to a new product, Coca-Cola light. Although this is a product belonging to the same category, it is important to mention that now Coca-Cola can say that this is a less sugary product, capturing a larger market share by enfolding both brands. Thus, the goal of this scenario could be, for example, to gain a more significant market share. Differently, a product brand extension strategy, considered the origin of strategic growth for several companies (Aaker, 1991), uses the existing brand name (parent brand) to enter a completely different product class. However, while studying 276 brand extensions, Tauber (1988) concluded that there are seven types of leverages to consider regarding the necessarily perceived fit across multi-brands:

- Same product in a different form;
- Distinctive taste, ingredient, or component in the new item;
- Companion product;
- Same customer franchise;
- Expertise;
- Benefit, attribute, feature owned;
- Designer image or status image.

Within the concept of brand extension, also known as brand stretching, its parent brand can be associated with umbrella branding. Sullivan, (1990) stated that this term points to the method of labelling more than one product with a single brand name, where the origin (parent) brand covers many other product brand extensions with the prospect of its line extensions. The aforementioned allows the designing, through the equity built up in established brand names (Loken & Boush, 1991) and a substantial reduction in introductory marketing expenses, allowing an easier consumer acceptance (D. Keller & Aaker, 1992), of opportunities to enter a new market share (D. Aaker & Keller, 1990). E.g., a tech brand like Apple marketing *MacBooks* (computers) at the beginning and extending its market to *Apple Watch* (watches).

Accordingly, D. Aaker (1990) remarked, enlightening the growing relevance of this strategy consecutively, that from 1977 to 1984, 40% of the 120 to 175 appearing market brands were extensions from existing brands. Moreover, leverage was not the only positive effect of multi-brand strategies. Besides product and brand trial being encouraged, the author also listed higher recognition visibility to both parent, brother and extension brands and easier and enhanced awareness and presence as advantages. Spillover effects can also be more effective in advertising and managing terms (D. Aaker, 1996), as budgets for advertising are cheaper and more effective, and brand management requires less effort and human resources.

Previous research has shown that if these brand associations and hierarchies are not deeply controlled and planned among multiproduct companies, they can open precedents to the occurrence of spillovers — whereby one product's reputation affects the demand for other products with the same brand name, positive or negatively. Supplementary to the previously stated advantages, there are disadvantages to dealing with when managing umbrella brands (D. Aaker, 1990).

A proof of the above mentioned is the Diesel Gate¹, which aftermath resulted in a series of lawsuits and financial compensations for Volkswagen (eleven million vehicles with cheating software), the main brand involved in the scandal. Such utter failure on CSR induced a negative reputation spillover through some of the brands belonging to the VW's group, like Audi and Porsche (Bachmann et al., 2019). Lower stocks, profits and sales and dissipated consumers', employees', and stakeholders' parent brand and extensions confidence were some of the outcomes.

This unethical move, which created more unforgiving markets, freed Toyota to climb up as the number one manufacturer worldwide in 2020 (Reuters, 2021). Now focusing on electric mobility, the brand is trying to focus all their efforts on proving their sustainably transparent intentions and values true as they should have been acting and communicating from the beginning.

¹ Also known as Emissionsgate, it was a scandal (2015) in which carmakers from Germany and other countries manipulated their vehicles' engines to cheat on emissions tests. This has severely damaged and bankrupted the business of various car dealers worldwide (Amelang & Wehrmann, 2020).

Hence, the brand architecture of an enterprise at any time is, in no small measure, a legacy of past management decisions as well as the competitive realities it faces in the marketplace, creating 'brand baggage' (Rajagopal & Sanchez, 2004) noticeable to the consumer's eye. Thus, the exploitation of this precious asset, the equity or associations that have been built up for the primary brand name, extending a brand is an evident approach for growth (Keller & D. Aaker, 1992).

A critical strategic concern is the collision of the extension brand on the original one. Its positive or negative impact can directly enhance or denigrate; accordingly, both name recognition and associations (D. Aaker & Keller, 1990). Other consequences may be cannibalisation of the sales of the original brand moreover misleading customers and brand image regarding new associations and existing ones (Ries & Trout, 2001). D. Aaker & Keller (1990) defend that this impact is particularly significant in vertical extensions presenting an "upscale or downscale version of the brand". Proposals on these bearings are still of little analysis.

Bedbury (2003), urges big brands against extending themselves too far within creating new products and penetrating supplementary markets, going even against the idea. The author defends that "brand values provide a much more efficient organizing framework for a business enterprise than financial performance measures like market share, earnings-per-share or even the stock price". This rule was called as *Spandex Rule* of branding, asserting "just because one can does not mean one should".

Sustainable product brand extensions are no exception to these former assumptions. As factors like imperativeness and scrutiny grow, consumers are getting more and more critical when regarding the selection of goods and labels. As stated previously, consumer individuality should express and second these choices on brand identity vs consumer identity, impacting the marketing environment and, consequently, its strategies.

The competitiveness between brands leads to an almost guarantee of future provisions on CSR (corporate social responsibility), pushing companies to present better, more worth, greener, more socially and environmentally responsible products and brands. Now, brand purposes express advantage, as trust is needed to distinguish better products from less good, defining consumer preferences and loyalty. Future generations are defining progressively that

the most valuable assets of a company are brand identity and the associated value other than external and financial factors. For this reason, brands should gain awareness of the fact that each customer has their uniqueness, their single way of reasoning and that critical thinking may ruin a brand due to not so well-designed strategies. Additionally, marketers must acknowledge the correlation between a brand's concept and assure the maintenance of its image throughout the brand's life (Park et al., 1986).

Precisely, the development of a new product brand extension, considering in this scenario entering the green market, can upgrade if well-structured and thought on, or downgrade a brands perception if not well considered. For this reason, identifying the factors influencing consumers' evaluations of sustainable product and at which levels merits further research.

2.5. Research Purpose & Hypothesis Development

As previously gleaned, a relevant approach would be then a mixture of elements: sustainability, consumer identity and the multi-brand reputation. Premature analysis of these three core components has considered them mainly separated or pairing only two. Due to its imperativeness and being contemporary topics, the purpose of this research is to provide a better understanding of their conjunction, assessing the manner and the extent it impacts consumer's insight and purchase.

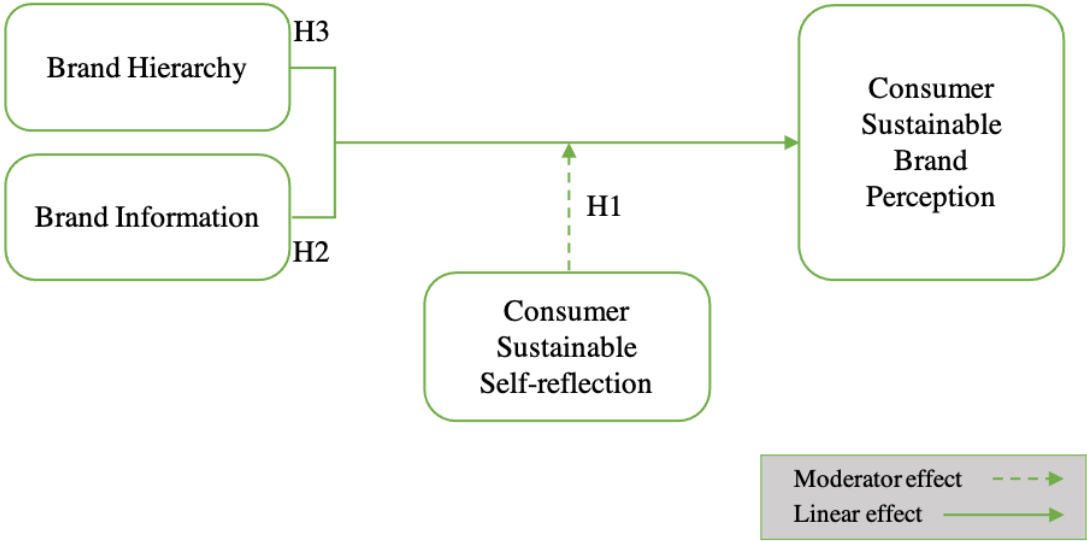


Figure 3: Conceptual Framework

The proposed model on the upcoming methodology and sequel analysis will aim to prove that there are factors that alter the decision on buying or not a green product and its related brands, as well as to demystify the transfer of attributes between Brand Extension and Parent and vice-versa. Therefore, and contributing to further company marketeer's consciousness towards sustainability on brand extensions — sustained by beforehand stated determinations — there are several hypotheses to experiment, each one addressing a further step of confirmation section the literature review.

According to the previous literature review, consumers demand for brands to match their desired selves is emerging. Therefore, the more consumers value sustainability, the more discriminating and austere they will be on green brand consideration. There is a clear correlation between self-image and consumer-behaviour (Azoulay & Kapferer, 2003; White & Argo, 2009). Therefore, consumers' sustainability level may be the driver for their considerations on brand sustainability, where their levels of sustainability are a causality to their sustainable preferences (Pickett-Baker & Ozaki, 2008). Hence the first set of hypotheses.

H1: Consumer's sustainability profile will affect the impact of brand information on brand perception.

H1.1: High sustainable profiled consumers are less affected by sustainable brand information (react differently within before and after access to information) than low sustainable profiled ones on brand perception.

As consumers care progressively more about sustainable motives (Barton et al., 2018), brands might be judged more severely for doing wrong than appraised for being ethical (Hilbig, 2012).

H2: The degree of sustainable brand information affects consumer brand perceptions in divergent directions (positive information leads to more positive evaluations of the brand while negative contributes negatively).

H2.1: Consumers brand perception is affected in a larger proportion by negative brand information than positive brand information.

The following set of hypotheses reflects the leverage that multi-brands can arise when structuring a good fit for all included brands (D. A. Aaker & Keller, 1990; Keller, 2002). However, if virtue can transfer, then immoral might too.

H3: Consumers transfer sustainable values (do not react differently between considering Brand Extension and Parent Brand) when evaluating related brands.

H3.1.: Consumers with a higher sustainable profile transfer sustainable values when considering a brand in a larger proportion comparing to lower profiled ones.

H3.2.: The transfer of sustainable values occurs in a bidirectionally for high profiles (brand extension can affect the parent brand and vice versa) and unidirectionally for low profiles.

3. Methodology

This chapter will present in detail the methodology used to investigate the framed hypothesis. Structured into two distinct dimensions, a multi-brand concept was created including to this study a Brand Extension and a Parent Brand, that will afterwards help cross data and produce conclusions.

3.1. Online Questionnaire

3.1.1. Participants

The study conducted had an elected sample of 151 participants. There was no restriction on respondents. The only requirements to be eligible for the analysis were an age limit, 15 to 80 years of age, and a mandatory survey conclusion.

Available for a fortnight, participation was voluntary and mainly shared through social media or by e-mail to acquaintances. To promote the inclusion of further participants without constraints, the study was shared in two languages, English, and Portuguese.

To draw up the Control Group, 69 of these had access to knowledge on Brand Extension, and 82 were graced with information that pertained to the Parent Brand. Those, as mentioned earlier, ensured the ability to retrieve and examine bias answers from participants.

3.1.2. Stimulus Materials

The introduction of the survey, as previously stated, is comprised of an existing one version shampoo front and back photo (Figure 4). This product is from an actual cosmetics brand, and it purposely communicates a green image so that it allows to grasp participant's reactions properly. Hence its intended position in the opening of the survey.

reactions. Moreover, Brand Extension and Parent Brand presented each a “positive” and negative scenario (2x2). Condition groups had as stimulus a piece of information as below displayed:

Brand Hierarchy	Brand Information	Stimuli
<u>Brand Extension</u>	Positive (Neutral)	"Please take into account the following additional information on <i>Green Hair</i> . <i>Green Hair</i> is a brand extension of <i>Global Cosmetics</i> . This means that <i>Green Hair</i> is part of the family of brands belonging to <i>Global Cosmetics</i> , a cosmetic brand that is well known in the market for years now and that has a great market dimension. Products of this brand are sold in every regular hypermarket or supermarket. ²
	Negative (Scandalous)	"Recently, the <i>Green Hair</i> brand, while promoting itself as a sustainable brand, has been discovered to promote greenwashing, i.e., to deceptively promoting an environmental concern, by extracting too much raw material and polluting with the production process for financial savings."
<u>Parent Brand</u>	Positive (Concerned)	"Recently, the <i>Global Cosmetics</i> brand has been recognised as a brand with environmental concerns and sustainability efforts, such as not testing on animals and responsibility in the raw material extraction and production processes."
	Negative (Scandalous)	"Recently, the <i>Global Cosmetics</i> brand has been accused of environmental scandals including greenhouse gas emissions and animal testing."

Table 1: Stimuli presented to different groups of respondents

Even though given positive scenarios might produce different reactions, crossing both concerned and neutral knowledge with time measures (before and after access to information)

² Stimuli for the remaining scenarios was introduced with the exact same text of the neutral scenario with the addition of a hypothetical correspondent scenario.

allowed not only an understanding on how powerful the displayed product was regarding sustainability, but also conceded an analysis on participants information bias.

The dependent variables within this survey intend to examine participants' considerations regarding the presented brand before and after access to any of the conferred scenarios. Factors like purchase likelihood, sustainability, ethicality, authenticity, and guilt prompted a better understanding of consumer behaviour towards the considered brand. Lastly, each of the four groups pumped about the closeness perception between extension and parent. These repeated measures will be echoed throughout the survey within each of the four exhibited scenarios.

The measurement of respondents considerations on brand values was elaborated through a single-item rating scale. The seven-point Likert-type scales, used for every existing factor on regards to both extension and parent, presented the selections from (e.g., likelihood to buy): 1- “not likely at all” to 7 - “extremely likely” (see appendix 1.2).

A construct was built from affirmations evaluated in a multi-item rating scale to grasp participants sustainable profiles. With a seven-point agreement Likert-type scale³ for each of the seven statements (see appendix 1.3), e.g., “I consider myself an environmental concerned person”, respondents answered according to their sustainable traits and habits (see appendix 2.1).

Since Cronbach Alfa corresponded to $0.801 > 0.8$ regarding the constructed sustainability level, implying consistency amongst the presented items, a medium split amid means of each participant originated the construct of Low and High sustainable profiles. Since there was not enough sample of eligible participants to select profiles within a quartile split, the decision was to split in the middle and group the middle-repeated values (such that all participants with a score of 5,43 would be integrated into the equivalent type of profile).

Finally, were collected demographic patterns such as age, within a slider; gender, with multiple choice and open question (for other options than the displayed); nationality, through

³ Adapted from NEP Scale, Dunlap et al. (2000)

text entry; and highest educational background, presented with multiple options from “some high school” to “Ph. D” (see appendix 1.4).

3.1.3. Procedure

Through social networks, anonymous volunteers were able to participate in the *Qualtrics* questionnaire. Attached was also a simple video on sustainability for greater involvement and attraction of a larger number of participants.

Respondents were informed about the brand "Green Hair", its product, and its ethical and sustainable credentials. They were then asked to consider and select various factors related to the product, before deciding on whether to buy it, while simulating a regular purchase of a shampoo proceeding as they would in such circumstances (appendix 1.1).

Secondly, all participants were divided randomly into four experimental conditions. These controls aimed to dissect reactions toward the inclusion/exclusion of bias on multi-brand value transferring. Whether bestowed with a positive (neutral or concerned insights) or negative (scandalous information) brand scenario, respondents answered to the corresponding factors familiarized in the introductory block (appendix 1.2).

The third part of this survey constructed participants sustainable profiles pondering their sustainable tendencies and practices, outlining a profile score later categorized Low or High Sustainable Profile (appendix 1.3).

The fourth and last section of the questionnaire added the concluding elements that allowed a more meticulous analysis of the basics of each participant. These were presented in purpose to draw out any further conclusions if there were to be any causalities (appendix 1.4).

3.1.4. Design

Consisting of 3 distinct segments, the study focused on grasping the impact of consumer self-reflection on brand sustainability perception when in contact with several contexts across diverse multi-brand scenarios.

Envisioned of 1 heat map; 56 individual matrix tables, distributed within the four existing experimental conditions, the survey (attached in x) enabled the Quantitative analysis of this dissertation. The structure of this survey was assembled so that its introduction to the participants would produce unbiased insights for analysis and conclusions to the formulated hypotheses.

The questionnaire (appendix 1), after requiring starting with control questions, the second section randomly directs participants into one of four experimental condition blocks, presenting a model with a 2x2 design (positive vs negative x BE vs PB).

	Brand Extension	Parent Brand
Positive		
Negative		

Figure 5: Questionnaire Cross-Sectional Design Matrix

The construct of participants environmental profile is present in the third section of the questionnaire. Thus, all participants indicated their preferences and attitudes towards various sustainable practices and knowledge.

The needed demographics were approached on the fourth and final block of the questionnaire, including age, gender, nationality, and education.

4. Data Analysis

4.1. Characterization of the Quantitative Analysis

4.1.1. Sample Characterization

The study had an elected sample size of 151 volunteer participants, with an age minimum of 15 and a maximum of 84. The median is 29.5 years old, and the age average equals 37.6 years. Demographics indicated participants as 56% Women and 43% Men (frequency of 85 and 65 correspondingly). As expected, the Portuguese, the form distribution's top country, was 95.4%, the most common nationality. Lastly, participants highest educational background inferred "Bachelor's Degree" as the most common setting, with a percentage of 41.72%, followed by "Master's Degree" (20.53%).

4.1.2. Low and High Profiles | Median Split analysis

To better grasp the extent of consumers' reactions towards sustainable brand values, comprehend how such perceptions are conceived was essential. Hence the formulation of sustainability profiles⁴ for participants, as suggested in the second chapter (Dunlap et al., 2000; Pickett-Baker & Ozaki, 2008).

The 151 respondents that contributed to the survey were subject to a matrix table. This table apprehended, throughout seven statements on sustainability, answers that contributed to an average profile. With approved reliability (appendix 2.1) and calculated by averaging the response values, the mean value of all participants was divided in half by a median — equal to 5.43. Since there were various averages with this same value, the election was to group all participants with this score and assign them to the profile with a smaller sample size — low sustainability. Therefore, it is necessary to remark that as low sustainable profiles range from 2.43 to 5.43 and the high ones from 5.57 to 7.00, low might produce more volatile results than high sustainable ones.

⁴ Demographics for both low and high sustainable profiles on appendix 2.2.

4.1.3. Manipulation Checks | Data Scenarios (bias)

The manipulation structure was designed so that it would be possible to understand what consumers reactions are when in contact with brand information. Therefore, consumers were bestowed with one of four groups with positive or negative information about brand extension or parent brand. The produced bias was a relevant factor for the following analysis since the focus is on participants reactions — comparing before and after and comparing after between groups and scenarios.

4.1.4. Controls

As a good practice to ensure good results is to measure the quality of answers through applied experimental questions, a simple attention test was on the questionnaire. The question (see appendix (survey question x)) asked participants to drag the slider's pointer until the number 90, on a presented scale of 0 to 100.

However, some participants, either for answering on the phone or not being precise with the mouse, did not achieve exactly 90. Hence, and as many aforementioned participants reached near 90, it was decided to ignore data quality control since there were no 100% plausible criteria.

4.2. Quantitative Analysis | Consumer Brand Sustainability Perception

4.2.1. Heat Map | Secondary Analysis



Figure 6: Heat Map | Low brand intention care level



Figure 7: Heat Map | High brand intention care level

On the Heat Map analysis, one may remark that for participants who answered less or equal than "somewhat agree" to the sentence "I care about brand intention" (Figure 6), it is straightforward the predominance on the front of the package. The brand logo and the specific word planet were the most spotted areas regarding a primary view for the participants with lower care on brand intention. Following is the main ingredients list, and only then, some participants noticed the reverse side considering the product full ingredients list and brand purposes.

As for the participants whose response to the same statement was greater or equal to "agree" (Figure 7), it is possible to denote that there was slightly less incidence on the front of the product and greater care to note the back.

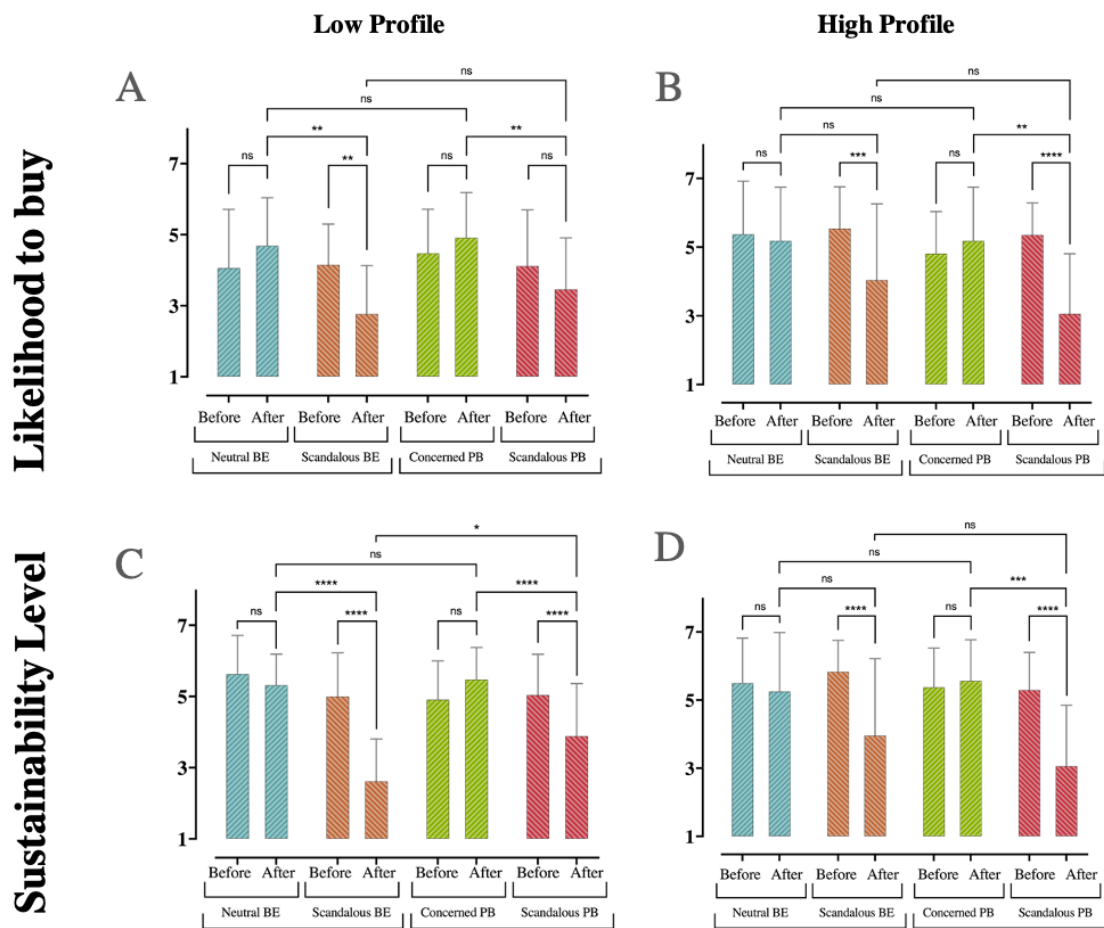
It is possible to notice in the front of the product that although the brand is still relevant, there is a predominance on the word "planet", on the consistency of the shampoo, and finally on the indication that the ingredients are natural.

On the opposite side of the product, many participants focused on how the brand contributes to the planet. Furthermore, were other points such as the "beauty" context of the brand, the components of the shampoo, and the "cruelty free" label - an indicator that the brand does not test on animals, neither harming nor killing them.

Lastly, it is important to remark that participants with lower care from brand intentions focused more on the front of the product and were more concise on their point of interest when buying a shampoo. In contrast, the ones who agree to care about the same intentions were more volatile in their preferences and selected more the reverse side.

4.2.2. 3 Way ANOVA Analysis

The below presented aggregation of 3-way ANOVAs⁵ (before vs after x extension vs parent x positive vs negative), with sustainability profile level as moderator, aims to enlighten consumer perceptions on the four existing factors transfer within the given multi-brand conditions.



⁵ With Tuckey as the method of multiple comparisons testing and a 95% confidence interval (0.05).

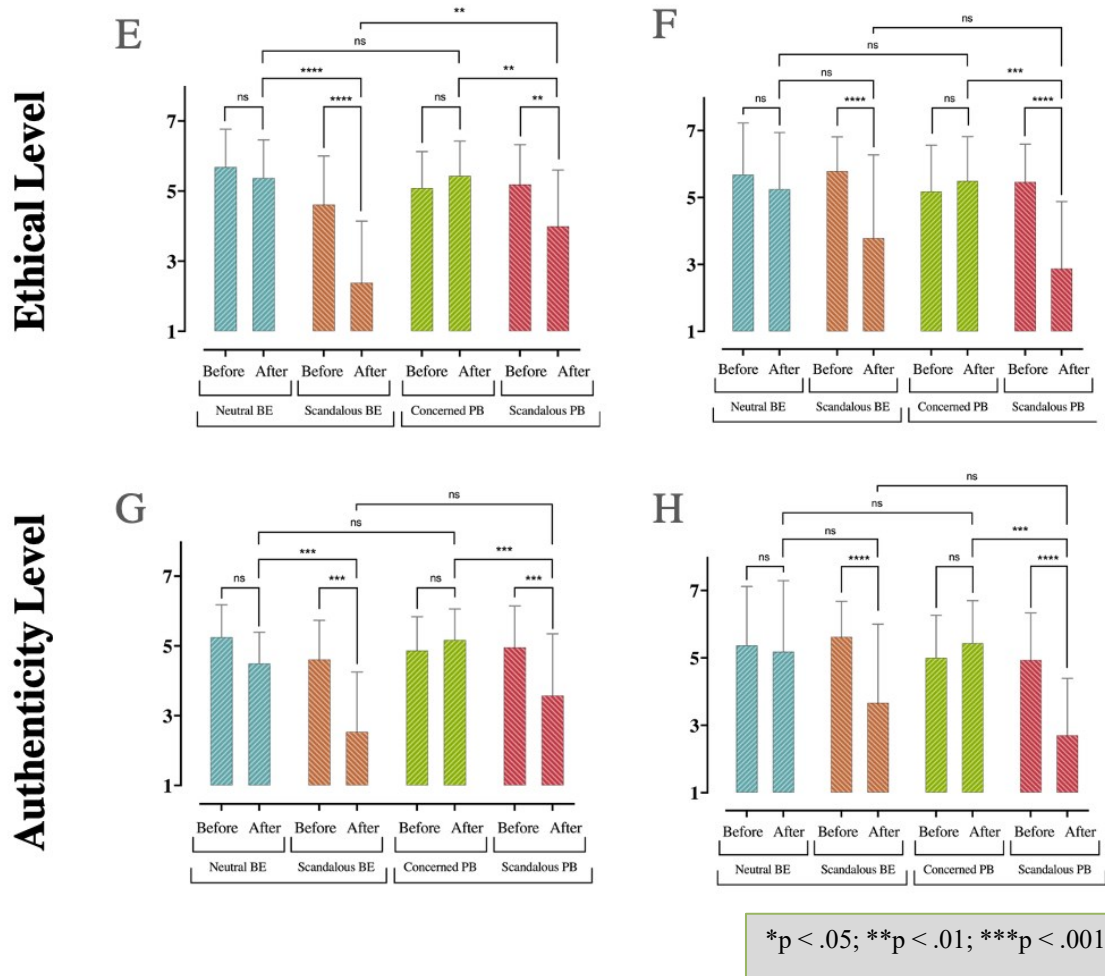


Figure 8: 3-Way ANOVAs on Brand Sustainability Perception

Moreover, as this is an extremely complete analysis, the below presented set of ANOVAs will be the main source provide results for the proposed hypothesis. For each graph, the following results (in addition to the means and standard deviation on table X, attached after the below analysis) suggest that:

Regarding the likelihood to buy (Figure 8), Graph A indicates that even though the main effect (Before vs After x BE vs PB x Concerned vs Scandalous) is insignificant ($F_{Low}(1, 69) < 24.9, p < .001$), the interaction between the before / after buy with the degree of information is significant ($F_{Low}(1, 74) = 26.2, p < .001$). Moreover, just the manifestation of given information is enough to result in divergent outcomes ($F_{Low}(1, 74) = 9.64, p < .003$). High Sustainability Profiles (Graph B) demonstrate not only significance on the decision bias ($F_{High}(1, 69) = 30.4, p < .001$) but also present the same significant interaction within before / after and concerned / scandalous scenarios ($F_{High}(1, 69) = 30.4, p < .001$).

The second assembly of graphs (Figure 8, C and D) approach consumer sustainability perception and suggest common significances within before/after ($F_{Low} (1, 74) = 35.5, p < .001$; $F_{High} (1, 69) = 37.8, p < .001$), on positive or negative scenarios ($F_{Low} (1, 74) = 26.5, p < .001$; $F_{High} (1, 69) = 7.72, p = .007$), as well as the interaction of bias and scenarios ($F_{Low} (1, 74) = 47.3, p < .001$; $F_{High} (1, 69) = 35.5, p < .001$) as stated on likelihood to buy. Additionally, Low participants also denote substance on the interactions of bias x brand Hierarchy ($F_{Low} (1, 69) < 14.6, p < .001$) and brand hierarchy x brand information ($F_{Low} (1, 69) < 3.97, p = .050$).

Ethical perception of the brand is the next element under analysis (Figure 8, E and F). It is possible to find common significances regarding the bias control group ($F_{Low} (1, 74) = 26.1, p < .001$; $F_{High} (1, 69) = 34.4, p < .001$), the effect of the type of information presented ($F_{Low} (1, 74) = 29.7, p < .001$; $F_{High} (1, 69) = 7.33, p < .009$), and in the interaction on bias x scenario ($F_{Low} (1, 74) = 27.2, p < .001$; $F_{High} (1, 69) = 30.9, p < .001$). Low, also exhibited significant values on bias x hierarchy ($F_{Low} (1, 74) = 6.56, p = .012$) and on hierarchy x scenario ($F_{Low} (1, 74) = 7.64, p = .007$) interactions.

Lastly, the outcomes on brand authenticity (Figure 8, G and H) reflect, for Low and High, common significances: before and after access to information ($F_{Low} (1, 74) = 27.0, p < .001$; $F_{High} (1, 69) = 34.4, p < .001$); type of information displayed ($F_{Low} (1, 74) = 21.3, p < .001$; $F_{High} (1, 69) = 34.4, p < .001$) and the interaction of both ($F_{Low} (1, 74) = 16.1, p < .001$; $F_{High} (1, 69) = 34.4, p < .001$). Once again, low also reacted significantly to the interaction of bias with brand hierarchy ($F_{Low} (1, 74) = 5.40, p = .023$).

			Mean	SD	N
Likelihood	Neutral BE	Low	4.688	1.352	16
		High	5.188	1.544	16
	Scandalous BE	Low	4.042	2.216	24
		High	2.769	1.363	13
	Concerned PB	Low	4.913	1.276	23
		High	5.188	1.559	16
	Scandalous PB	Low	3.462	1.449	26
		High	3.059	1.749	17
Sustainability	Neutral BE	Low	5.31	0.873	16

	Scandal BE	High	5.25	1.73	16	
		Low	2.62	1.19	13	
	Concerned PB	High	3.96	2.26	24	
		Low	5.48	0.898	23	
	Scandalous PB	High	5.56	1.21	16	
		Low	3.88	1.48	26	
Ethics	Neutral BE	High	5.375	1.088	16	
		Low	5.250	1.693	16	
	Scandal BE	High	2.385	1.758	13	
		Low	3.792	2.484	24	
	Concerned PB	High	5.435	0.9921	23	
		Low	5.500	1.317	16	
	Scandalous PB	High	4.000	1.600	26	
		Low	2.882	1.996	17	
	Authenticity	Neutral BE	High	4.50	0.894	16
			Low	5.19	2.10	16
		Scandal BE	High	2.54	1.71	13
			Low	3.67	2.33	24
Concerned PB		High	5.17	0.887	23	
		Low	5.44	1.26	16	
Scandalous PB		High	3.58	1.77	26	
		Low	2.71	1.69	17	

Table 2: Descriptive statistics on the 3-Way ANOVA's Factors

Proving that low and high participants reacted differently, aggregated with the additional elaborated paired t-tests, it supports that indeed Low consumers react in different proportions comparing to low ones.

Aggregated with the additional elaborated paired t-tests (see appendix 2.4.1), the provided analysis supports that Low Profiles react in a more volatile manner when compared to High Profiled Participants. Although low sustainability levelled participants appear to individualise scandalous scenarios within related brands, they tend to be more affected by the scandal in BE

than in PB when considering perceptions, meaning that they are more sensitive to brand information. However, low, contrarily to high, does not change purchasing intentions even if their sustainable perceptions change.

Hence, the clear discrepancies within the interaction of before x after with type of information. Negative information produced quite stark reactions from participants, independently of their sustainable profile.

Besides the independent variables (information bias; degree of information; brand hierarchy) showing impacts on the dependent one (sustainable brand perception), the moderator (sustainable profile of the participants) also contributes to the impacts being more or less accentuated.

Thus, the most important remarks are regarding the overall non-rejection of the null hypothesis considering brand hierarchy evaluation. When evaluating answers towards both brand extension and parent brand, significant divergence between participants answers indicate a rejection of the null hypothesis (consumers transfer brand values across multi-brands). However, if participants reactions are similar, that could signify a transfer of those same values.

Such conclusions might intimate that low profile individualises regarding transferring values within BE to PB affect only the direct brand that participants had knowledge on and scrutinise factors alone, differentiating perceptions from intentions or feelings (guilt). Contrarily, the high profile allows value transferring within related brands and factors in general.

5. General Discussion

After individual analysis and discussion of the results obtained, this chapter has given them meaning. Hence, the focus was cross-referencing information from literature and assessments given by the survey participants.

Thus, through joint analysis, there will be an easier understanding of brand implications to assume a sustainable character and the cost of greenwash, the dimension of sustainable behaviours from consumers behaviour and, finally, to test the presence and direction of value transfer between multi-brand contexts. Thus, below are the conclusions drawn about our data against the hypotheses created.

5.1. The moderating effect of consumer sustainability profile

The first set of hypothesis proposes that consumer sustainable profile (low vs high) moderates the impact of brand information (positive vs negative) towards brand perception (dependent variable).

Therefore, and to provide answers to the H1, the conducted 3-Way ANOVAs (Figure 8) and t-tests (Appendix 2.4.1 and 2.4.2) inferred that low profile participants respond in a more volatile and positive manner than high profiled ones when in contact with the same information. Thus, it is possible to answer the first hypothesis: "Consumer's sustainability profile will affect the impact of brand information on brand perception", as supported by the collected data.

As stated in the literature review, consumers are shifting to a more purpose-driven consumption and want companies to be further sustainable, transparent, and fair. (Accenture's Strategy Research Report, 2018). So, it is understandable that those most concerned with sustainable issues are also those most concerned with brand values and intentions.

Furthermore, and intersecting the research in the second chapter with the collected data of low and high sustainability profiles, it is anticipated that the higher the sustainable level self-reflected by the consumer, the more equally sustainable must be the brands it consumes be. Hence, the higher the profile, the more critical consumers are towards sustainable brand values and their consumptions. Therefore, H1.1: Consumers with a higher sustainable profile are more

rigorous and demanding towards green brands than others" can likewise be maintained by the collected results.

5.2. The impact of Brand Information on Brand Perception

The same t-tests (Appendix 2.4.1 and 2.4.2) interpreted how consumers react to positive and negative brand information clarifying the second set of hypotheses (H2). In this study, neutral (due to displaying a possible green product as stimulus) and concerned scenarios are considered positive. Research exhibits that for low profiles, contacting neutral information contributes to a likelihood to buy the product. Otherwise, participants react non-significantly to neutral information, independently of their profiles.

With a concerned bias (receiving concerned information regarding brand sustainability values), reactions depend on the respondent sustainability level. Often participants with low profile react significantly to positive information, attaching sustainable values to the brand, while high ones show to be non-significant. The aforementioned, sustained by the self-reflection learning within the presented literature, is due to low sustainable profile participants considering brands without any sustainable expectations. In contrast, the high-levelled ones might require, if compatible to their self-reflection (Ackerley, 2019; Pickett-Baker & Ozaki, 2008), that brands have already green core values and consequently do not react significantly to sustainable information.

The negative part corresponds to both presented scandalous scenarios. Moreover, outcomes imply a similarity, where reactions are rather negative, within overall participants reactions when dealing with negative brand information. However, the two existing sustainable profiles show differences within the significance level. As maintained by the elaborated analysis, high-levelled participants reactions suggest a bigger care and more severe perceptions for the degree of information than lower profiles.

Besides, in addition to the above, there are also disparities in the proportions of the reactions. In fact, not only is the reaction to positive or negative information distinctive but the level of significance given by respondents to scandalous events is indicated as being higher than the level of reaction to positive information. It can thus be concluded that a brand's effort

to be sustainable may not repay if there is a possibility of greenwashing. Summing up, it is possible to verify that both hypotheses 2 and 2.1 are proven true for the obtained scores.

5.3.Value transferring within Multi-Brand Hierarchy

Finally, the final set of hypotheses (H3), which considers value transfer between related brands, was supported by 2-way (appendix 2.4.1 and 2.4.2) and 3-way (Figure 8) ANOVAs. As discerned, the presented box-plots indicate within the same scenario if and how participants separate sustainable information, supporting this way answers to the third hypothesis set.

When knowledge is regarding a neutral (positive) context, outcomes suggested that overall values do not transfer and for the concerned scenario, where values and brand considerations do not related brands as well. This overall rejection of the null hypothesis with positive knowledge manifests that each brand's green values need to be established individually.

Contrarily, scandalous scenarios present a more doubtful inference towards transferring capabilities within BE and PB. Although participants reactions to a BE scandalous scenario (Figure X) appear, at first glance, to transfer values, factor guilt does not appear to correspond (conferring a correct interpretation since participants had information on BE only). When approaching PB, the behaviour does not match since scandalous PB outputs (Figure X) register that participant do not transfer likelihood, ethics or sustainability values. Moreover, it is noteworthy that all these factors have different human behaviour terms, since likelihood is associated to an intention and ethics, sustainability and authenticity are perceptions. Even though such results could signify unidirectional transmissions, authenticity and guilt rejected the null hypothesis. Once again, the extent to which participants consider guilt non-transferring might be because of how subjective this factor is.

Hence, although H3 can be carried by the results found within this thesis analysis, H3.2, even though findings reject the null hypothesis, the reasons behind it cannot be assured within the collected data.

Moreover, it was also necessary to compare within the whole participant spectrum through the 3-way-ANOVAs (Figure X). To compare differences between BE and PB information, positive and negative scenarios were scrutinised. Overall, effects designate that, as expected,

neutral and concerned scenarios end up being similar and, therefore, non-significant by both low and high profiles. Furthermore, the scandalous scenarios present the same impacts for high profiled participants, while low presents some significances within brand sustainable and ethical levels.

Additionally, and verifying that exhibited results support H3.1, consumers with a higher sustainable profile transfer indeed sustainable values in a larger proportion than others. According to the literature review, probably because high sustainability profiles deeply care about green brand values and have, therefore, more to succumb, identity speaking, if they do not generalise, since they will always suspect any greenwashing association. Thus, it suggests that they generally consume both bad and good, despite difficulties on being influenced by neutral/concerned information, making logical sense. On the other front, low profiles do not oversimplify and prefer to react to each situation individually, probably due to a more relaxed profile. Therefore, H3.1 is supported within the collected data and executed analysis.

Closing, as exhibited in the Diesel Gate case example presented in the literature review chapter, participants tend to, either high or low, react negatively to scandalous information. Moreover, reactions towards brand sustainable values generally do not compensate if high sustainable levelled participants. Such a result might be because consumers already reflect themselves as highly sustainable. So, either consumers do not accept that brands do not correspond to their sustainable values, or they already consider that brands should be sustainable from the beginning. Hence the no surprise factor when reacting to the concerned group. Furthermore, as Audi and Porsche were affected by negative public knowledge, this study supported that related brand information, easily a negative than a positive one, could transfer to other brands when products/brands are within the same fit as established in the second chapter.

5.4. Hypothesis Testing Overview

Hypothesis	Description	Result
H1	Consumer's sustainability profile will affect the impact of brand information on brand perception.	Significant and validated
H1.1	High sustainable profiled consumers are less affected by sustainable brand information than low sustainable profiled consumers on brand perception.	Significant and validated
H2	Positive and negative sustainable brand information affects consumer brand perceptions in divergent directions (positive information contributes positively to brand perception while negative contributes negatively).	Significant and validated
H2.1	Consumers brand perception is affected in a larger proportion by negative brand information than positive brand information.	Significant and validated
H3	Consumers transfer sustainable values (do not react differently) when evaluating related brands.	Significant and validated
H3.1	Consumers with a higher sustainable profile transfer sustainable values when considering a brand in a larger proportion comparing to lower profiled ones.	Validated
H3.2	The transfer of sustainable values occurs in a bidirectionally for high profiles (brand extension can affect the parent brand and vice versa) and unidirectionally for low profiles.	Significant but not validated

Table 3: Results from Hypothesis Testing

6. Limitations and Future Research

When designing a survey, working with fiction limitations does not make it easy to understand how much the hierarchy level may or may not affect other brands. A practical approach may facilitate a better understanding of this needed future research.

The main limitation of this study might be the number of participants included in the samples of each study, while the bigger the sample, the higher the chance to have a good representation of the population. Thus, the choice of quartile split, which would certainly make the analysis more realistic and meaningful, could not elaborate. Median-split was, therefore, the closest and most efficient solution. Moreover, profile scores were another limitation since perhaps a better approach should include a harder analysis towards the maximum “points” on participant sustainable profile level. Therefore, and since participants categorized within low sustainable level have a not so low score, probably due to the general imperative of sustainability in brands, there might be a need to evaluate better dimensions of these differences between the scale of consumer sustainability.

For a more solid guarantee that participants are indeed reacting to bias or not, a way to separate types of sustainability would be through awareness, whereby randomly displaying participants with good, bad and none information through a video (e.g. brand CEO talking about sustainability goals). Here, the choice applied in this study to employ a neutral group instead of two concerned ones could be reversed for both BE and PB. A gain would be to execute a case study (quantitative analysis) towards guidance through sustainable issues and better understand the brands' point of view.

Another suggestion to complement what has been studied in this thesis would be to understand the extent and weight that the guilt factor has on participants and consumers and to what extent it may or may not be relevant to the analysis. Thus, understanding the extent to which guilt affects our results is an unapplied limitation and a possibility for future research.

Finally, the main suggestion for future research would be to comprehend past and future brand reputation when contacting with positive and negative information, learning this way the time required to surpass knowledge on brand and related ones. Moreover, to question why the

lows behave differently from the highs. Are some more eurythmic and others less so, or are some simply trying not to constrain their own judgments? Answers to such unresolved issues would certainly contribute at the academic level but would also have management relevance.

7. Conclusion

This thesis addresses the contrasting impacts vis-à-vis sustainable reputation on the consumer and within the multi-brand universe. The depth to which brands are affected by sustainability, being an imperative topic today, is a central analysis for the consumer goods industry. Thus, the analysis of this study focused on the understanding brand perception according to various levels of imperative (RQ1) existing in the market, as well as reactions to brand information (RQ2) and compared them from the parent brand to brand extension (RQ3).

The main purpose of this study is to analyse the impact of sustainable brand information, whether positive or negative, on consumer brand sustainable perception. Consumers reaction to sustainable knowledge and their environmental practices defines their tendencies in perceiving a certain brand, due to its sustainable self-perception. Therefore, crossing sustainable perceptions with multi-brand interactions has academic and managerial relevance.

In this last chapter, having already interpreted and discussed all the results obtained from the conducted analyses, the objective is to summarise and answer the research questions. Qualitative research, in the literature review, together with the results obtained from the quantitative research, the survey, allowed for an adequate and sustained response to the hypotheses previously established.

The hypotheses outlined, cross-checked against the results, suggest that the formulations were generally valid. Moreover, the outcomes were coherent with the conducted qualitative research, which addressed the implications that the term greenwashing had in the marketing world, the proportion in which the consumer identified himself as green, and consumerist perspectives of multi-brands, to encompass the arguments necessary for the discussion of the data obtained.

Approaching now the first research question (RQ1), it is possible to conclude that, accordingly to the collected literature review and its association with the obtained results, there are indeed different sustainable levels within today's consumer profiles. Self-reflection is a key element in understanding consumer attitudes and considerations (Ackerley, 2019; Azoulay & Kapferer, 2003; Pickett-Baker & Ozaki, 2008).

Secondly (RQ2), consumers do value most negative information indeed than positive (Hilbig, 2012). Therefore, this dissertation also proposes a call-out alert to brands to outline a well-drawn-out strategy, assuring all ethics are in the right place, guaranteeing to not perform on a rash decision ending up destroying brand and/or multi-brand reputation.

Lastly, the approach to the multi-brand dimension (RQ3), a component whose research is still primary, allowed to obtain full outcomes for the consumer industry. Even though the results were not entirely conclusive, it allowed conjecturing that the whole umbrella brand might suffer from the mistake originated of one, independently of the direction of reputation.

Although the sustainable supply is growing, there is a need for constant monitoring, improvement, and ethical certification to decline consumer uncertainty about green and ecological consumption.

The sustainable market is undoubtedly a world with much potential, but it is a market that in itself proves to be quite volatile. There is much to develop and change; however, consumers are progressively imperative towards the topic. So, in terms of managerial implications, brands should bear in mind that creating a brand extension or similar is as manageable as being transparent about sustainable motives. Contrarily, self-reflection and consequent consumer profiling are independent variables, non-controllable and necessary variables for brand progress.

Furthermore, and as revealed by the main findings, there is a need for study on brands as to their intention. As previously discussed, regardless of whether consumers position themselves with a low or high sustainability profile, there is a predisposition to react to sustainable reputations, whether this information is positive or negative. However, as expected, the more the consumer reflects himself as sustainable, the more this factor impacts his choices and considerations regarding the brand in question due to more heuristic perspectives. Thus, we further conclude that it is necessary, both at an academic and managerial level, to adapt, study and be transparent so that the progressive adaptation of customers is a beneficial and not a detrimental factor to the brand, its image, and the perceptions of brands and associated products.

Therefore, this thesis fulfils the purpose of drawing attention to sustainability issues and the major and exponential relevance it progressively has and raising awareness from academics, marketers, managers, brands, and companies to the dimension in which reputation matters. Hence and supported by bestowed results, greenwashing must not be a solution, whether upon parent brand or brand extension.

In closing, it is noteworthy that identity, from both consumer and brand, is key to understanding how brand managers should direct strategies. Self-identification, particularly unitedly with sustainability, are two fundamental factors that the world has lately been keen on since utilitarian and hedonic values are a vital part of consumption.

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Appendix

1. Survey

1.1. Start of Block: Introduction of brand extension and element selection

Q1: "Green Hair" is a new brand on the market that has just launched their new shampoo. Please take into account a situation where you had to buy shampoo at the supermarket/store and think about **what you would do** in those circumstances. Select*, by clicking on either the product front/back, the **one element** that you care most on that same buying experience (please ignore factors like hair type).

Q2: Considering the previously shown product, please indicate how likely would it be for you to purchase it, on a scale from 1 (not likely at all) to 7 (extremely likely).

	1	2	3	4	5	6	7	
not likely at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	extremely likely

Q3: Based on the presented information, please indicate how **sustainable** do you consider the brand values to be on a scale of 1 (not sustainable at all) to 7 (extremely sustainable).

Q4: Based on the presented information, please indicate how **ethical** do you consider the brand values to be on a scale of 1 (not ethical at all) to 7 (extremely ethical).

Q5: Based on the presented information, please indicate how **authentic**, about genuine intentions from the brand, do you consider the brand values to be on a scale of 1 (no authenticity at all) to 7 (extremely authentic).

End of Block: Introduction of brand extension and element selection

1.1. Start of Block: Influences with neutral parent brand

Q6: Please take into account the following additional information on "Green Hair". "**Green Hair**" is a **brand extension** of "Global Cosmetics". This means that "Green Hair" is part of the family of brands belonging to "Global Cosmetics", a cosmetic brand that is well known in the market for years now and that has a great market dimension. Products of this brand are sold in every regular hypermarket or supermarket.

Page Break -----

Q7: Please answer the following questions regarding the "**Green Hair**" brand (brand extension).

Q8: Considering the previous information, please indicate **how likely** would it be for you to purchase from the brand, on a scale from 1 (not likely at all) to 7 (extremely likely).

Q9: Based on the presented information, please indicate how **sustainable** do you consider the brand values to be on a scale of 1 (not sustainable at all) to 7 (extremely sustainable).

Q10: Based on the presented information, please indicate how **ethical** do you consider the brand values to be on a scale of 1 (not ethical at all) to 7 (extremely ethical).

Q11: Based on the presented information, please indicate how **authentic**, about genuine intentions from the brand, do you consider the brand values to be on a scale of 1 (no authenticity at all) to 7 (extremely authentic).

Q12: Considering the previously stated information, please indicate how **guilty** would you feel if you bought a product from this brand, on a scale of 1 (not guilty at all) to 7 (extremely guilty).

Q13: Please consider the relationship between the "Green Hair" brand extension and its parent brand "Global Cosmetics". How **independent** from the parent brand do you

think **Green Hair management** (overall brand decisions) is, on a scale of 1 (not independent at all) to 7 (extremely independent).

Page Break -----

Q14: Please, consider now "**Global Cosmetics**" (parent brand) while answering the next questions.

Q15: Based on the presented information, please indicate how **sustainable** do you consider the brand values to be on a scale of 1 (not sustainable at all) to 7 (extremely sustainable).

Q16: Based on the presented information, please indicate how **ethical** do you consider the brand values to be on a scale of 1 (not ethical at all) to 7 (extremely ethical).

Q17: Based on the presented information, please indicate how **authentic**, about genuine intentions from the brand, do you consider the brand values to be on a scale of 1 (no authenticity at all) to 7 (extremely authentic).

Q18: Considering the previous information, please indicate how likely would it be for you to purchase products from other brands **affiliated** with the brand, on a scale from 1 (not likely at all) to 7 (extremely likely).

Q19: Considering the previously stated information, please rate how **guilty** would you feel if you bought a product from this brand, on a scale of 1 (not guilty at all) to 7 (extremely guilty).

Page Break -----

Q20: Now consider the **relationship** between "Global Cosmetics" (the parent brand) and "Green Hair" (the brand extension). Please indicate how "**close**", **related** or **similar** do you think the parent brand and the brand extension are regarding their values and intentions, using a scale from 1 (not related at all) to 7 (extremely related).

End of Block: Influences with neutral parent brand

Start of Block: Influences with environmental scandals from parent brand

Q21: Please take into account the following additional information on "Green Hair". **"Green Hair"** is a **brand extension** of "Global Cosmetics". This means that "Green Hair" is part of the family of brands belonging to "Global Cosmetics", a cosmetic brand that is well known in the market for years now and that has a great market dimension. Products of this brand are sold in every regular hypermarket or supermarket.

Recently, the **"Global Cosmetics"** brand has been **accused of environmental scandals** including greenhouse gas emissions and animal testing.

(...)

End of Block: Influences with environmental scandals from parent brand

Start of Block: Influences with environmentally concerned parent brand

Q36: Please take into account the following additional information on "Green Hair". **"Green Hair"** is a **brand extension** of "Global Cosmetics". This means that "Green Hair" is part of the family of brands belonging to "Global Cosmetics", a cosmetic brand that is well known in the market for years now and that has a great market dimension. Products of this brand are sold in every regular hypermarket or supermarket.

Recently, the **"Global Cosmetics"** brand has been **recognised as a brand with environmental concerns and sustainability efforts**, such as not testing on animals and responsibility in the raw material extraction and production processes.

(...)

End of Block: Influences with environmentally concerned parent brand

Start of Block: Influences with environmental scandals extension brand

Q51: Please take into account the following additional information on "Green Hair". **"Green Hair"** is a **brand extension** of "Global Cosmetics". This means that "Green Hair" is part of the

family of brands belonging to "Global Cosmetics", a cosmetic brand that is well known in the market for years now and that has a great market dimension. Products of this brand are sold in every regular hypermarket or supermarket.

Recently, the "**Green Hair**" brand, while promoting itself as a sustainable brand, has been discovered to promote **greenwashing**, i.e. to **deceptively promoting an environmental concern**, by extracting too much raw material and polluting with the production process for financial savings.

(...)

End of Block: Influences with environmental scandals extension brand

1.2. Start of Block: Persona outline

Q66: Please rate each of the following statements according to your identity and attitudes.

*Please note values correspond to the following agreement degrees:

(1)	Completely disagree
(2)	Disagree
(3)	Somewhat disagree
(4)	Neither agree nor disagree
(5)	Somewhat agree
(6)	Agree
(7)	Completely agree

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
I am very aware of sustainability issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider myself an environmental concerned person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I recycle on a daily basis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family and friends have environmental concerns.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I practice sustainable shopping.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I care about brand intention.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with the concept of greenwashing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q67: Please drag slider 7 to 90.

0 10 20 30 40 50 60 70 80 90 100

End of Block: Persona outline

1.3. Start of Block: Basics ID

Q68: Please indicate your age.

10 20 30 40 50 60 70 80 90 100

Q69: Please indicate the gender you identify with.

- Male
 - Female
 - Other (please indicate which) _____
-

Q70: Please indicate your nationality.

Q71: Please indicate the highest degree or educational background you have completed.

- Some High School
- High School
- Trade/technical/vocational training
- Bachelor's Degree
- Master's Degree
- Ph.D.

End of Block: Basics ID

2. Graphs and Figures

2.1. Sustainability Profile Construct Cronbach Alfa

Reliability Statistics

Cronbach's Alpha	N of Items
.801	7

Item Statistics

	Mean	Std. Deviation	N
Sustainability awareness level	5.61	1.071	151
Environmental Concern level	5.87	.911	151
Recycling Habits level	5.91	1.387	151
Social Circle Environmental Concern Level	5.66	1.217	151
Sustainable Shopping Level	4.97	1.397	151
Brand intention Care Level	5.10	1.491	151
Familiarity with greenwashing concept level	4.64	1.842	151

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sustainability awareness level	32.15	33.872	.507	.782
Environmental Concern level	31.88	34.159	.595	.774
Recycling Habits level	31.85	30.997	.545	.773
Social Circle Environmental Concern Level	32.10	34.223	.395	.798
Sustainable Shopping Level	32.79	29.248	.670	.749
Brand intention Care Level	32.66	28.227	.687	.744
Familiarity with greenwashing concept level	33.11	28.887	.457	.803

2.2. Descriptive Statistics of High and Low Sustainability Profiles

Demographics	Sustainable Profile	Statistic	Value
Age	Low	Min Value	15.00
		1st Quartile	20.00
		2nd Quartile / Median	24.00
		3rd Quartile	46.25
		Max Value	76.00
	High	Min Value	15.00
		1st Quartile	22.00
		2nd Quartile / Median	40.00
		3rd Quartile	61.50
		Max Value	84.00

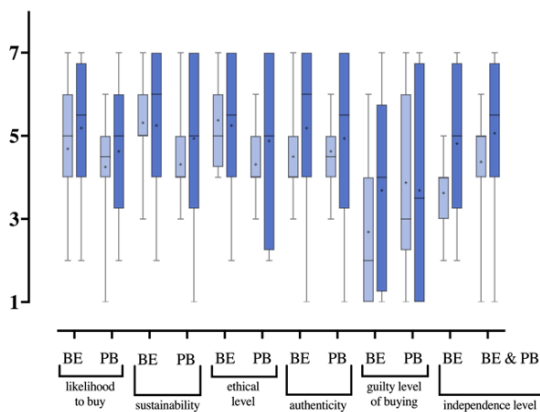
Demographics	Sustainable Profile	Answer	Frequency	Percentage
-	Low	-	78	51.66%
	High	-	73	48.34%
Gender	Low	Male	36	23.84%
		Female	42	27.81%
	High	Male	30	19.87%
		Female	43	28.48%
Nationality	Low	Portuguese	57	37.75%
	High	Not Portuguese	21	13.91%
	Low	Portuguese	54	35.76%
	High	Not Portuguese	55	36.42%
Education	Low	Some High School	6	3.97%
		High School	17	11.26%
		Trade/technical/vocational training	8	5.30%
		Bachelor's Degree	30	19.87%
		Master's Degree	16	10.60%
		Ph.D.	1	0.66%
	High	Some High School	2	1.32%

		High School	13	8.61%
		Trade/technical/vocational training	7	4.64%
		Bachelor's Degree	33	21.85%
		Master's Degree	15	9.93%
		Ph.D.	3	1.99%
Total			151	100%

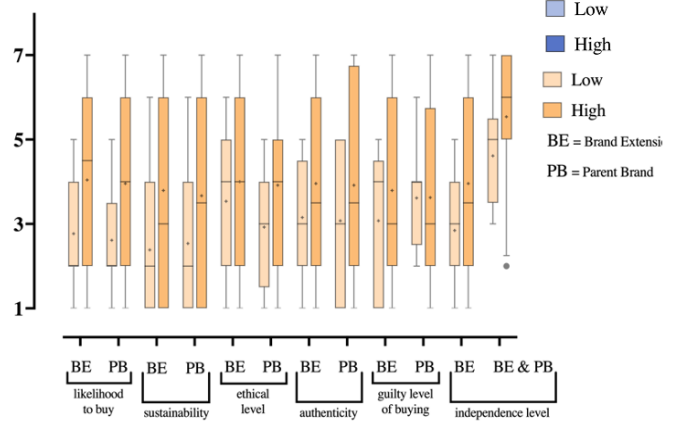
2.3. Box-plot on Bias for both Brand Extension and Parent Brand

The following 2 Way Anova made multiple comparisons across the factors within each group and participant profiles (Low and High), centring what their reactions towards BE are and PB within the same scenario. Moreover, the multiple comparisons were grounded on hypothesis testing through the Sidák test.

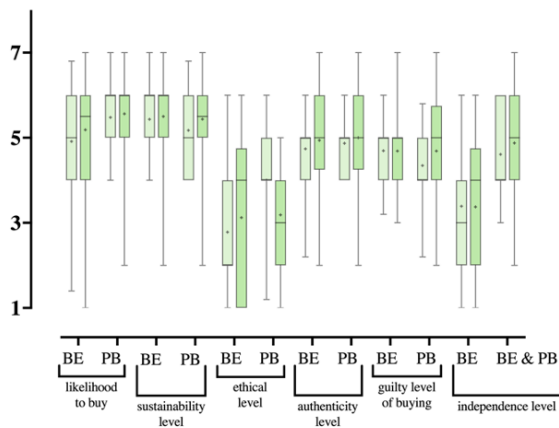
A Neutral Information on Brand Extension
- Low vs High Sustainable Levels -



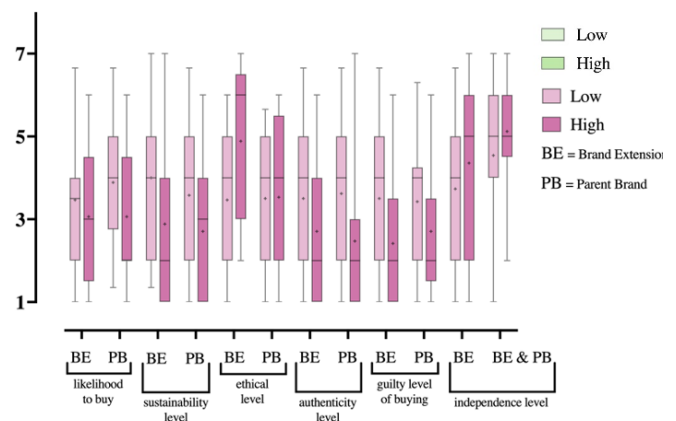
B Scandalous Information on Brand Extension
- Low vs High Sustainable Levels -



A Concerned Information on Parent Brand
- Low vs High Sustainable Profile -



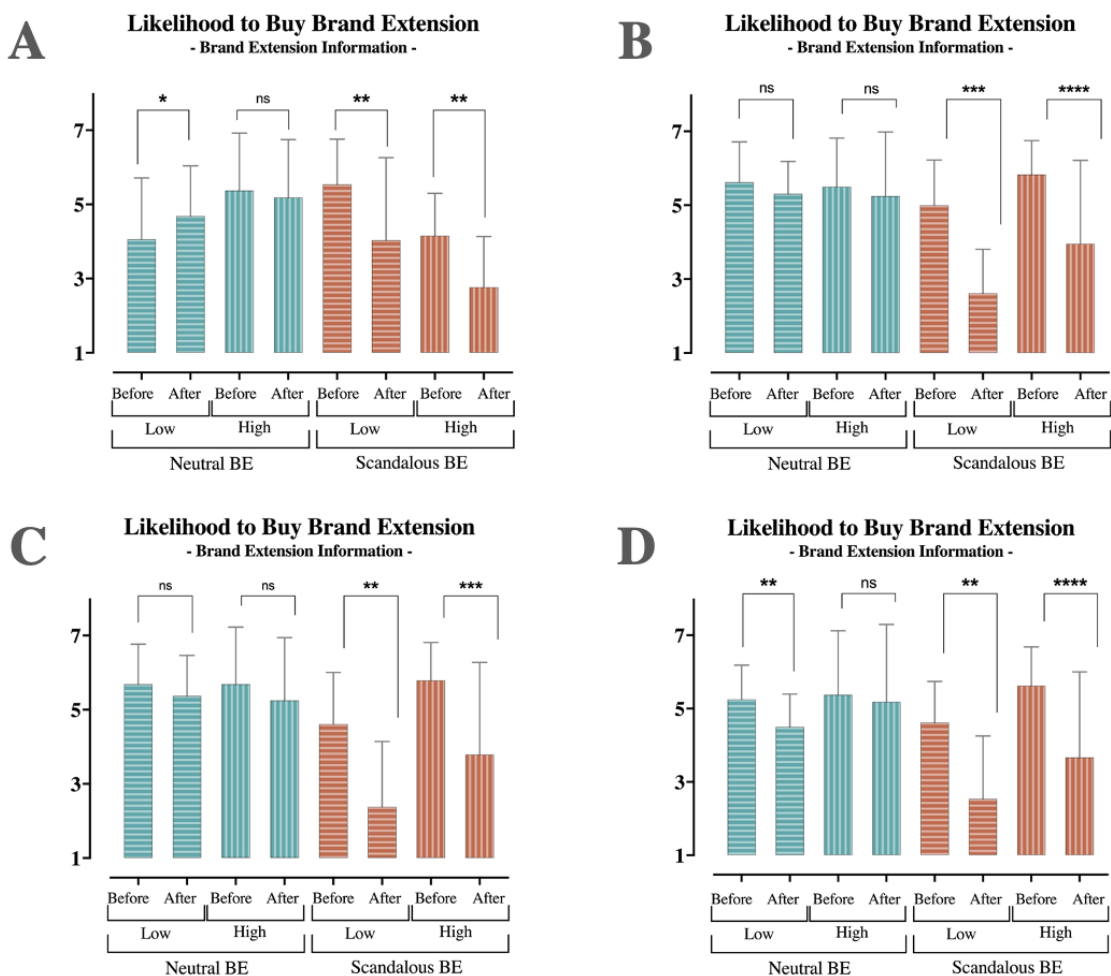
B Scandalous Information on Parent Brand
- Low vs High Sustainable Profile -



2.4. Dimension 1 | Brand Extension and Parent Brand

As mentioned in the methodology chapter, this thesis will be analysing the survey answers separated into two different dimensions. An independent analysis will allow a more in-depth perspective of the results, and the following t-tests and 2-way ANOVAS will grant a more detailed analysis, as for the conclusion that results prove indeed behavioural differences between low and high sustainability profiles.

2.4.1. Brand Extension



The graphs above present the conjunction of paired t-tests in neutral and scandalous scenarios on brand extension. The parametric test was composed of a two-tailed p-value. Hence, this set aims to answer beforehand stated hypothesis H2 and H2.1.

a) Neutral Scenario | Blue Bars

In graph A, and where participants had admittance to neutral information (blue bars), one can verify that for Low Sustainability Profiles, a mere piece of data can significantly increase the contrast after deciding on buying status ($M = 0.6250, SD = 0.8851, t(15) = 2.825, p = .0128$). As for the High profiled ones, minor neutral information does not contribute to developing second opinions, and consequently, the responses were non-significant ($M = -0.1875, SD = 0.9106, t(15) = 0.8236, p = .4230$).

Secondly, the following graph (blue bars) approaches participants considerations on Brand Extension sustainability values. In this situation, both Low Profiled ($M = -0.3125, SD = 0.6021, t(15) = 2.076, p = .0555$) and High Profiled ($M = -0.2500, SD = 1.238, t(15) = 0.8076, p = .4320$) respondents had non-significant reactions to the neutral scenario.

Similarly to the previously approached neutral scenario, on Graph C (blue bars), a non-significant effect occurred on both Low ($M = -0.3125, SD = 0.8732, t(15) = 1.431, p = .1728$) and High ($M = -0.4375, SD = 1.315, t(15) = 1.331, p = .2031$) Profiled circumstances when evaluating the Brand Extension's Ethical level.

The fourth graph (D, blue bars) allows discerning significant and non-significant reactions from participants according to their reflection on Brand Extension's Authenticity. Here, Low Profiled Participants, likewise to the head exhibited scenario, had a significant reaction ($M = -0.7500, SD = 0.9309, t(15) = 3.223, p = .0057$), whereas High sustainable levelled ones did not show any particular reaction ($M = -0.1875, SD = 1.223, t(15) = 0.6132, p = .5489$).

When contemplating all presented reactions, it is interesting that, even though bestowed a neutral scenario, respondents with a High Sustainable Profile denied any effect contrasting before and after accessing neutral information. Conversely, it is pronounced the volatility of feedback from Low Profiled participants.

b) Scandalous Scenario | Orange Bars

On a scandalous note, Graph A (orange bars) demonstrates that in both Low ($M = -1.500, SD = 1.978, t(23) = 3.715, p = .0011$) and High ($M = -1.385, SD = 1.502, t(12) =$

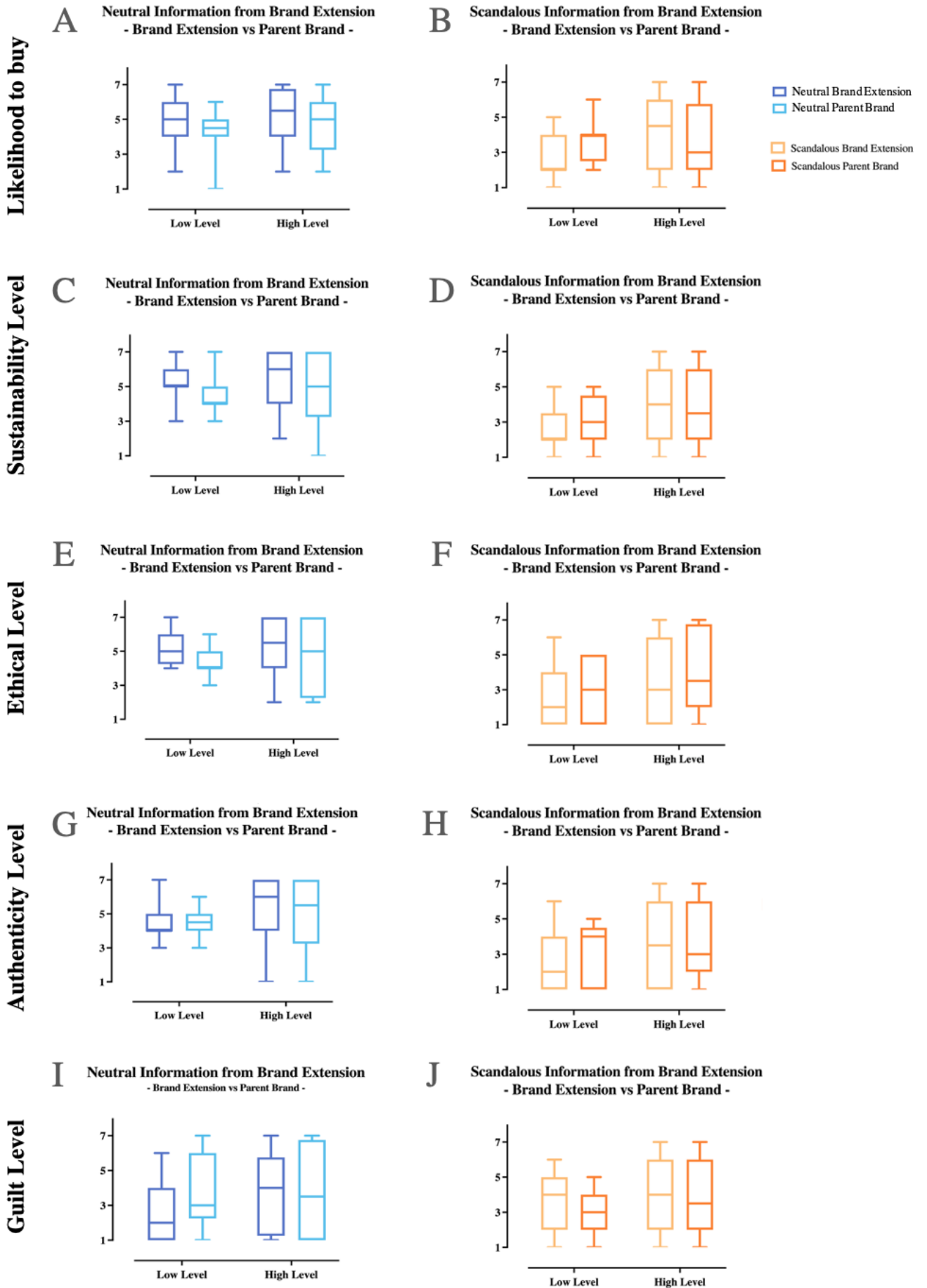
3.323, $p = .0061$) Sustainable Profiles, participants react significantly and negatively, comparing before and after considerations on the likelihood of buying the advertised product. The previously mentioned reaction was defined by participants knowledge of outrageous behaviours from the Brand Extension.

Regarding sustainable considerations on Brand Extension (orange bars), both participant types resembled once again. Low ($M = -2.385$, $SD = 1.557$, $t(12) = 5.523$, $p = .0001$) and High ($M = -1.875$, $SD = 1.777$, $t(23) = 5.169$, $p < .0001$) Sustainable Levels reacted significantly and negatively to the given scandalous knowledge.

Moreover, the third graph (orange bars) proves that both profiles significantly react just as negatively as the previously analysed situations. Low ($M = -2.231$, $SD = 2.048$, $t(12) = 3.928$, $p = .002$) and High ($M = -2.000$, $SD = 2.126$, $t(23) = 4.608$, $p < .001$) counter the Brand Extension as rather less ethical than their previous analysis.

Last but not least, graph D (orange bars) witnesses that along with the earlier mentioned settings, Low ($M = -2.077$, $SD = 2.139$, $t(12) = 3.500$, $p = .004$) and High ($M = -1.958$, $SD = 1.805$, $t(23) = 4.608$, $p < .001$) profiles have clear significance. These negative behaviours are towards Brand Extension's Authenticity Level after being given a scandalous piece on the same brand.

In hindsight, it is completely explicit that there are no distinguishing attitudes toward the Brand Extension amid Low and High Sustainable Profiles when in contact with a scandalous scenario about the corresponding brand.



The previously exhibited box-plot graphs (Figure x) measured how distinctive, sustainable profiles react within the same scenario towards considerations on BE and PB. Here, the end was to contrast neutral from scandalous information crossed with low and high sustainable levels.

c) Neutral Scenario | Blue Boxplots

Regarding the neutral scenario (Figure X, A), the difference between brand extension and parent brand is significant when comparing the likelihood to buy.

Graph C (Figure X) disclosed that regarding brand sustainability there is a significant difference within the comparison of BE and PB, and even though low and high are non-significant the interaction between profiles — low react significantly comparing to high — and kinship, exceptionally to all existing results, is significant.

The following graph (Figure X, C) denotes, just as the previous, a significant difference in comparison of sustainability considerations between BE and PB independently of being low or high profiles.

Authenticity (Figure X, G) the fourth analysed factor, illustrates a non-significant comparison within BE and PB as well as an also non-significant comparison between low and high.

Lastly, (Figure X, I) both the comparison between BE and PB and between low and high reflect, as the above factor, non-significant results.

Overall, neutral results show that the transferring does not occur within brand values, as likelihood, sustainability and ethicality reject the null hypothesis, while authenticity and guilt, by not rejecting H₀, might transfer to the related brand.

d) Scandalous Scenario | Orange Boxplots

The BE scandalous scenario (B) illustrates that even though individual differences on likelihood to buy between BE and PB, and participant profiles have non-significant results, together both have a significant interaction.

Secondly, the factor sustainability (D) indicates that both differences between BE and PB as well as Low and High sustainable profiles are non-significant.

Following, within ethical focus (F) BE and PB specify no comparing differences equal to sustainable profiles proving also to be non-significant.

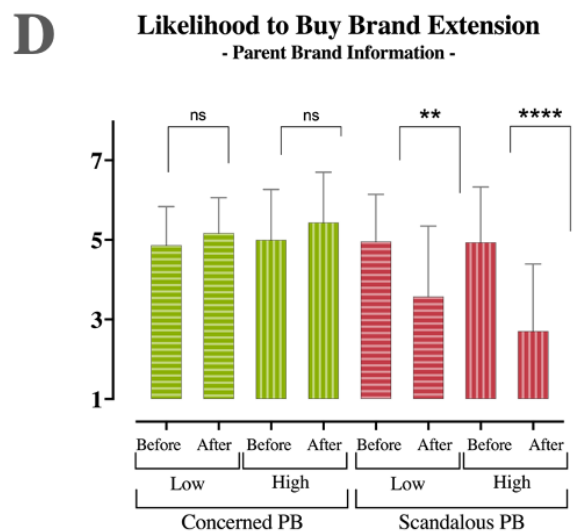
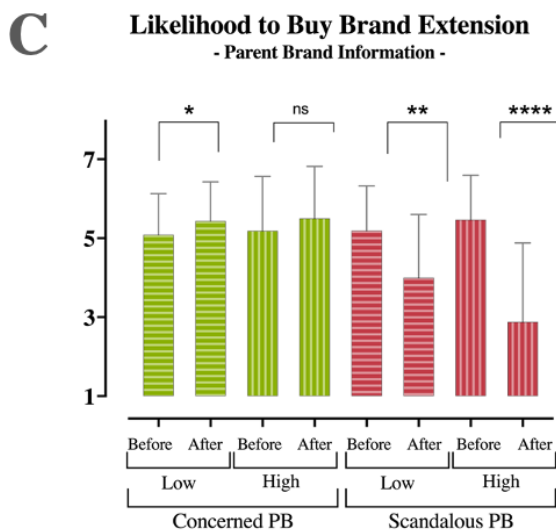
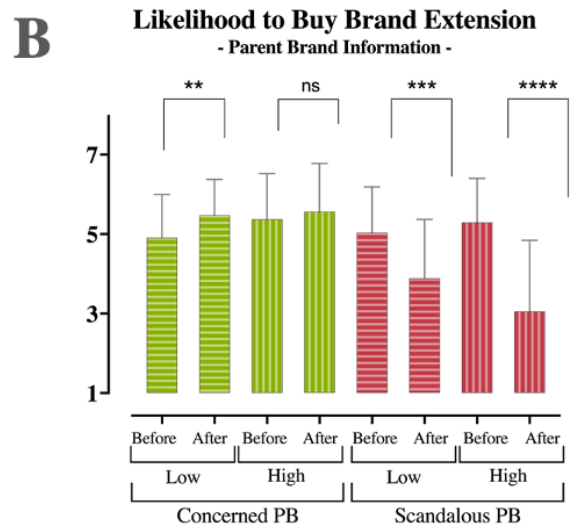
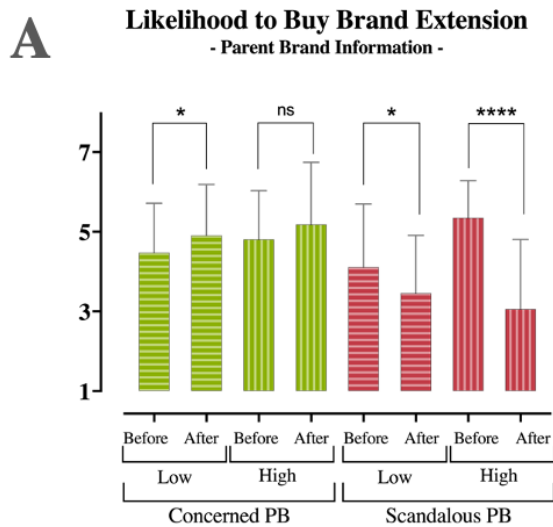
Moreover, and non-contrasting with the previous evaluation, brand authenticity exhibits non-significance when comparing BE and PB independently of the consideration of low or high — also non-significant.

Within the fifth and last factor, guilt (J), BE and PB specify significant differences contrarily and independently from sustainable profiles.

As a brief termination, the highlight regarding scandalous knowledge on BE is concerning the overall non-rejection of the null hypothesis. This indicates that information transfers between related brands when in cause a negative reputation, independently of participants profile. However, guilt does not appear to be included in such manner, since it rejects the null hypothesis.

2.4.2. Parent Brand Analysis

All the following analysis proceeded to the same exact measures presented before each graph on the brand extension analysis. Please note that that ns = non-significant and * = significant, in which the more * presented, the more significant it is.



a) Concerned Scenario | Green Bars

First, and within the Concerned Group (A, green bars), and for the Low Sustainable profile, a significant increase averaged value was observed when comparing the likelihood to buy the product before and after receiving additional information ($M = 0.4348$, $SD = 0.9451$, $t(22) = 2.206$, $p = .0381$), which was not observed for the High Sustainable profile ($M = 0.3750$, $SD = 1.147$, $t(15) = 1.307$, $p = .2108$).

Analyzing now graph B (green bars), it is also possible to discern a significance level when confronting before and after receiving information for the Low Sustainable Profile ($M =$

0.5652, $SD = 0.9451$, $t(22) = 2.868$, $p = .0089$). Nevertheless, High Sustainable Profiled participants did not present a significant level of reactions to given Sustainable information on Brand Extension ($M = 0.1875$, $SD = 0.8342$, $t(15) = 0.8991$, $p = .3898$).

Similarly to both previously presented examinations, on Graph C (green bars), significance levels under access to ethical information about the parent brand, were only manifested on Low Profiled Participants ($M = 0.3478$, $SD = 0.7751$, $t(22) = 2.152$, $p = .043$) contrarily to the High Profiled ones ($M = 0.313$, $SD = 1.078$, $t(15) = 1.159$, $p = .264$).

Lastly, enduring on the Concerned Scenario (D, green bars), it is noted that both the sustainable profiles, Low ($M = -1.385$, $SD = 2.080$, $t(25) = 3.394$, $p = .002$) and High ($M = -2.235$, $SD = 1.678$, $t(16) = 5.492$, $p < .001$), did not react significantly to the authenticity of the brand in the light of the information given about the Parent Brand.

In summary, these results showed a clear effect when participants were exposed to a scandal information after buy a product, which led to a decreasing on the averaged values for all the studied factors. Even though the Profile Level from participants did not yield, in average, differences at the on significance, these effects were superior for the High Profiled participants when comparing to the Low Sustainable Profiled ones.

b) Scandalous Scenario | Red Bars

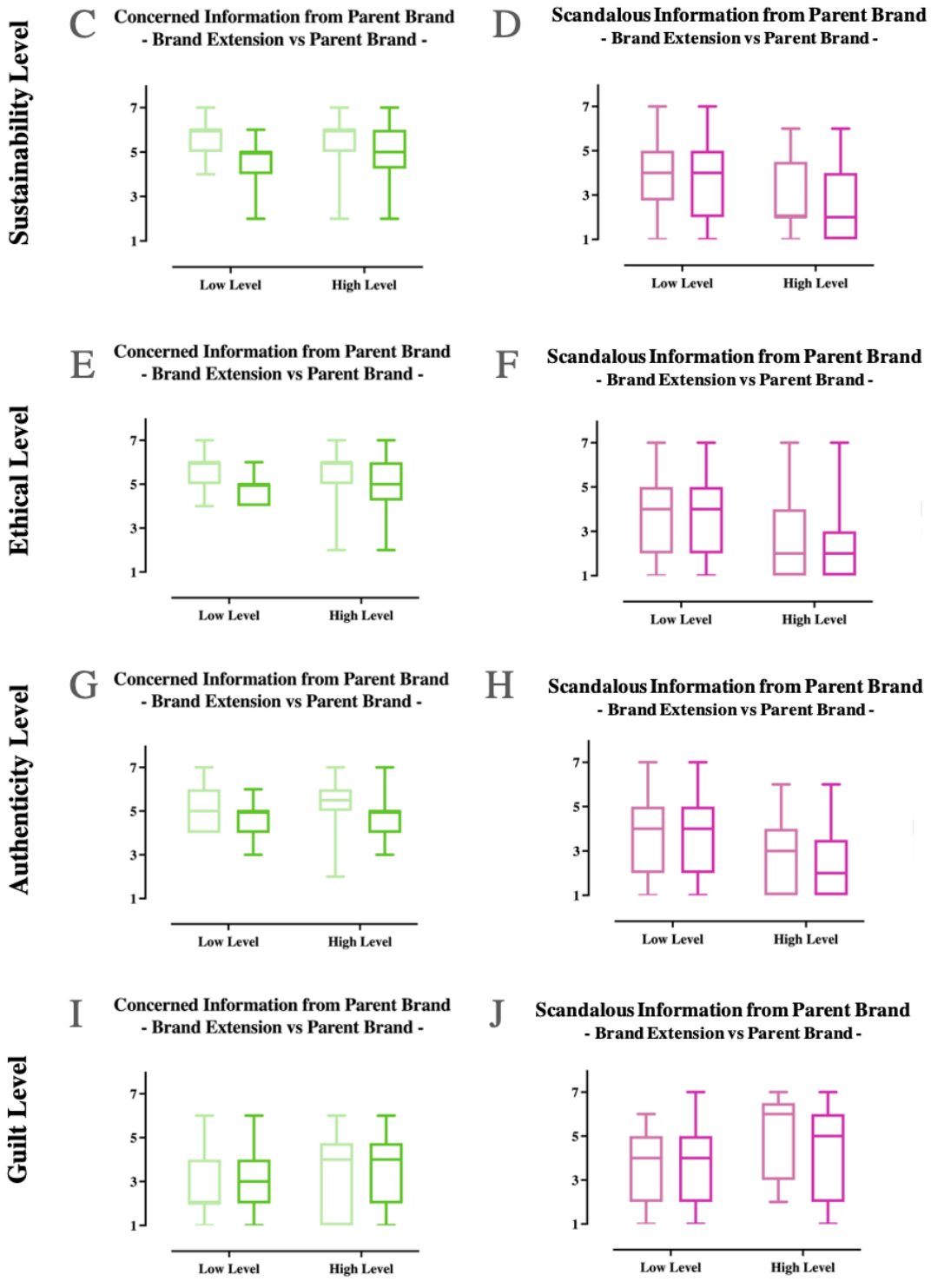
Regarding the Scandalous Scenario (A, red bars), for both profiles the results showed significant differences between the likelihood to buy, which can be observed as a decreased averaged value obtained for after buying the product when compared with before: Low ($M = -0.6538$, $SD = 1.599$, $t(25) = 2.086$, $p = .0474$) and High ($M = -2.294$, $SD = 1.532$, $t(16) = 6.176$, $p < .001$).

The second graph (B, red bars), exhibits a significant discrepancy regarding participants consideration of brand Sustainability Level on both Low ($M = -1.154$, $SD = 1.377$, $t(25) = 4.274$, $p < .001$) and High ($M = -2.235$, $SD = 1.480$, $t(16) = 6.226$, $p < .001$) Sustainable Profiles about the brand extension between before and after recognising scandalous information on the parent brand information.

Once more, on Graph C (red bars), on Ethical Brand considerations, the pattern repeats itself, and both Low ($M = -1.192, SD = 1.698, t(25) = 3.581, p = .001$) and High ($M = -2.588, SD = 1.770, t(16) = 6.030, p < .001$) Profiled Participants react significantly to the provided scandalous information.

Ultimately, and examining Brand Authenticity, (D, pink bars), a similar variance occurs, where both Low ($M = -1.385, SD = 2.080, t(25) = 3.394, p = .0023$) and High ($M = -2.235, SD = 1.678, t(16) = 5.492, p < .001$) react significantly, once again, to the given Scandalous Parent Brand scenario.

In retrospect, it is noteworthy that all analysis situations, when participants contact scandalous information, even though it concerns the Parent Brand, react negatively towards the product brand (Brand Extension). More so, sustainable profiles indicate superior contrasts on High Sustainable valued participants than Low Profiled ones afresh.



c) Concerned Scenario | Green Boxplots

Regarding the neutral scenario (A), the difference between BE and PB is significant when comparing the likelihood to buy, regardless of participants sustainable profiles.

The following graph (C) denotes, just as the previous, a significant difference in comparison of sustainability considerations between BE and PB, independently of being low or high profiles.

The third factor evaluated, ethicality (E), illustrates once again a significant interaction in comparing BE and PB. Equally, it has no significance on participant's sustainable level.

Graph G reveals an insignificance regarding low or high profiles, although with a significant difference between BE and PB when comparing brand authenticity level.

Guilt level (I), when comparing BE and PB, implies, as the above, a significant variation, while doesn't show any regarding subject being high or low.

Hence, it is remarkable that all graphs regarding concerned scenarios reject the null hypothesis, suggesting that, when reacting to positive information, participants do not transfer concerned sustainable values, independently of their sustainable profile being high or low.

d) Scandalous Scenario | Pink Boxplots

The first graph on scandalous scenario (B), presents a conflicting state comparing to the previously concerned situations scenario. Not only the difference between BE and PB is not significant, but participant profiles have also non-significant results between low and high.

Sustainability (D), in contrast, and as seen in concerned scenarios, exhibits significance when comparing BE and PB independently of the consideration of low or high profiles.

The succeeding graph (Figure X, F), regarding brand ethical level and when paralleling BE and PB shows a significant difference and independence significance of participant's profile.

The fourth factor, authenticity (Figure X, H), indicates, as the opening one, that both difference from BE to PB and between Low and High sustainable profiles are non-significant.

Lastly (Figure x, J), BE and PB specify no differences when comparing guilt (of buying BE or buying affiliated PB products, as well as sustainable profiles are also non-significant.

Summarizing, it is noteworthy that scandalous information, even though regarding PB, brings some contrasts within the same scenario and comparing with the concerned scenario. Even though analysis on individual brand values show to be independent for sustainability and ethics, likelihood to buy as well as brand authenticity, and guilt, still do not reject the null hypothesis.