

Exploring the relationship between sustainability perceptions and brand value: how and why does perceived sustainability affect brand value?

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Gabriela Salinas and Carmen Abril
Universidad Complutense de Madrid, Madrid, Spain

Abstract

Purpose – Previous research examining the association between brand value and sustainability has largely focused on corporate sustainability efforts measured through environmental, social and governance indices, rather than on customer perceptions of those efforts. Within the brand value chain framework, customer perceptions of brand actions are key to generating financial brand value. However, prior research focus on sustainability performance has overlooked the crucial role of customer perceptions in shaping brand value. To address this gap, this study aims to explore the effects of customer-perceived sustainability on brand value. Furthermore, this study examines the drivers (mediators) that explain the impact of customer-perceived sustainability on brand value and the variables that determine a higher or lower impact (moderators).

Design/methodology/approach – Using brand value data from Interbrand, and customer perception data from Brand Finance's Brand Equity Monitor, a global panel-based survey with more than 150,000 respondents, the authors conducted mediation and moderation analyses to test their hypotheses.

Findings – The analysis shows that customer perceived sustainability has a positive impact on brand value. Furthermore, the findings suggest that perceived quality mediates this effect. The findings provide clarity for brand managers on how sustainability affects financial brand value and emphasize the importance of linking sustainability commercial communications to product performance to increase brand value.

Originality/value – Among the growing body of literature that explores the link between sustainability and brand value, to the best of the authors' knowledge, this study is the first to focus specifically on perceptions of sustainability rather than sustainability actions.

Keywords Brand valuation, Brand value, Sustainability, CSR, Interbrand, Brand Finance, Kantar, BrandZ

Paper type Research paper

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Explorando la relación entre las percepciones de sostenibilidad y el valor de marca: ¿cómo y por qué la sostenibilidad percibida afecta al valor de marca?

Resumen

Objetivo – La investigación previa que examina la relación entre el valor de marca y la sostenibilidad se ha centrado principalmente en los esfuerzos corporativos de sostenibilidad medidos a través de índices ESG (Ambientales, Sociales y de Gobernanza), en lugar de en las percepciones de los clientes sobre dichos esfuerzos. Dentro del marco de la cadena de valor de marca, las percepciones del cliente sobre las acciones de la marca son clave para generar valor financiero de marca. Sin embargo, el enfoque de investigaciones anteriores en el desempeño de sostenibilidad ha pasado por alto el papel crucial de las percepciones del cliente en la formación del valor de marca. Para abordar esta brecha, este estudio explora los efectos de la sostenibilidad percibida por el cliente sobre el valor de marca. Además, examinamos los factores impulsores (mediadores) que explican este impacto y las variables que determinan un impacto mayor o menor (moderadores).

Metodología – Utilizando datos de valor de marca de Interbrand y datos de percepción del cliente del Brand Equity Monitor de Brand Finance, una encuesta global basada en panel con más de 150,000 encuestados, realizamos análisis de mediación y moderación para contrastar nuestras hipótesis.

Resultados – Nuestro análisis muestra que la sostenibilidad percibida por el cliente tiene un impacto positivo en el valor de marca. Además, nuestros hallazgos sugieren que la calidad percibida media este efecto. Estos resultados ofrecen claridad a los responsables de marca sobre cómo la sostenibilidad afecta al valor financiero de marca y subrayan la importancia de vincular las comunicaciones comerciales de sostenibilidad con el desempeño del producto para aumentar el valor de marca.

Originalidad/valor – Entre el creciente cuerpo de literatura que explora el vínculo entre sostenibilidad y valor de marca, este estudio es el primero en centrarse específicamente en las percepciones de sostenibilidad en lugar de en las acciones sostenibles.

Palabras clave Valoración de marca, valor de marca, sostenibilidad, RSC, Interbrand, Brand Finance, Kantar, BrandZ

Tipo de artículo Trabajo de investigación

探讨可持续性认知与品牌价值之间的关系：可持续性认知如何以及为何影响品牌价值？

摘要

研究目的 – 现有关于品牌价值与可持续性关系的研究，主要集中于基于环境、社会与治理（ESG）指数衡量的企业可持续发展努力，较少关注客户对这些努力的主观感知。在品牌价值链框架下，客户对品牌行为的认知被认为是驱动财务品牌价值形成的关键因素。然而，已有研究对可持续性绩效的强调忽略了客户感知在塑造品牌价值过程中的重要作用。为弥补这一研究空白，本文聚焦客户感知的可持续性，探讨其对品牌价值的影响机制。同时，进一步分析了影响路径中的中介变量与调节变量，以揭示可持续性认知如何以及为何影响品牌价值。

研究方法 – 本研究基于 Interbrand 提供的品牌价值数据及 Brand Finance 品牌资产监测系统的客户感知数据（数据来源于全球超过 150,000 名受访者的面板调查），通过中介效应与调节效应分析方法，实证检验相关研究假设。

研究发现 – 研究结果表明，客户对品牌可持续性的感知对品牌价值具有显著的正向影响。同时，感知质量在可持续性认知与品牌价值之间发挥了重要的中介作用。基于此，研究为品牌管理实践提供了清晰指导，即通过强化可持续性传播并有效关联产品性能，可显著提升品牌的财务价值。

原创性/价值 – 在日益增长的可持续性与品牌价值研究领域，本文首次将研究焦点从企业可持续性行为转向客户的可持续性认知，深化了对可持续性在品牌价值形成过程中作用机制的理解，拓展了现有理论视角。

关键词 品牌估值; 品牌价值; 可持续性; 企业社会责任; Interbrand; Brand Finance; Kantar; BrandZ

文章类型 研究型论文

1. Introduction

Sustainability has increasingly become a significant driver of consumer purchasing decisions, particularly among younger generations (Eitelwein and Paquet, 2021; Ishaq, 2021). A recent study shows that younger consumers are willing to pay more for sustainable products (Goedertier *et al.*, 2024). These changes in customer expectations and preferences have made sustainability a strategic imperative for marketing executives (Brown, 2021). Marketing professionals are expected to address the sustainability challenge by understanding its role as a demand driver and incorporating sustainability criteria into brand positioning, product development and promotional tactics (Kim *et al.*, 2024; White *et al.*, 2025). At the same time, they are tasked with demonstrating the effectiveness of such investments, particularly considering the challenging global economic conditions we are currently facing (Gartner, 2023; Papadas *et al.*, 2024). This requires linking brand sustainability investment to business outcomes (Gibbs, 2023). In this context, financial brand value emerges as the optimal metric for marketing executives to justify investments in brand sustainability initiatives and to demonstrate their long-term effects (Brand Finance, 2024; Calder, 2020).

In fact, one of the main factors motivating corporations to incorporate sustainability considerations into product design is to improve brand value (Küçüksayraç, 2015). However, according to the brand value chain framework, for sustainability efforts to positively impact brand value, customers must first be aware and favorably view these efforts (Keller and Lehmann, 2003; Moratis, 2018; Pomeroy and Dolnicar, 2009). This is why companies invest in communication to create awareness about their sustainable offerings (Acuti *et al.*, 2022).

However, communicating a company's sustainability efforts does not always lead to a positive customer response. Academic research shows contradictory findings regarding the impact of perceived sustainability on customer response, particularly on perceived quality, which is the key perceptual driver of brand value (de Oliveira *et al.*, 2015). Some studies show that perceived sustainability positively influences perceived quality (De Los Salmones *et al.*, 2005; Marín-García *et al.*, 2020), whereas others find a negative effect, particularly in utilitarian categories (Luchs *et al.*, 2010; Newman *et al.*, 2014; Skard *et al.*, 2020). Regardless of the nature of this impact, according to the brand value chain framework, changes in quality perceptions lead to changes in brand value (de Oliveira *et al.*, 2015; Swaminathan *et al.*, 2022). These findings point to a significant (albeit indirect) effect of perceived sustainability on brand value.

Despite the recognized significance of perceived sustainability in generating (or destroying) brand value, there is a notable dearth of academic literature delving into the specific impact of sustainability perceptions on the financial value of brands.

Most prior studies have specifically examined the association between brand value and corporate sustainability performance measured through environmental, social and governance (ESG) indices, which identify the impact of business activity on the planet (Alcaide González *et al.*, 2020; Harjoto and Salas, 2017; Ke *et al.*, 2023; Loh and Tan, 2020; Melo and Galan, 2011; Pope and Kim, 2021; Rahman *et al.*, 2019; Torres *et al.*, 2012; El Zein *et al.*, 2020). As a result, this focus has inadvertently overlooked the crucial role of customer sustainability perceptions in shaping brand value. Furthermore, these studies have not delved into the mechanisms that explain the impact of sustainability, perceived or otherwise, on the financial value of brands.

In fact, according to [Kinnunen et al. \(2022\)](#), a comprehensive investigation of the link between customer-perceived sustainability and brand value is missing. In a similar vein, [Nguyen et al. \(2015\)](#) highlight the need to quantify said impact.

We advocate the integration of customers' perceptions of sustainability in brand valuation as an indispensable element to augment the corporate perspective on the impact of brand sustainability. Furthermore, contradictory findings on the effect of perceived sustainability on perceived quality, a key driver of brand value, and the fact that this effect depends on the product category, underscore the need to consider perceived quality and product category as crucial mechanisms in the sustainability–brand value relationship.

To this end, the purpose of this research is threefold:

- (1) to investigate how customer-perceived sustainability affects brand value;
- (2) to understand the mechanism that explains this relationship, specifically by exploring how perceived sustainability impacts brand value through changes in quality perceptions; and
- (3) to investigate the moderating role of product category (hedonic vs utilitarian) in the relationship between customer-perceived sustainability and brand value.

This study makes several important contributions to the literature. First, it sheds light on the relationship between customer-perceived sustainability and brand value, in contrast to prior studies based on sustainability performance. Second, we explore the mechanism through which sustainability influences brand value, identifying perceived quality as a key mediating factor. This approach builds on but goes beyond prior research, which has typically treated sustainability as a standalone construct without fully examining the pathways through which it impacts financial brand value.

Using brand value data from Interbrand, and customer perception data from a Brand Finance survey, our analysis shows that perceived quality mediates the effect of perceived sustainability on brand value. This highlights the importance of linking sustainability commercial communications and advertising to product or service performance.

The structure of this article is as follows: We begin by discussing prior literature and proposing hypotheses in Section 2. In Section 3, we describe the methodology, sample, sources of secondary data used to test the hypotheses and how different variables were measured and specify the moderated mediation model. Next, we show our empirical findings in Section 4. We discuss our results, their implications, limitations and further research opportunities in Sections 5 and 6.

2. Literature review and hypothesis development

2.1 *The effect of customer-perceived sustainability on brand value*

Existing research exploring the connection between sustainability and brand value exhibits two main problems.

First, findings on the link between sustainability and brand value are often contradictory, with different scholars differing about the nature, strength, and sign of the association between both constructs. While some authors find a positive association between sustainability and brand value ([Alcaide González et al., 2020](#); [Harjoto and Salas, 2017](#); [Loh and Tan, 2020](#); [Melo and Galan, 2011](#); [Pope and Kim, 2021](#); [Rahman et al., 2019](#); [Torres et al., 2012](#); [El Zein et al., 2020](#)), others find an inverted U-shaped relationship ([Qi et al., 2021](#)) or no association between them ([First and Khetriwal, 2010](#)). More strikingly, [Nguyen et al. \(2015\)](#) found a negative

correlation between both constructs. These mixed results suggest that the effect of sustainability on brand value may not be straightforward and may depend on the presence of moderating or mediating variables that influence the relationship. Despite this, no research has examined the mechanisms underlying the impact of sustainability on brand value.

Second, existing research exploring the connection between sustainability and brand value tends to concentrate primarily on firms' sustainability actions rather than perceptions (see [Table 1](#)).

However, as the brand value chain framework suggests, the financial value of brands depends, to a great extent, not only on what companies do, but also on how customers perceive and react to these actions ([Calder, 2020](#); [Gupta and Zeithaml, 2006](#)). Within this framework, positive customer responses to sustainability actions, such as improved perceived sustainability, enhance brand value, while negative responses diminish it ([Keller and Lehmann, 2003](#); [Swaminathan et al., 2022](#)).

In line with this framework, we define customer-perceived sustainability as the set of perceptions in a customer's mind regarding a brand's ESG commitment and performance ([Berg et al., 2022](#); [Chiang et al., 2022](#); [Gidwani, 2013](#); [Kim and Choi, 2022](#); [Rathee and Milfeld, 2023](#); [Sahin et al., 2022](#)).

The effects of overall customer-perceived sustainability and each one of its dimensions on customer response have been extensively studied. However, its potential to directly influence brand value has received far less attention. From the reviewed literature, only one study ([Nguyen et al., 2015](#)) has examined this relationship, reporting a negative association between perceived sustainability and brand value. These findings suggest that consumers may not always value companies' sustainability efforts and that such efforts could even negatively impact brand value. Although these results are based on a limited sample and specific industries, they underscore the need to further explore the link between perceived sustainability and brand value. This is particularly important given the inconsistency of [Nguyen et al.](#)'s findings with studies showing a positive association between firms' sustainability actions and brand value (cf. [Table 1](#)) and the brand value chain framework, within which positive customer responses to sustainability actions enhance brand value ([Keller and Lehmann, 2003](#); [Swaminathan et al., 2022](#)).

To address this gap, we propose the following hypothesis:

H1. Perceived sustainability has a positive effect on brand value.

2.2 The mediating role of perceived quality

While research on the direct link between perceived sustainability and brand value is limited, its effects on customer response have been widely studied. However, the findings regarding whether perceived sustainability is more likely to have a positive or negative effect on customer response remain inconclusive ([Kunz et al., 2021](#)).

This divergence of findings invites consideration of the underlying mechanisms that explain the impact of sustainability on brand value. Notably, extant literature on the link between sustainability and brand value has not explored the role of mediators in this relationship. However, prior research examining the link between perceived sustainability and customer response has shown that consumers often perceive a trade-off between sustainability and quality, especially in categories in which product functionality and strength are key attributes ([Luchs et al., 2010, 2012](#)). These results suggest that perceived quality may be the underlying mechanism explaining the differing findings regarding the effect of perceived sustainability on customer response. This is particularly relevant for brand value creation, as perceived quality has been found to be the most relevant perceptual

Table 1. Previous empirical studies on the link sustainability and brand value

Authors and year	Sample size	Methodology	Industrial scope	Geographic scope	Time scope	Brand value (DV) sources	IV perceptions	IV performance	Sustainability index or perceptions sources	Limitations	Findings
Frist and Khetriwal (2010)	18 firms	ANOVA test	Electronic and electrical equipment	USA, EU, Asia	2006	Interbrand		X	Authors assigned values on environmental performance based on their judgement	Limited sample (number of brands, industry)	Environmental performance not associated to higher brand equity or brand value
Wang (2010)	81 brands, 200 firm-year observations	Linear regression model	Cross-industry	Global	2005–2008	Interbrand		X	Scores were sourced from Innovest, and converted using a numerical scale, with 1 representing the “worst” and 7, the “best” in each area	This study focuses solely on large corporations that emphasize their brands	Positive effect of prior social performance on brand value, which is amplified for smaller firms
Melo and Galan (2011)	48 firms	Panel data technique	Cross-industry	USA	2001–2003	Interbrand		X	KLD database (MSCI KLD Stars)	Limited sample size, geographic scope and time	CSR has a positive impact on brand value, but to a lesser extent than firm size and other conventional financial indicators. This is due to the lack of alignment of CSR initiatives and corporate strategy
Torres et al. (2012)	57 firms	General least squares (GLS) random-effect estimation	Cross-industry	USA, EU, Asia	2002–2008	Interbrand		X	Sustainalytics	Limited sample (number of brands)	CSR has a positive impact on brand value

(continued)

Table 1. Continued

Authors and year	Sample size	Methodology	Industrial scope	Geographic scope	Time scope	Brand value (DV) sources	IV perceptions	IV performance	Sustainability index or perceptions sources	Limitations	Findings
Bouvain <i>et al.</i> (2013)	84 major banks	ANOVA and multiple regressions	Financial services (banking)	East Asia (China, Hong Kong, Japan, South Korea and Taiwan) and the USA	2012	Brand Finance		X	CSRHub	Limited in terms of geographic scope, time and industry (financial services)	Brand value is positively related to CSR, but different CSR factors are more relevant in different regions. In Japan and South Korea brand value is associated with a bank's appreciation for its employees, while in China, brand value is linked to a focus on the community. In East Asia, community is most significantly related to brand value, while in the USA, caring for the environment and corporate governance are associated with brand value
Nguyen <i>et al.</i> (2015)	15 firms, 348 respondents	Survey	Electronics, food, clothing, financial and automobile	USA, EU, Asia	2009–2011	Interbrand		X	Perceived sustainability from survey	Limited to product categories; student survey	Perceived sustainability negatively associated to brand value

(continued)

Table 1. Continued

Authors and year	Sample size	Methodology	Industrial scope	Geographic scope	Time scope	Brand value (DV) sources	IV perceptions	IV	Sustainability index or perceptions sources	Limitations	Findings
Harjoto and Salas (2017)	47 firms	Structural equations for multivariate regression analyses	Manufacturing sector	USA	2000–2014	Interbrand		X	KLD database (MSCI KLD Stars)	Focused on the USA, over one half of our sample operates in the manufacturing sector	CSR enhances brand value, while socially irresponsible activities destroy more brand value than what socially responsible activities build
Rahman et al. (2019)	62 firms	Dynamic panel data – generalised method of moments (GMM)	Cross-industry	US	2000–2013	Interbrand		X	KLD database (MSCI KLD Stars)	Limited to corporate brands, rather than product brands. Small sample	CSR positively moderates the relationship between corporate brand equity and firm performance
El Zein et al. (2020)	1,100 firms	Panel data OLS regression controlling by region and time effects	Financial sector	USA, EU	2013–2017	Estimated based on public information and Damodaran's model		X	Sustainalytics	Limited in terms of geographic scope and focused on the financial sector	ESG positively impacts brand value
Loh and Tan (2020)	90 firms, 180 observations	Regression analysis	Cross-industry	Singapore	2016–2018	Brand Finance		X	Each company was given a sustainability performance score based on the information that has been made publicly available through their company reports and websites	Limited in terms of geographic scope and time	Greater and higher quality sustainability disclosure leads to higher brand value

(continued)

Table 1. Continued

Authors and year	Sample size	Methodology	Industrial scope	Geographic scope	Time scope	Brand value (DV) sources	IV perceptions	IV performance	Sustainability index on perceptions sources	Limitations	Findings
Zahari <i>et al.</i> (2020)	92 firms	Normality and correlation test	Cross-industry	Malaysia	2016	Brand Finance		X	Companies' annual reports were reviewed for authors to manually score the companies based on ESG criteria	Limited in terms of geographic scope and time	CSR involvement (environmental, community, workplace and marketplace) improves brand value
Alcaide González <i>et al.</i> (2020)	13 firms	Multivariate linear regression by ordinary least squares	IT sector	USA, Asia	2000–2017	Interbrand, Brand Finance, Kantar		X	Green Ranking, CSR Reprtrak, Finance Yahoo Sustainability, Global 100 most sustainable corporations	Limited sample (number of brands, sector)	Companies better ranked in brand league tables are indeed those that report a larger amount of information in their CSR reports
Kim <i>et al.</i> (2024)	144 global brands, 790 observations	Ordinary least square (OLS) regression models	Cross-industry	Global	2007–2014	Brand Finance		X	KLID (now MSCI KLID 400)	Limited to the companies included in Brand Finance's Global 500	Corporate CSR activities (environment, community, employee relations and diversity) have a positive impacts on brand value, but for CSR focused on product (green products)

(continued)

Table 1. Continued

Authors and year	Sample size	Methodology	Industrial scope	Geographic scope	Time scope	Brand value (DV) sources	IV perceptions	IV performance	Sustainability index or perceptions sources	Limitations	Findings
Zampone <i>et al.</i> (2021)	80 firms, 420 firm-year observations	Linear regression model	Cross-industry	Global	2013–2018	Interbrand		X	Thomson Reuters EIKON	Limited to the companies included in the Best Global Brands provided by Interbrand	Brand value is positively related to the environmental disclosure, social disclosure, and ESG disclosure, whereas no significant correlation has been found for the governance disclosure
Rahman <i>et al.</i> (2019)	110 firm-year observations	Linear regression model	Cross-industry	US	2007–2016	Interbrand		X	Thomson Reuters EIKON (Resource use, Environmental innovation and Emission reduction scores)	Limited geographic scope	This research argued that industrial firms that actively pursue corporate environmentalism will have a higher brand value
Pope and Kim (2021)	618 firms	Global panel study	Cross-industry	Global	2007–2013	Brand Finance		X	ASSET4 (now Refinitiv), DISI, ETHICAL, FTSE4GOOD, G100	Limited in terms of time span. No representation from Central America or Africa	CSR and brand value are positively associated, but this association has weakened over time, and CSR has stronger effects for monolithic brand architectures vs. multi-brand

(continued)

Table 1. Continued

Authors and year	Sample size	Methodology	Industrial scope	Geographic scope	Time scope	Brand value (DV) sources	IV perceptions	IV	Sustainability index or perceptions sources	Limitations	Findings
Lin et al. (2021)	164 firms	Dynamic panel data – Generalised method of moments (GMM)	Automotive	Global	2011–2018	Accounting goodwill or intangible assets as proxies for brand value		X	CSRHub	Limited to automotive sector	Green innovation strategy has a positive impact on brand value, which is stronger when a company invests more in marketing and innovation
Qi et al. (2021)	110 firms, 770 observations	Hansen panel threshold regression method	Cross-industry	China	2012–2018	World Brand Lab		X	Shen et al. method to measure CSR strength with social contribution per share	Limited geographic scope	CSR has a significantly inverted U-type threshold effect on brand value
Chiang et al. (2022)	6,763 observations	Linear regression model	Cross-industry	Taiwan	2014–2017	Estimated by authors based on Hirose model		X	Corporate Governance Performance Score sourced from the Financial Supervisory Commission and Corporate Governance Center, Taiwan Stock Exchange	Limited geographic scope	A better CSR exerts a significantly positive effect on brand value, but this effect is stronger for family businesses than for non-family businesses
Ma et al. (2023)	1,515 observations	Linear regression model	Cross-industry	China	2010–2020	World Brand Lab		X	Scores assigned by authors based on companies' annual reports and ESG reports	Limited geographic scope	Corporate carbon information disclosure has a positive impact on brand value

(continued)

Table 1. Continued

Authors and year	Sample size	Methodology	Industrial scope	Geographic scope	Time scope	Brand value (DV) sources	IV perceptions	IV performance	Sustainability index or perceptions sources	Limitations	Findings
Ke et al. (2023)	110 firms, 990 observations	Three-stage least squares (3SLS) method	Cross-industry	China	2013–2021	World Brand Lab		X	Hexun's rating on shareholders and customers and suppliers	Limited geographic scope	Increasing investment in CSR increases brand value in the current period. This relationship is positively moderated by two corporate governance variables (size of the board of directors and the board's proportion of independent directors) and negatively moderated by another (proportion of executive shareholdings)
Zhang and Liu (2023)	81 firms, 810 observations	Linear regression model	Cross-industry	China	2013–2022	World Brand Lab		X	Overall score of CSR obtained from the Hexun and RKS database	Limited geographic scope	Corporate social responsibility (CSR) was significantly positively correlated with financial performance and brand value

driver of brand value (de Oliveira *et al.*, 2015). Therefore, we focus on perceived quality as a potential mediator in the relationship between perceived sustainability and brand value.

Before exploring the role of perceived quality as a mediator in the relationship between perceived sustainability and brand value, we need to define what this concept means. Perceived quality is defined as a consumer's assessment of a product's excellence or superior performance (Zeithaml, 1988) and is regarded as a variable impacting brand value (Liu *et al.*, 2014).

Two groups of authors found contradictory results regarding the association of perceived sustainability and perceived quality.

The first group of authors found that consumers considered sustainable products to be of lower quality and less effective than their regular counterparts (Lin and Chang, 2012; Luchs *et al.*, 2010; Luchs and Kumar, 2017; Newman *et al.*, 2014; Visser *et al.*, 2018; Wood *et al.*, 2018). This effect may be due to a compensatory inference process, where consumers assume that improving product sustainability comes at the expense of worsening product performance or quality (Newman *et al.*, 2014). For example, Raghunathan *et al.* (2006) showed that more consumers perceive more sustainable and healthier food options as less tasty. In other words, consumers think of resource allocation as a zero-sum game, in which there is a trade-off between product sustainability and quality (Wood *et al.*, 2018). According to these authors, sustainability *per se*, not associated with product performance leads to poorer consumer evaluations (Gershoff and Frels, 2015). These lay theories of consumer inference making suggest that perceived sustainability leads to poorer quality perceptions.

Another group of authors found a positive association between perceived sustainability and perceived quality. Yang and Basile (2019) showed that companies perceived as having robust governance procedures and fostering positive employee relationships, may also be seen as providing good quality products. In the same vein, early studies on the link between sustainability and customer response found that superior product quality improves customer response to perceived ethical firm behavior (Folkes and Kamins, 1999). Bodur *et al.* (2014) demonstrated that sustainability-related attributes improve perceived quality when they align with the expected category benefits.

Signaling theory can help explain the theorized positive mediating effect of perceived quality between perceived sustainability and customer response. Fisman *et al.* (2006) explained that sustainability initiatives may signal product quality and concern for customers in highly competitive markets with low differentiation where quality is difficult to observe, thereby generating trust with customers. For these authors, sustainability actions can serve as a signaling mechanism, suggesting that a firm's products are reliable and that the company can be trusted to deliver high quality in areas where consumers cannot easily verify quality before purchase. In turn, improved quality perceptions, the authors explain, lead to higher returns. Similarly, Bardos *et al.* (2020) found that sustainability initiatives signal product quality and indirectly have a positive impact on firm value reducing firm-level systematic risk. Based on the signaling theory, if perceived sustainability leads to positive quality inferences, and improved quality perceptions, in turn, have a positive impact on the risk and return profile of a brand, then, improved perceived sustainability is likely to increase brand value. This suggests that perceived quality is a mediating mechanism between perceived sustainability and brand value.

Drawing from both consumer inference-making and signaling theories, we propose that perceived sustainability impacts perceived quality. Following the brand value chain framework, we further suggest that perceived quality, in turn, impacts brand value. This is, we propose perceived quality as a mediator of the relationship between perceived sustainability and brand value:

H2. The effect of perceived sustainability on brand value is mediated by perceived quality.

2.3 The moderated mediation role of the nature of the product category

The impact of customer-perceived sustainability on perceived quality has been found to be moderated by the hedonic versus utilitarian nature of the product category (Kim and Choi, 2022; Lin and Chang, 2012; Luchs *et al.*, 2010; Luchs and Kumar, 2017; Montoro-Rios *et al.*, 2008; Newman *et al.*, 2014; Skard *et al.*, 2020). Hedonic product categories are those in which consumer experience is paramount, while utilitarian categories are driven primarily by functionality (Valenti *et al.*, 2023; Voss *et al.*, 2003).

Findings from prior studies indicate that customer-perceived sustainability has a stronger impact on perceived quality in hedonic categories than in utilitarian ones (Kim and Choi, 2022; Lin and Chang, 2012; Luchs *et al.*, 2010; Luchs and Kumar, 2017; Skard *et al.*, 2020).

In utilitarian categories, enhancing sustainability perceptions can undermine quality-related brand associations. This is aligned with the findings of Luchs *et al.* (2010), who described the detrimental effect of customer-perceived sustainability on customer response in categories in which superior functional performance is crucial for consumers, such as laundry detergent, automobile tires and liquid hand sanitizer. Similarly, Skard *et al.* (2020) found that in strength-dependent product categories, consumers infer lower functional product quality when the product exhibits a green attribute.

This effect, known as “sustainability liability”, is particularly harmful in categories such as food (Raghunathan *et al.*, 2006), detergent (Montoro-Rios *et al.*, 2008), home appliances (Visser *et al.*, 2018), hand sanitizers, car tires (Luchs *et al.*, 2010) and sophisticated products that are highly elaborate or technological (Herédia-Colaço and Coelho do Vale, 2018). In these categories, consumers are less likely to trade off utilitarian value or functional performance for sustainability (Luchs and Kumar, 2017).

Drawing on the “sustainability liability” theory, we suggest that the type of product category (hedonic vs utilitarian) moderates the mediating effect of perceived quality on the relationship between perceived sustainability and brand value. By influencing perceived quality, the type of category can strengthen or weaken the relationship between perceived sustainability and brand value. In hedonic categories, perceived sustainability is likely to have a positive impact on perceived quality. The impact of perceived sustainability on perceived quality in utilitarian categories is likely to be negative. Therefore, the type of category will influence the strength of the indirect link between perceived sustainability and brand value via perceived quality. Accordingly, we formulate the following moderating mediating relationship:

H3. The category in which the brand operates moderates the mediating effect of perceived quality on the relationship between perceived sustainability and brand value.

The research framework, based on the proposed hypotheses, is presented in Figure 1.

3. Methodology and data

3.1 Sample and data sources

To explore the relationship between perceived sustainability and brand value, we obtained data from two separate databases to ensure independent observations.

We obtained brand value data from the 2023 “Best Global Brands” brand value ranking by Interbrand, an international brand consultancy with a legacy spanning over 50 years,

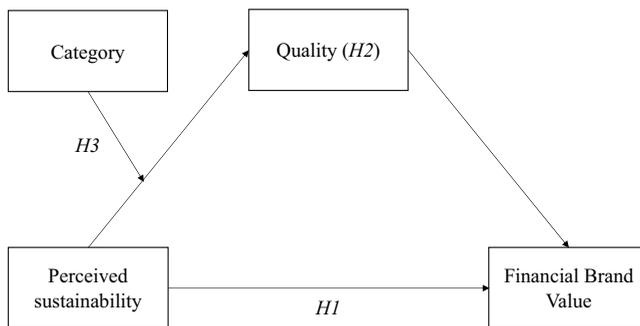


Figure 1. Model 1: general research framework

renowned for pioneering brand valuation (Haigh, 1994). Every year since 2001, Interbrand has published a list of the top 100 most valuable brands. From the 2023 most valuable brands list, we obtained the brand values estimated by Interbrand for 100 brands. The sample includes brands owned by some of the world's largest companies, with an average Enterprise Value of \$178.26 bn (as of December 31, 2022).

Brand Finance, the leading independent brand valuation consultancy, provided us with perceptual data on customer-perceived sustainability and quality for those brands in the Interbrand list. The data provided by Brand Finance is obtained via their "Global Brand Equity Monitor" survey, which is conducted annually among 150,000+ respondents in 38 countries and 31 sectors and tracks more than 4,500 brands (Brand Finance, 2023). The fieldwork was conducted from August to September 2022. This study covers a wide range of brand equity metrics, including perceived commitment to sustainability and perceived quality.

Once we obtained the two bodies of data, we matched the brand values estimated by Interbrand with Brand Finance's perceptual data. The sample with complete data for the sustainability variable included 69 brands across 13 industries and 14 countries. Among the brands included in our sample, 49% are American, 10% German, 10% Japanese and 6% French. Regarding sectors, 22% of the brands included in our sample are technology brands, followed by automotive brands (19%), financial services brands (14%) and media brands (10%).

Statistical analysis was performed using IBM[®] SPSS[®] Statistics version 27.0.1.0. and Jamovi version 2.3.38.

3.2 Measurements

3.2.1 Dependent variable: brand value. There are three well-known brand value rankings which are published annually and have been used by academics in their empirical research: Interbrand's Best Global Brands, Brand Finance's Global 500 and Kantar's Brand Z Most Valuable Global Brands. In our study, brand value estimates were obtained from the 2023 "Best Global Brands" list published by Interbrand.

We discarded Kantar's Brand Z Most Valuable Brands as a source of brand value estimates, given that this method is not certified by ISO 10668, which is a global standard setting guidelines for brand valuations exercises. Interbrand was our database of choice for sourcing brand value estimates because it is the most widely used in empirical studies on brand valuation.

We compiled the data set manually from Interbrand's 2023 Best Global Brands report. In this report, Interbrand describes their methodology, which is compliant with

the requirements of ISO 10668, a brand valuation standard which specifies the key principles that brand valuers must adhere to when conducting a brand valuation (Brand Finance, 2010). Their methodology is based on three key pillars: the financial performance of the brand, the role of the brand in the purchase decision and the brand strength relative to competitors (Interbrand, 2023).

3.2.2 *Key independent variables.* To operationalize customer-perceived sustainability and customer-perceived quality, we used Brand Finance data obtained from their Global Brand Equity Monitor survey.

Brand Finance measures its customer-perceived sustainability score as the strength of a brand’s sustainability associations by asking respondents how much effort they think a particular brand is making to protect the environment and support communities and wider societies. The customer-perceived sustainability score is measured through a five-point Likert scale, where the maximum score represents “A leader in Sustainability” and the minimum score represents a brand that makes “no real effort to be a sustainable business”.

The mediating variable, customer-perceived quality, is based on clients’ ratings of a brand’s products and services compared to its competitors. This was assessed by asking customers to rate the brand’s quality on a five-point Likert scale.

Industry was measured as utilitarian and non-utilitarian classifications assigned by the authors based on Voss et al. (2003) and Sloot and Verhoef (2002).

Table 2 shows the variable descriptions, measurement and sources.

3.2.3 *Moderated mediation model.* To test the theoretical model illustrated in Figure 1, we ran a moderated mediation analysis using the PROCESS macro for SPSS (Hayes, 2013).

This model investigates the effect of perceived sustainability on brand value through perceived quality, as well as the effect of perceived sustainability on perceived quality (as moderated by the category type).

The moderated mediation analysis (Model 7) was based on 5,000 bootstrap samples using 95% confidence intervals. Perceived sustainability was used as the independent variable (X), perceived quality as the mediator (M) and brand value as the dependent variable (Y).

Table 2. Variable definitions, measurement and sources

Variable	Definition	Measurement	Source
Brand value	Present value of the projected income attributable to the brand	Dollar value of the brand as reported by Interbrand’s 2023 Best Global Brands	Interbrand (2023)
Customer-perceived sustainability	A brand’s perceived sustainability effort by customers	How much effort is <BRAND> making to protect the environment and supporting communities and wider society? Scale: five-point Likert scale	2023 Global Brand Equity Monitor, database provided by Brand Finance
Customer-perceived quality	Relative quality of brand’s product and services compared to competing brands as perceived by customers	How would you rate the quality of this brand’s products/services compared to competing brands products/services? Scale: five-point Likert scale	2023 Global Brand Equity Monitor, database provided by Brand Finance
Category	Type of category in which the brand operates	Categorical variable with two levels (utilitarian vs hedonic)	Assigned by authors based on Sloot and Verhoef (2002); Voss et al. (2003)

Category (W) was used as a moderator of the relationship between perceived sustainability and perceived quality.

4. Results

4.1 Descriptive analysis

Table 3 presents the summary statistics of the research variables. The average brand value is \$38.62bn, with a median of \$15.14bn.

Brands in our sample have an average perceived quality score of 3.74 and an average perceived sustainability score of 3.36, indicating that customers perceive these brands slightly better in terms of quality than sustainability.

Table 4 presents the correlation coefficients between the dependent variable (brand value from Interbrand) and the independent variables (perceived quality and perceived sustainability from Brand Finance).

Table 3. Sample statistics and country and sector representation for sample brands

Numeric variables	Mean	Median	SD	Min.	Max.
Brand Value 2023 (\$bn)	38.62	15.14	80.39	6.03	502.68
Perceived quality	3.74	3.75	0.21	3.36	4.19
Sustainability score	3.36	3.35	0.14	3.13	3.82
<i>Categorical variables</i>					<i>Proportion (%)</i>
Utilitarian					60.9
Hedonic					39.1
<i>Sector representation</i>					<i>%</i>
Technology					22
Automotive					19
Financial services					14
Media					10
Food					7
Retail					6
Beer					4
Soft drinks					4
Restaurants					4
Engineering and construction					3
Spirits					3
Personal care					1
Leisure and tourism					1
<i>Country representation</i>					<i>%</i>
USA					49
Germany					10
Japan					10
France					6
Switzerland					4
South Korea					4
Sweden					3
China					3
Netherlands					3
Italy					1
UK					1
Spain					1
Mexico					1
Austria					1

Table 4. Correlation matrix

Variables	Brand Value 2023	Perceived quality	Perceived sustainability
Brand Value 2023	1.000		
Perceived quality	0.390	1.000	
Perceived sustainability	0.296	0.691	1.000

4.2 Testing the direct, total and moderated mediated effects of sustainability on brand value

We began by running a simple regression of perceived sustainability on brand value which shows that perceived sustainability has a positive and significant effect on brand value (coeff = 175.34, $t = 2.537$, $p = 0.014$) when the mediator (perceived quality) is not accounted for. This result supports *H1*.

Next, we used Hayes’s SPSS PROCESS macro to run the moderated mediation model using Model 7. The results of the analysis are presented in [Tables 5](#) and [6](#), respectively. The analysis indicates that, once the mediator (perceived quality) is introduced, the direct effect of perceived sustainability on brand value becomes insignificant (coeff = 30.244, $t = 0.326$, $p = 0.745$). This suggests that perceived quality fully mediates the relationship between perceived sustainability and brand value.

Moreover, the data analysis revealed a significant positive indirect effect of perceived sustainability on brand value through perceived quality, thus supporting *H2*. [Table 6](#) shows that the indirect effect of perceived sustainability on brand value through perceived quality is significant at different levels of the moderator “type of category”.

Table 5. Model pathways and interaction results

Model pathways	Coeff	SE	t	p	95% CI
Perceived sustainability → Brand value (direct effect)	30.244	92.763	0.326	0.745	(-154.964, 215.451)
Perceived sustainability → Perceived quality	0.909	0.193	4.710	0.000	(0.524, 1.294)
Category	-1.182	0.838	-1.410	0.163	(-2.855, 0.492)
Sust × Category	0.309	0.249	1.240	0.220	(-0.189, 0.807)
Perceived quality → Brand value	135.264	59.734	2.264	0.027	(16, 254.528)

Table 6. Results of mediation and moderated mediations analyses

Hypotheses	Path and interactions	Estimate	SE	95% CI	Results
<i>H1</i>	Perceived sustainability → Brand value (total effect, not accounting for the mediator)	175.345	69.109	(37.403, 313.286)	Supported
<i>H2</i>	Perceived sustainability → Perceived quality → Brand value (indirect effect)	122.963 (Hed) 164.742 (Ut)	103.110 102.818	(9.932, 405.894) (13.858, 406.223)	Supported
<i>H3</i>	Interactions: Sustainability × Category	0.309	0.249	(-0.189, 0.807)	Not supported

For utilitarian categories, the indirect effect is 164.742 with a 95% bootstrap confidence interval of [13.858, 406.223], whereas for hedonic categories, the indirect effect is 122.963 with a 95% bootstrap confidence interval of [9.932, 405.894]. Both conditional indirect effects are significant, suggesting that the indirect effect of perceived sustainability on brand value through perceived quality is significant for any type of category, utilitarian or hedonic.

Furthermore, the results in Table 5, show that the direct effect of perceived sustainability on perceived quality is not moderated by category type (coeff = 0.309, $t = 1.240$, $p = 0.220$). Therefore, H3 is not supported.

In short, the indirect effect of perceived sustainability on brand value through perceived quality is significant for brands operating in both hedonic and utilitarian categories. However, the strength of this indirect effect does not vary significantly across utilitarian or hedonic categories.

The hypotheses testing results are reported in Table 6 and Figure 2.

5. Discussion

In this study, we used brand value data sourced from Interbrand and perceptual brand metrics obtained from Brand Finance to explore the relationship between perceived sustainability and brand value. We also delved into the factors that both mediate and moderate this relationship.

Our findings suggest that perceived sustainability has an indirect effect mediated by its impact on perceived quality. In addition, we found that perceived sustainability significantly predicts perceived quality. In the following paragraphs, we discuss theoretical contributions and managerial implications.

5.1 Theoretical contributions: the financial impact of perceived sustainability

Our study makes significant contributions to the literature on sustainability and brand valuation. First, it adds a new perspective to the existing literature by shifting the focus from sustainability actions to sustainability perceptions and how they impact brand value. Previous studies have focused exclusively on firm's sustainability commitment and performance and their effect on brand value. Although Chen (2010) identified the effect of

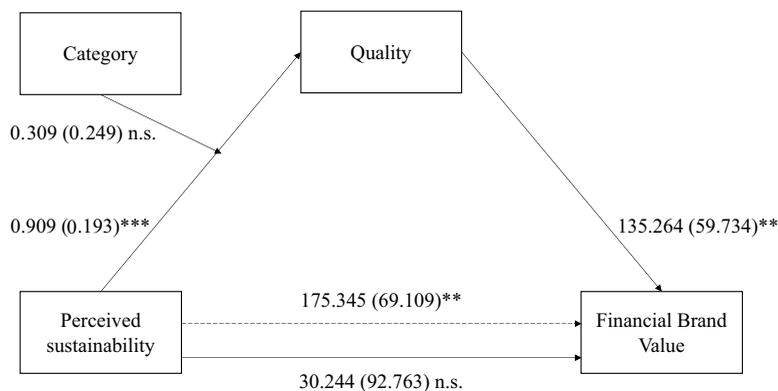


Figure 2. The moderated mediation analyses results (Model 7 by Hayes, 2013)

Note(s): Hayes's moderated mediation model, including path coefficients. The dotted line indicates the effect of perceived sustainability on brand value when perceived quality is not included as a mediator.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

perceived sustainability on customer response, they did not identify its effect on financial brand value. This is a key contribution of our study, which acquires relevance in a business environment in which marketing spend is scrutinized and cut back. Our findings clarify not only the customer response to perceived sustainability, but also how this response translates into actual financial brand value. To explain this impact, our study assessed the indirect effect of perceived sustainability on brand value via perceived quality. To the best of our knowledge, the mediating role of perceived quality in the relationship between perceived sustainability and brand value has not yet been studied. We broaden the perspective on the impact of perceived sustainability on customer response via perceived quality, understanding whether this impact translates into enhanced brand value. Sustainability affects brand growth and value, not only through actions but also via perceptions. This study sheds light on the role of sustainability perceptions in shaping brand value. Therefore, we contribute to the current knowledge on sustainability and brand value in the literature.

Second, we looked at the type of category as a moderator of the relationship between perceived sustainability and perceived quality. Our results contradict prior literature, as we found that the type of category does not significantly moderate the impact of perceived sustainability on perceived quality or the indirect effect of perceived sustainability on brand value (Luchs *et al.*, 2010; Luchs and Kumar, 2017). While prior studies have found that sustainability has stronger effects in hedonic categories in terms of consumer response, we found that the positive impact of perceived sustainability seems to be stronger for brands operating in utilitarian categories, but this moderating effect is not significant. One plausible explanation for this that given the global inflationary pressures and the fact that sustainability has become widespread, it is now being communicated in ways that are linked to product performance such as “more efficient”, “lasts longer” or “better value for money” (Economist Impact, 2024; LEK, 2024). Therefore, independent of the category, most sustainable communications are increasingly linked to product performance and specific client benefits.

Another possible explanation for the absence of a moderating effect of category type can be found in recently published literature. While early studies proposed a “sustainability liability” effect dependent on the type of category (Luchs *et al.*, 2010), more recent studies indicate that this effect has disappeared over time (Möller and Herm, 2021). This could explain why we found no difference in the indirect effect of sustainability on brand value between hedonic and utilitarian categories.

5.2 Managerial implications: the key role of sustainability communications to bridge sustainability activities (what the company does) and perceptions (what clients see)

This research contributes to a better understanding of the relationship between overall perceived sustainability and brand value, as well as the factors underlying such relationship. Prior literature has explored the link between sustainability activities (measured through ESG indices) and brand value. We broaden this perspective by considering the effects of perceived sustainability on brand value. This finding is key to understanding the role of sustainability communications in creating brand value.

Our results provide guidance to managers in terms of when and how to communicate product sustainability. If perceived sustainability cannot be credibly linked to product performance, it may be best not to focus product positioning and promotion around sustainability, because it may destroy brand value. On the contrary, if perceived sustainability can be linked to product performance such that it has a positive effect on perceived quality, managers should emphasize the sustainable qualities of their products without fear of hurting customer response and negatively impacting brand value.

As a way of example, Stanley Cups, a blockbuster in the USA, is positioned on durability. Although this trait makes it inherently sustainable, and consumers understand this link, the focus of the message is on durability, which is more closely tied to quality and provides a clear benefit for clients. Another example comes from professional and logistic services, where a provider’s sustainability performance helps its clients with their own compliance. In general, in this type of utilitarian categories, there is more opportunity to link inherently functional attributes to sustainability.

Findings from recent research might help understand why it is important for managers to link sustainability to quality and highlight similarities with traditional non-sustainable products.

Florack *et al.* (2021) found that consumers perceive the differentiating attributes between classic and healthier or more sustainable products to be negative, while most shared attributes are perceived to be positive.

Importantly, consumers form expectations of product quality based on those attributes that distinguish it from existing products. This is, they rely on the negative aspects of the sustainable offers to form expectations on quality. Therefore, from a communications standpoint, it is recommendable to lead with points of parity with traditional categories rather than with sustainability. Instead of using sustainability as a stand-alone differentiating attribute, it should always be linked to quality and how it enhances product performance.

Findings from other studies suggest similar communication strategies when it comes to marketing sustainable offers. Skard *et al.* (2020) suggest that it is crucial to directly link sustainability-related attributes to the product’s core function for sustainability to have a positive effect on perceived quality. If sustainability-related attributes are only loosely connected to the core function, their positive impact may be weakened or even turn negative.

Table 7 summarizes the research conclusions and implications.

6. Limitations and further research

Our research presents several limitations. First, the study has considered the indirect impact of overall perceived sustainability on brand value via perceived quality. Future research may examine the impact of each sustainability dimension, namely environmental, social and governance, on brand value.

Table 7. Conclusions and theoretical and managerial implications

Conclusions	Theoretical and managerial implications
Perceived sustainability impacts brand value through perceived quality Sustainability effects are independent of category type	Perceived sustainability indirectly affects financial brand value by impacting perceived quality. Understanding this relationship helps clarify how sustainability perceptions translate into tangible financial outcomes Unlike prior research, category type (hedonic vs utilitarian) does not significantly moderate the relationship between perceived sustainability and brand value. Sustainability messages are increasingly linked to product performance, making the distinction less relevant
Effective sustainability communication enhances brand value Consumers evaluate sustainability in relation to quality	To maximize the impact of sustainability on brand value, brands should align sustainability-related attributes with core product functions, ensuring they contribute positively to perceived quality Research suggests consumers form quality perceptions based on shared attributes rather than differentiating features. Sustainability should be integrated into messaging that emphasizes parity with traditional products

Besides this, it would be interesting to study the impact of specific demographic variables (such as age, gender or income). In addition, studying more granular sectors as a moderating variable in the relationship perceived sustainability and brand value can shed more light on sectors in which perceived sustainability may have a significant impact on brand value. Recent research suggests that the importance of sustainability varies by sector, and it can be very important for certain professional services such as IT services as it has a positive effect on perceived supply risk (Brand Finance, 2024; Han and Lee, 2021). With a sample with a bigger representation of each sector, the moderating role of industry could be further explored.

Third, our sample is limited to global brands and to one year (2023). Therefore, there is an opportunity to explore the evolution of the relationship between perceived sustainability and brand value over time and for smaller and regional brands.

Fourth, there is an opportunity to study the impact of sustainability perceptions from stakeholder groups other than customers on brand value.

In addition, further research could explore whether the effects of perceived sustainability on brand value vary by geography. Differences in cultural attitudes toward sustainability, economic development levels, or local regulatory frameworks could provide valuable insights into how sustainability perceptions are formed and their differential impacts on brand value across regions.

Finally, future research could explore broader strategic elements influencing the perceived sustainability–brand value connection, such as corporate purpose. Investigating how a clearly articulated corporate purpose shapes perceptions of sustainability and its subsequent impact on brand value could provide valuable insights into the mechanisms driving consumer trust and loyalty. In addition, corporate purpose could be analyzed in terms of its alignment with sustainability communication and organizational actions, shedding light on its role in mitigating the risks of perceived greenwashing.

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Corresponding author

Gabriela Salinas can be contacted at: msalin04@ucm.es