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National Branding and ESG Perception: Assessing the Impact of "Made in Italy" on Online Sustainability Reputation

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Abstract

As Environmental, Social, and Governance (ESG) concerns have become increasingly important for corporate reputation, investigating how such initiatives are perceived, particularly in an online environment, has become an important area of research. Although the literature has addressed ESG perception and communication separately from national branding, little attention has been given to how cultural origin cues influence the perception of sustainability. Symbolic markers such as country-of-origin indicators can influence how a firm's ESG efforts are represented and associated with sustainability across digital channels, potentially amplifying or altering its visibility and reputational image. Thus, studying the relationship between national branding and ESG perception can help better understand how ESG initiatives are perceived. This thesis explores whether the "Made in Italy" (MDI) brand, historically associated with quality, heritage and identity, affects the online perception of corporate ESG efforts. Through correlation, OLS and WLS regression analyses, the study analyzes a sample of 126 Italian companies to understand the relationship between firms' "Made in Italy" branding and online perception of ESG initiatives. The findings show a statistically significant and positive relationship between MDI and ESG perception online. These results suggest that national origin cues may act as symbolic signals that reinforce sustainability narratives in digital contexts. This work contributes to ESG and signaling theory by revealing the reputational role of national branding in digital environments and its implications for both academics and practitioners.

Keywords: ESG, Made in Italy, ESG Perception, National Branding, Online Sustainability Perception

1. Introduction

In recent years, Environmental, Social, and Governance (ESG) frameworks have evolved from internal managerial tools into powerful business reputational levers. Originally developed to evaluate organizational responsibility in terms of emissions, labor conditions and board policies (Oh, Lee, & Lee, 2023), ESG metrics are now widely recognized as public signals of values alignment and credibility. Increasingly, firms are judged not only on what they do, but also on how they are perceived to do it, particularly in digital environments where corporate messages, media language and symbolic cues affect reputational capital (Nuortimo, Harkonen, & Breznik 2024). Credibility is not only built only on regulatory compliance, but also on communicative openness, cultural sensitivity and visibility (Du, Bhattacharya, & Sen, 2010). This growing emphasis on perception has established a difference between ESG performance, that is the measurable implementation of sustainability practices, and ESG perception, which instead refers to external stakeholders' interpretation of such practices. Although the two are often assumed to be aligned, an emerging body of research shows that this is not the case (Oh, Lee, & Lee, 2023). For example, firms with limited sustainability credentials can gain reputational advantages through effective communication, while others with substantive performance remain under-recognized when their messaging is less resonant (Du et al. 2010). This divergence highlights the role of symbolic interpretation in shaping stakeholder attitudes and underscores the need to further investigate the factors that influence ESG perception, especially in the online environment.

The online environment has become of central concern to firms (Bertolini, Conte, Siano, & Marongiu 2023). Social media, websites and algorithmic content aggregators act as the main intermediaries between firms and the public (Etter, Ravasi, & Colleoni 2019). They influence how sustainability stories are encountered and interpreted (Liu, Luo & Lu 2023). These platforms not only report on performance but also filter and amplify meaning (Eberle, Berens,

& Li 2013). Therefore, firms must manage not only the implementation of ESG, but also the symbolic environment in which these efforts are received. In fact, perceived authenticity across digital touchpoints was identified as a key factors in positive ESG perception (Eberle et al., 2013; Bertolini et al., 2023). As stakeholder expectations evolve and digital ecosystems continue to shape public perception, the ability to craft meaningful and substantive ESG narratives constitutes a core strategic capability (Casalegno et al. 2024).

One way that firms nurture authenticity perception is through national identity signals. In the branding literature, national cues such as origin labels and cultural heritage marks are known as indicators able to influence consumers' attitudes, sometimes serving as shorthand for quality, authenticity and trustworthiness (Ancarani, Costabile, & Mazzù 2020; Erdem & Swait 1998). In Italy, the "Made in Italy" (MDI) label carries deep symbolic meaning, associated with artisanal excellence, aesthetic heritage and lifestyle storytelling (Fortis & Realacci 2009). MDI has long been a source of competitive advantage, especially in fashion, design and food sectors, where intangible brand capital plays a critical role. However, it remains unclear whether such authenticity signals facilitate ESG perception online. Some studies suggest that symbolic brand components, such as national identity signals, may serve as heuristic cues in conditions of information asymmetry, influencing stakeholder judgments (Ali, Lynch, Melewar, and Jin 2015). From this perspective, labels such as MDI could serve as both indicators of origin and perceived markers of ethical orientation, supporting the perception of positive sustainability efforts. However, whether national identity branding does influence ESG perception online remains underexplored.

This master thesis investigates whether, and how, the symbolic connotation of the "Made in Italy" label influences the online perception of corporate ESG efforts. It is guided by the following research question: How does the "Made in Italy" (MDI) brand affect the online

perception of companies' ESG efforts? The study attempts to understand whether national branding can be a positive reputational signal for sustainability, especially in digital contexts where perception and visibility are central for corporate legitimacy. By shifting the focus from performance to perception, the study introduces a new perspective to ESG research, by incorporating national branding, digital communication and signaling theory to explain how symbolic capital relates to sustainability narratives.

To address this research objective, the study employs a quantitative research design based on secondary data. The dependent variable is the ESG Perception Index, a multidimensional score developed by an independent observatory that calculates the extent to which companies are associated with the United Nations' 17 Sustainable Development Goals in digital environments. This includes materials found in search engines, on social media, in online news and on company websites. The key independent variable is the presence of the “Made in Italy” signal in corporate communications, operationalized as a dummy variable. The control variables are firm size, profitability (measured by return on assets), ownership structure, firm age and industry classification. The study is based on a sample of 126 companies active in the Italian market and employs Ordinary Least Squares (OLS) and Weighted Least Squares (WLS) regression models to test the hypothesis. The results reveal a statistically significant and positive relationship between the presence of MDI branding and online ESG perception. These results confirm the study’s main hypothesis that national branding strengthens sustainability perception. Thus, cultural symbols appear to strengthen the credibility and impact of sustainability perception by reinforcing ESG storytelling.

From a theoretical perspective, this study contributes to connecting signaling theory and ESG communication (Spence 1974; Bertolini et al 2023). It demonstrates how culturally embedded symbols can be perceived as non-verbal indicators of a company’s values and commitment to

sustainability. The study broadens the signaling theory landscape by incorporating brand-level associations, such as origin marks, into the set of signals that firms utilize to mitigate informational asymmetry. In practice, this provides actionable insights for firms that operate under strong national brand. Cultural identity remains a powerful asset that can enhance the ESG perception online.

The remainder of this thesis is organized as follows. The next section reviews the literature on ESG perception, online reputation and national branding, while introducing the signaling theory that supports the study. This is followed by the methodology section including data sources, operational variables and statistical models. The subsequent section offers the results of the empirical analysis. Finally, the discussion considers these findings in the context of theoretical debates and practical implications. It concludes by outlining key limitations and areas for future research.

2. Literature Review

2.1 Environmental, Social, and Governance (ESG)

The concept of Environmental, Social, and Governance (ESG) has gained increased importance both in academic and managerial literature since its introduction in the 2006 publication of the United Nations Principles for Responsible Investment (Yoon, Lee, & Byun 2018). ESG is usually understood to be an evolution of Corporate Social Responsibility (CSR), a more structured and investor-focused approach for analyzing corporate sustainability (Garcia, Mendes-Da-Silva, & Orsato 2017). Although the two concepts have often been used interchangeably in literature (Jain, Jain, & Rezaee 2016), ESG has gradually developed into a distinct framework that brings together environmental impact, social engagement and governance practices into corporate evaluation processes.

ESG redefines the firm's responsibilities to shareholders, employees, customers, communities and society (Carroll 1991; Bowen 2013). In fact, the early CSR discourse was predominantly normative, about what businesses should do, but has become increasingly based on evidence that sustainable business practice will drive improved financial performance and long-term corporate stability (Luo and Bhattacharya 2006). ESG has thus developed from being primarily a compliance-related activity into a forward-looking strategic tool, enabling companies to create reputational capital, mitigate risk and differentiate in competitive environments (Whitelock 2015). What distinguishes ESG from CSR is the attempt to specify three distinct, measurable fields: environmental responsibility (e.g., energy efficiency, emissions reduction), social impact (e.g., employees' welfare, community engagement), and governance integrity (e.g., board responsibility, transparency). These measurement categories provide a framework for both organizations and external evaluators to assess a firm's commitment to sustainability (Oh, Lee, and Lee 2023).

However, although ESG adoption has grown globally, it remains a complex and dynamic concept. Its broad scope and the absence of definitions or metrics leave room for different interpretations and biases (Reber, Gold, and Gold 2022). Various tools have been developed for measuring and comparing ESG performance, with ESG scores and ratings being the most common (Drempetic, Klein, and Zwergel 2020). These assessments are typically based on sub-scores within each dimension. For instance, environmental sub-scores may depend on emissions, waste management and resource exhaustion, but they often differ across rating agencies due to differences in methodology (Halbritter & Dorfleitner 2015). This lack of standardization has created problems with reliability, comparability and even manipulation (Berg, Kölbel, and Rigobon 2022). In turn, ESG ratings can differ widely between providers

for the same firm, undermining their usefulness for stakeholders and investors (Rezaeian & Racine 2024).

This challenge has made ESG disclosure, as opposed to scoring, a strategic priority for firms. ESG disclosure can be described as information about sustainability policies, activities and outcomes released by companies (Fatemi, Glaum, and Kaiser. 2018; Tsang, Frost, and Cao 2023). Direct disclosure allows companies to determine the narrative behind their ESG priorities. However, this control is not risk-free. As multiple studies caution, excessive emphasis on image with no corresponding action can foster stakeholder distrust and expose companies to reputational risk (Albuquerque, Koskinen, and Zhang 2019). The issue is not merely whether ESG actions are promoted, but whether stakeholders trust them and whether they trust the motivations behind them.

Signaling theory helps understand the mechanisms between a firm's ESG communication and ESG perception by audiences. Originally developed by Spence (1974) in the context of labor markets, signaling theory describes how one party (the signaler) conveys information to another party (the receiver) under conditions of information asymmetry, where some characteristics, such as quality, ability or intention, cannot be directly observed. In corporate contexts, signals are actions or communications that convey unobservable characteristics to stakeholders in a credible way, thereby reducing uncertainty (Connelly, Certo, Ireland, and Reutzel 2011). ESG communication thus functions as a strategic signal aimed at reducing information asymmetry between firms and external audiences (Spence 1974; Connelly et al. 2011). A great ESG message does not simply inform but it communicates intention, integrity and commitment (Jayadatta 2023). Consistent, multichannel communication through reports, packaging and digital platforms can amplify the signal, particularly when aligned with long-term firm conduct (Du et al. 2010; Zerbini 2017). As Bitektine and Haack (2015) argue, firms operate under

institutional scrutiny, where legitimacy is conferred not just by fulfilling commitments, but by being perceived as fulfilling them credibly. The role of ESG disclosure is therefore not just informative but performative, helping to shape the very legitimacy that it is meant to represent (Cho, Guidry, Hageman, and Patten 2006). To this degree, the true test of ESG is not only meeting standards, but ensuring that such efforts are perceived as credible and legitimate in the information space that stakeholders monitor. Several researchers note that ESG value creation increasingly depends on the credibility of the communication, as opposed to its frequency or form (Whitelock 2015; Reber et al. 2022).

2.2 Online ESG Perception

While ESG frameworks were originally designed to reflect firms' internal sustainability performance, an increasing amount of research has emphasized the significance of how these initiatives are perceived, particularly in digital environments (Etter, Ravasi, and Colleoni 2019; Connelly et al. 2011). ESG perception reflects how these actions are interpreted by external parties, such as investors, consumers, media players and algorithmic systems. Importantly, ESG Performance and ESG Perception do not always align (Oh, Lee, and Lee 2023). This divergence is particularly evident in the digital realm, where framing strategies and symbolic cues often hold greater significance than technical disclosure (Ji, Sheng, and Wan 2023). As Liu, Luo and Lu (2023) demonstrate, social media and other internet platforms are becoming central locations for interpreting ESG behavior, shaping public perception and influencing legitimacy. Indeed, the influence of online platforms has grown, and existing literature has emphasized the role of the digital sphere in shaping how sustainability efforts are perceived, discussed and valued (Eberle et al. 2013; Du et al. 2010). Rather than relying solely on internal metrics or standardized sustainability reports, companies are now increasingly evaluated based on how their ESG orientation is expressed through websites, media coverage and social media. This

shift has made the quality and interactivity of ESG communication a central component of perceived corporate legitimacy. As Van Noort, Antheunis, and Van Reijmersdal (2012) suggest, the interactivity of digital media amplifies both positive and negative stakeholder responses, increasing the stakes of online ESG communication. However, negative feedback is more powerful online than positive feedback because it signals a reputational risk in terms of how ESG narratives are received in public digital spaces (Eberle et al. 2013).

From a strategic point of view, this suggests that ESG disclosure alone is not sufficient: firms must manage actively how their initiatives are communicated and framed through digital touchpoints. When such communication is perceived as authentic and consistent with corporate actions, it can enhance legitimacy and make ESG a source of competitive advantage (Du et al. 2010). In this way, ESG perception, particularly as mediated through digital channels, becomes the primary driver of how sustainability efforts are translated into reputation and long-term value.

2.3 ESG perception, National Identity and “Made in Italy” Brand

2.3.1 ESG perception and National Identity

National identity represents a crucial cultural frame through which ESG communication is perceived and interpreted. Strizhakova and Coulter (2021) observe that consumers' cultural identities shape the interpretation of environmental and social sustainability claims, implying that the national context can significantly influence the perception of the organizations' sustainability efforts. Similarly, research examining the national culture's role in environmental innovation and ESG practices in Latin American companies indicates that cultural values and norms mediate how stakeholders assess sustainability efforts, affecting their legitimacy and success (Torres 2022). These findings indicate that ESG initiatives can be interpreted differently

depending on the cultural context. In this way, national identity serves as a lens through which ESG activities are interpreted, connecting the general perception of ESG with the symbolic value of national branding, such as the Made in Italy effect, and enhancing corporate reputation and legitimacy in global markets.

2.3.2 Made in Italy as National Branding

The “Made in Italy” (MDI) label is one way firms enact national identity branding. MDI is a global symbol of cultural heritage, aesthetic sensibility and manufacturing excellence relying on the image of “Italian lifestyle”. MDI is famously known to be a meta-brand conveying craftsmanship, innovation and authenticity (Fortis & Realacci 2009; Napolitano, Resciniti, and Fusco 2020). These values form the core of Italy’s cultural identity, positioning MDI at the intersection of tradition and modernity. According to Varaldo (2001), it does not have a single all-encompassing identity but represents a variety of industries and sectors. These include the “4A” industries, Abbigliamento (Clothing), Arredo (Furniture), Alimentare (Food), and Automazione (Mechanical Automation), which together form the backbone of Italy's reputation for high-value manufacturing (Fortis 2005).

The distinctiveness of MDI lies in its ability to fuse functionality with identity construction. According to Costabile and Mazzù (2020), consumers perceive MDI products as unique not only because of their superior design and quality, but also because they help define personal and social identity. This symbolic role is achieved through a set of distinctive capabilities: obsessive attention to detail, adaptive flexibility, creative reinterpretation of tradition, manufacturing excellence and a humanistic approach to production processes Empirical research into Italian management further confirms this perception. Ancarani, Costabile, and Mazzù (2020) identify three pillars that define MDI firms: first, intrinsic and aesthetic quality

deriving from artisanal origins; second, a relational capacity to interpret and satisfy diverse consumer needs; and third, an innovation strategy that reshapes existing technologies for tailored, high-value outcomes. These attributes suggest that MDI is not simply an expression of industrial excellence and cultural heritage, but also a symbolic frame through which contemporary concerns, such as sustainability, may be interpreted. Building on this perspective, the central research question arises:

How does the "Made in Italy" (MDI) brand affect the online perception of companies' ESG efforts?

3. Hypothesis Development

Firms use symbolic resources in their narratives to shape how they are perceived. Cultural branding, as illustrated by Holt (2004), transforms products into symbols of identity, authenticity and prestige. In a sustainability context, these symbolic cues are fundamental for how stakeholders interpret the values of a firm (Morsing & Schultz 2006). To understand this process, it is useful to refer to the Brand Value Telling Journey (BVTJ) model that Giorgino and Mazzù (2018) constructed, in which they conceptualize brand development as a dynamic and value-based storytelling process. The BVTJ occurs across five intertwined phases: identifying, creating, extracting, delivering and regenerating value. The brand, in this context, is not a fixed identity but an evolving story, built through the dynamic interaction between tangible dimensions (e.g., craftsmanship, design, local production) and intangibles dimensions (e.g., heritage, aesthetics, emotional connection). Within the MDI context, this process takes on particular significance. The strength of MDI lies in its ability to embed stories about products with cultural meaning, giving them a perception of authenticity and prestige which transcends national borders (Giorgino & Mazzù, 2018). MDI firms are thus not merely producers of high-quality products but also storytellers about a typical Italian lifestyle. The BVTJ model enables

the explanation of how these firms create and expand this symbolic value, through aligning business strategy, product innovation and communications strategy around emotionally engaging narratives. Storytelling thus provides a mechanism for translating operational excellence into reputational capital, allowing MDI brands to continue to be relevant in changing market contexts while enhancing consumer trust and loyalty.

As global market shift toward environmentally and socially responsible consumption, sustainability has become an increasingly important factor in brand valuation. Italian firms, especially MDI firms, those reflecting the “Bello e Ben Fatto” (“beautiful and well-done”) elements and the classic Italian style, are willing to demonstrate how their identity aligns with ESG values (Rovai and De Carlo 2022). In this context, the symbolic power of the “Made in Italy” (MDI) brand can serve as an important reputational signal in the ESG landscape. When formal sustainability disclosures are not easily verifiable or understandable, symbolic cues like national origin marks can serve as heuristic tools that shape stakeholder perceptions. For example, longevity of products, circularity through reuse and repair, use of natural materials and local community participation are historically embedded within Italian artisanal culture and are forms of expressions of identity and social embeddedness (Ceccotti, Vernuccio, Patrizi, Boccalini, Scrimieri, and Pastore 2024). In this way, signaling theory posits that when reliable or technical information is scarce, customers utilize brand-related signals to evaluate a firm's intentions, credibility and long-term orientation (Connelly et al. 2011). The literature demonstrates that culturally resonant brand signals, such as those embedded in MDI, can reduce perceived risk and establish trust (Erdem & Swait 1998; Ali et al. 2015). To this purpose, MDI can serve not only as a marker of national identity and product quality, but also as a symbolic ESG signal that enhances the visibility and perceived legitimacy of a firm's sustainability efforts.

A key distinctive feature of most MDI businesses, one that contributes significantly to this concept, is their ownership structure. Around 65% of Italian businesses are family-owned (AIDAF 2023) and Italy is also home to some of the world's oldest family-owned firms, such as Fonderie Pontificie Marinelli (founded in 1000) and Marchesi Antinori (1385). This ownership model has long encouraged a proactive approach to reputation, legacy and sustainability. In particular, a firm is typically considered a family firm whenever a controlling family can appoint a family chairman or CEO, a trend of management that allows long-term planning and identity retention (Lansberg 2000). In MDI industries, these firms do not just sell products, they instill values. They are therefore more sensitive to their reputation among the public. Evidence suggests that family firms often enjoy a reputational advantage because their identity is closely linked to that of the owning family (Deephouse & Jaskiewicz 2013). This connection makes them more sensitive to judgement, meaning their commitment to sustainability is more likely to be perceived as authentic. Socioemotional Wealth (SEW) theory provides an explanatory lens: family firms highly value their socioemotional ties to the company and preserving family name (Berrone, Cruz, and Gomez-Mejia 2012). This, in turn, leads them to take actions that are perceived as socially responsible. Importantly, such initiatives are more often judged positively than those of non-family companies. For instance, Panwar, Paul, Nybakk, Hansen, and Thompson (2014) find that sustainable initiatives by family firms are perceived as more legitimate than those of non-family firms because they are associated with a long-term orientation and family legacy rather than short-term profit-driven motivation. In general, their long-term orientation, founded on heritage and reputation, aligns strongly with the underlying values of sustainability, especially in MDI sectors where artisanal production and long-lasting quality already favor ESG-compatible narratives.

Furthermore, the linkage between MDI and sustainability extends beyond formal ESG communication. The "Made in Italy" identity naturally encompasses cultural values of authenticity, craftsmanship and heritage, which are also fundamental to sustainability (Ceccotti et al. 2024; Giorgino & Mazzù 2018). These culturally based characteristics make products and narratives of MDI companies inherently ESG-consistent. However, most studies treat Italy only as a research context (Ceccotti et al. 2024), without analyzing how the symbolic capital of the MDI label affects ESG communication and visibility. These alignments can influence expectations and digital representations in unique ways, either building more trust in sustainability narratives or skepticism when firms fail. As stated above, most MDI firms, especially family-controlled firms, have a strategic and cultural interest in protecting their reputation and acting responsibly. Yet even genuine ESG initiatives are dependent on how they are communicated and interpreted, especially in the online environment.

Despite this relevance, there is still a lack of clarity surrounding how national branding interacts with ESG narratives online. Does the symbolic appeal of MDI enhance the online perception of sustainability? Or does it risk hiding weaknesses behind a strong brand image? These are important questions in a media culture where perception, especially digital, can influence consumer sentiment and long-term value. This study aims to fill this gap by examining whether, and how, the symbolic identity of the “Made in Italy” label adds value to the online perception of corporate ESG activity. Building on the literature, the following central hypothesis is proposed:

(H1). Made in Italy firms are perceived as more sustainable online, as reflected in higher ESG Perception Index scores.

4. Methods

To investigate the relationship between the Made in Italy dimension and the ESG perception, I conducted several analyses. The Ordinary Least Squared (OLS) regression methodology is used first. OLS is one of the most widely used econometric techniques in empirical research as it enables the estimation of the linear relationship between a dependent variable and a set of independent variables, under the assumption of exogeneity, linearity and homoskedasticity (Wooldridge, 2015). Its application is particularly appropriate when the goal of the analysis is to isolate the impact of a specific explanatory variable, such as MDI, while controlling for other firm-level factors that might affect ESG perception, such as firm size or industry. Moreover, the use of OLS to investigate the factors that influence sustainability perception or ESG scores is consistent with the existing literature. Previous studies have adopted OLS models to analyze the relationship between firm-specific characteristics and ESG performance (Eccles, Ioannou, & Serafeim, 2014; Garcia, Mendes-Da-Silva, & Orsato, 2017).

To ensure robustness, Weighted Least Squares (WLS) was also applied. WLS is a robust alternative when the assumption of homoskedasticity is violated as it allows for efficient estimation by assigning weights inversely proportional to the variance of the residuals (Greene, 2018; Wooldridge, 2015). This methodological improvement is consistent with best empirical practice, where heteroskedasticity is known to compromise OLS inference (White, 1980) and is consistent with studies that have applied WLS in ESG-related situations (Chelawat & Trivedi 2016; Zhao, Guo, Yuan, Wu, Li, Zhou, and Kang 2018; Zhang & Zhao 2018). By combining OLS and WLS, the methodology balances interpretability of baseline estimates with robustness against heteroskedasticity. Control variables are included to adjust for confounding firm-level characteristics, enabling the analysis to control for the impact of MDI on online ESG perception. The use of both methods ensures that the results are consistent with theory and are empirically valid.

4.2 Sample

The empirical analysis of this research is based on the 2022 dataset from the ESG Perception Index, developed by Reputation Manager, Italy's leading company in reputation analysis and management. The ESG Perception Index is a tool designed to measure the sustainability perception of companies in the online environment. The model considers the largest companies in the Italian market using several sources (Mediobanca rankings; Interbrand rankings; companies listed on the Italian stock exchange (Borsa Italiana)) and produces a ranking of the top 200 firms with the highest ESG perception scores. The Index is built through the assessment of the brand's proximity to the 17 pillars of sustainability defined by the UN and generates an indicator (from 0 to 100) for each company based on a combination of qualitative-quantitative and structural parameters. What weighs in the scoring are the volume of content reporting the association between the brand and sustainability, the reputational impact of this content on the brand, the association of the brand identity with sustainability on search engines and how much the company talks about sustainability through its proprietary channels (e.g., website, social profiles).

Starting from this initial sample of 200 companies, a selection process was carried out with the goal of adjusting the dataset to meet the specific research objectives. First, I excluded all companies that do not have their registered headquarters in Italy in order to focus on companies that operate and are rooted in the Italian context. This led to the exclusion of multinational groups and other foreign companies. Second, universities and educational institutions were excluded. Despite being part of the original sample, these entities did not align with the goal of categorizing businesses based on the Made in Italy dimension. This is because educational institutions lack the commercial or industrial identity on which this classification is based on,

they cannot be included in either of the analytical categories under consideration. Third, the sample was further reduced due to missing values of various variables for several companies. Following these adjustments, the final sample comprised 126 companies.

4.3 Analysis

To ensure the reliability of the Ordinary Least Squares (OLS) estimation, the model's seven classical assumptions were verified. First, the assumption of linearity in the parameters was verified by the residuals vs fitted values plot, which did not show any significant non-linear patterns. Second, the random sampling assumption, while not strictly satisfied, was adequately approximated because of the sample heterogeneity: 126 firms operating in 15 industries, selected from a list of 200 of the most visible companies on the Italian market for their ESG perceived visibility. Third, multicollinearity was assessed using Variance Inflation Factors (VIF), all of which were below 5, meaning that no independent variable had an excessive amount of correlation with any other variable (see Appendix, Table 6). The fourth assumption, which states that the error term must have a zero conditional mean given the independent variables, was assessed through each predictor's residual plot. The absence of visible patterns suggests that this condition is reasonably satisfied. Fifth, the Breusch-Pagan test suggested the presence of marginal heteroskedasticity ($p = 0.056$) and although not severe, this demanded methodological caution (see Appendix, Table 6). In fact, the risk of inefficient OLS estimates and unreliable standard errors lead to the decision to adopt a Weighted Least Squares (WLS) approach for the final model. The WLS specification had improved statistical efficiency and showed a positive and statistically significant effect of the MDI variable on ESG perception, one that was distorted under OLS due to unaccounted heteroskedasticity. Sixth, the normality of residuals was assessed via the Shapiro-Wilk test ($p = 0.991$), confirming that residuals are approximately normally distributed (see Appendix, Table 6). However, the Ramsey RESET test

indicated potential model misspecification (p = 0.0014), meaning that linear specification may not fully capture all underlying relations (see Appendix, Table 7). Despite this, the inclusion of theory-based control variables, robust estimation technique (WLS) and the reasonable explanatory power of the model (Adjusted $R^2 = 0.31$) provide confidence about the robustness of the main findings. Nevertheless, those observations are to be received cautiously in acknowledgment that some dynamics can take place and might not be captured by current model specification. Finally, it is important to consider the general possibility of both Type I and Type II errors in statistical analysis. While significance testing is designed to repress these risks, they cannot be entirely eliminated. In this study, where a statistically significant and positive relationship between the Made in Italy (MDI) factor and ESG perception has been established, the primary interest is on the risk of Type I error, that is, the risk of rejecting the null hypothesis and detecting an effect that may not occur in the population. Given the binary nature of the MDI variable and the moderate sample size, caution is warranted when interpreting the result, even though it aligns with theory and is supported by a robust estimation approach.

4.4 Model

In line with the objective of this research, the following model is employed to assess the relationship between the Made in Italy dimension and the ESG perception of companies operating in Italy. The analysis is conducted on a cross-sectional dataset composed of N = 126 firms

The model to be estimated is the following:

$$ESGPerception_i = \beta_0 + \beta_1 MadeInItaly_i + \beta_2 Industry_i + \beta_3 CompanySize_i + \beta_4 ROA_i + \beta_5 OwnershipStructure_i + \beta_6 FirmAge_i + \varepsilon_i \quad (1)$$

Where *i*= 1, …, N indicates each firm included in the sample.

The dependent variable ESGPerceptioni represents the ESG Perception Index score assigned to firm i. The key explanatory variable is MadeInItaly a categorical variable equal to 1 if the company is classified as Made in Italy and 0 otherwise.

Control variables include industry affiliation, firm size, ROA of the firm, ownership structure and firm age to capture company-specific effects. The error term ε_i is assumed to be an independently and identically distributed random variable with zero mean and constant variance, and it represents the effects of the omitted variables that are peculiar to all the firms.

4.4.1 Variables

Data Sources

Variables utilized in this analysis were sourced from a combination of databases and manual research. Specifically, data regarding firm size, ROA and ownership structure was gathered from the Refinitiv Eikon database, using 2022 as the reference year. ESG Perception Index scores were retrieved from the Index official website. The Made in Italy classification was constructed through a qualitative content analysis of the companies' official websites, industry affiliation was coded manually based on the classification used by the ESG Perception Index, while founding dates for firm age were collected from the companies' official websites.

Dependent variable

The dependent variable in this study is the ESG Perception score, which measures how firms are viewed in relation to their alignment to environmental, social and governance (ESG) principles. ESG refers to the actions companies take to address the most pressing environmental and social challenges, and comprises three key dimensions: environmental impact, social

responsibility and ethical governance. The score measures how well a company communicates its sustainability efforts and how effectively these efforts are perceived in the online environment.

Independent variables

The key independent variable is Made in Italy, a categorical indicator which is intended to capture the presence of Italian identity and heritage in the company's positioning. If the company explicitly promotes its ties to Italian culture, tradition or values, the variable takes on the value of 1, and if not, it takes on the value of 0. Particular attention during the analysis was paid to the company's mission, vision and brand identity statements. Firms were categorized as Made in Italy if they specifically mentioned the "Made in Italy" label or emphasized features like Italian heritage, artisanal craftmanship, cultural heritage or the promotion of Italian values and lifestyle. Based on these criteria, 39 companies were classified as Made in Italy.

Control variables

To control for industry effects, an industry dummy variable is included in the model. This variable determines whether a company operates in a so-called sensitive industry, which is defined as a sector with a high socio-environmental impact. Examples of such industries include building, steel production, transport and energy (including oil and gas). If the company belongs to a sensitive industry, the variable takes the value 1 and 0 otherwise. The inclusion of this control is motivated by existing literature, which has demonstrated that companies in environmentally sensitive industries are more likely to be scrutinized by the public and subject to regulatory pressure (Garcia, Mendes-Da-Silva, & Orsato, 2017). Therefore, firms operating in sensitive sectors, regardless of their actual ESG conduct, are more likely to be exposed to these visibility pressures which may disproportionately impact their perception scores.

Along with the industry control variable, firm size is included in the model as a control variable. The extant literature has shown that firm size affects its engagement in social and environmental initiatives (Lepoutre & Heene, 2006; Orlitzky, 2001). In particular, the greater the size of the firm, the more exposed it is to media coverage and regulatory attention, which places it to greater pressure to manage public opinion (Achour & Boukattaya 2021). This increased visibility means that actions and communications related to sustainability have more opportunities to create traceable digital footprints that shape how the company is framed and associated with ESG topics in the online environment. For this reason, it is necessary to control for firm size to avoid an omitted variables bias. Firm size is measured by the natural logarithm of a firm's total assets in 2022 (Block & Wagner 2014).

Next, return on assets (ROA) is included to control for the financial performance of a firm. ROA is a commonly used profitability measure and has been widely examined in the sustainability reporting literature. In theory, more profitable companies have the ability to utilize ESG-related disclosure as an indicator of transparency and long-term orientation (de Villiers & van Staden 2011). However, the empirical evidence on the relationship between financial performance and sustainability disclosure is contradictory. Some studies identify a positive relationship, indicating that profitable firms disclose more since they need to meet stakeholders' expectations (Lang & Lundholm 2000; Roberts 1992), while others find negative or non-significant relations (Clarkson, Li, Richardson, and Vasvari 2008; Cormier & Gordon 2001). In the context of this study, ESG disclosure contributes to the ESG perception index, particularly through the assessment of how much the company reveals sustainability-related information through its own channels. Therefore, profitability indirectly contributes to ESG perception by enabling or constraining the firm's ability to engage in visible and systematic ESG communication. ROA is measured by dividing the 2022 income before discontinued

operations and extraordinary items by the total asset of the company in 2022 (de Villiers & van Staden, 2011).

After firm performance, ownership structure is included as a control variable to account for potential differences in ESG perception based on firm type. A dummy variable is used to identify family firms, taking the value 1 if a family owns at least 5% of the company's shares, and 0 otherwise (Berrone et al. 2010). The inclusion of this variable is based on Socioemotional Wealth (SEW) theory, which holds that family firms are particularly attentive to how stakeholders view them. Prior research has shown that since reputational harm can have a direct impact on the family, they are more likely to participate in CSR initiatives that improve their public image in order to safeguard their legacy and reputation (Craig & Dibrell 2006).

Finally, firm age is included as a control variable to measure differences in organizational maturity and stakeholder familiarity that may influence perceptions of ESG. Firm age is measured as the natural logarithm of the number of years elapsed since the company's official establishment, using 2022 as the reference year. Prior research on ESG reputational risk has shown that younger firms experience greater information asymmetry and possess more growth-oriented profiles, which can impact how they are perceived in terms of sustainability (Fafaliou, Giaka, Konstantios, & Polemis 2023). Controlling for firm age is therefore relevant when investigating how stakeholders view evidence of ESG engagement across firms at different stages of maturity.

5. Results

5.1 Descriptive Statistics

The sample consists of 126 companies from the 2022 ESG Perception Index developed by Reputation Manager, depicting perception of companies' sustainability from online content analysis. Table 1 shows descriptive statistics for independent and dependent variables.

Table 1
Descriptive Statistics

	ESG Perception Index	Made in Italy	Industry	Company Size	ROA	Ownership Structure	Firm Age
N	126	126	126	126	126	126	126
Missing	0	0	0	0	0	0	0
Mean	33.2	0.32	0.34	22.30	0.04	0.54	3.94
Median	33.6	0.00	0.00	22.1	0.02	1.00	4.11
Standard Deviation	17.9	0.47	0.48	2.27	0.06	0.50	0.93
Minimum	5.58	0	0	15.7	-0.18	0	0.00
Maximum	94.6	1	1	29.2	0.32	1	6.31
Shapiro-Wilk W	0.96	0.59	0.60	0.97	0.86	0.63	0.94
Shapiro-Wilk p	<.001	<.001	<.001	0.01	<.001	<.001	<.001

The ESG Perception score, the dependent variable, has a mean of 33.2 (on a scale of 100) and has a standard deviation (SD) of 17.9. The relatively low average suggests that Italian firms, although increasingly engaging in sustainability discourse, are still perceived only moderately devoted to ESG principles in the online environment. The large spread (SD = 17.9) indicates high heterogeneity in how sustainability efforts are conveyed and interpreted across firms. Moreover, given that the mean and median are close in value and the maximum score is 94.6, it can be concluded that the distribution is slightly skewed to the right. This suggests that a

small number of companies have very high ESG perception scores while the majority have lower values. The key independent variable, Made in Italy (MDI), is a dummy variable and it has a mean of 0.32, meaning that approximately 32% of the sample firms are classified as MDI firms. This suggests that a significant proportion of companies actively leverage Italian heritage, values and storytelling in their brand, making it a good candidate for testing its role as a symbolic amplifier of ESG perception. In addition, the binary nature of the variable ensures logical group comparison in the multivariate analysis. The Industry variable, also binary, has a mean of 0.34, meaning that almost one-third of the sample is exposed to greater ESG focus and demands due to industry characteristics. These firms may face stronger reputational demands, which may pressure them to engage in good ESG communication but also expose them to skepticism. Company size has a mean of 22.30 and a standard deviation of 2.27, with values ranging between 15.7 and 29.2. This wide variation captures a balanced sample with medium-sized and very large firms. Firm size is a particularly relevant variable since larger firms would have more structured communication functions but also more scrutiny from stakeholders and the media. The Return on Assets (ROA) metric has an average of approximately 4% and a standard deviation of 6%, indicating large variability in profitability. It is a signal that while some companies have very good financial results, others have more constricted margins. Moreover, it is a right-skewed distribution, which indicates that a relatively small number of companies have very high ROA values. The Ownership Structure variable has a mean of 0.54, meaning that more than half of the sample firms are controlled by families. This prevalence is consistent with the corporate landscape in Italy and adds further weight to the impact of tradition and reputation continuity in shaping ESG communication practice. Lastly, Firm Age averages 3.94 with a standard deviation of 0.93. This corresponds to an average firm age of roughly 51, with the youngest firm being approximately 1 year old and the oldest being well

over 500 years old. Having a mix of young firms and old firms adds depth to the analysis, especially with regard to the link between institutional legacy and ESG perception.

5.2 Correlation Analysis

Table 2
Correlation Matrix

		ESG Perception Index	Company Size	ROA	Firm Age	Made in Italy	Industry	Ownership Structure
ESG Perception Index	*Pearson's r*	—						
	df	—						
	p-value	—						
Company Size	*Pearson's r*	0.53	—					
	df	124	—					
	p-value	<.001	—					
ROA	*Pearson's r*	-0.09	-0.28	—				
	df	124	124	—				
	p-value	0.299	0.0002	—				
Firm Age	*Pearson's r*	-0.14	-0.02	0.09	—			
	df	124	124	124	—			
	p-value	0.132	0.812	0.327	—			
Made in Italy	*Pearson's r*	-0.21	-0.35	0.26	0.21	—		
	df	124	124	124	124	—		
	p-value	0.017	<.001	0.003	0.021	—		
Industry	*Pearson's r*	0.34	0.10	-0.07	-0.06	-0.28	—	
	df	124	124	124	124	124	—	
	p-value	<.001	0.246	0.433	0.479	0.002	—	
Ownership Structure	*Pearson's r*	-0.28	-0.29	0.18	0.18	0.46	-0.11	—
	df	124	124	124	124	124	124	—
	p-value	0.002	<.001	0.043	0.050	<.001	0.230	—

Table 2 presents the Pearson correlation coefficients among the variables used in the analysis. One of the most notable finding is the high positive correlation between firm size and ESG

perception ($r = 0.53$, $p < .001$), indicating that larger firms are more positively associated with ESG topics in the online environment. As expected, firms operating in sensitive industries are also strongly positively correlated with ESG perception ($r = 0.34$, $p < .001$). This suggests that firms in such industries may be compelled to engage more actively in sustainability to prevent reputational damage or comply with higher public and regulatory demands. A different pattern, instead, emerges when looking at ownership structure. Contrary to hypothesis, there is a negative correlation between family ownership and ESG perception ($r = –0.28$, $p = .002$). This indicates that family-controlled firms are perceived more negatively concerning their sustainability in the digital world. Interestingly, the Made in Italy (MDI) variable also shows a negative correlation with ESG perception ($r = –0.21$, $p = .017$), in contrast to preliminary assumptions that national branding would support sustainability reputation. However, this result will be further examined in the regression analysis. On the contrary, profitability (ROA) and firm age do not have a significant correlation with ESG perception ($p = 0.299$ and $p = 0.132$, respectively), suggesting that organizational history and financial performance do not contribute to higher online ESG perception. This may suggest that reputation online is more sensitive to the way in which companies frame and communicate their ESG efforts rather than to structural or historical aspects.

Among control variables, some relevant interdependencies emerge. Company size is negatively correlated with family ownership ($r = –0.29$, $p < .001$) and MDI status ($r = –0.35$, $p < .001$), indicating that smaller companies are more likely to be both family-controlled and culturally established as Made in Italy brands. This is consistent with structural characteristics of the Italian business context, where many SMEs, especially in traditional sectors such as food, fashion and manufacturing, are family-controlled and have a strong cultural identity. In addition, there is a statistically significant and positive correlation between MDI status and

family ownership (r = 0.459, p < .001). This relationship follows the idea that firms with strong ties to Italian heritage are also likely to have family governance structures.

5.3 Regression Analyses: OLS and WLS

To assess the relationship between ESG perception and firm-level characteristics, a two-stage regression analysis was conducted. First, an Ordinary Least Squares (OLS) model was estimated to identify baseline relationships. Then, a second model of Weighted Least Squares (WLS) was employed to derive more efficient estimates and consistent standard errors. The empirical results of the two models are presented in this section, as shown in Tables 3 and 4.

Table 3
OLS Model

Coefficients:	**Estimate**	**Std. Error**	**t value**	**Pr(>|t|)**
Intercept	-52.56	15.22	-3.45	0.001 ***
Made in Italy	4.59	3.36	1.36	0.175
Company Size	4.07	0.62	6.53	1.68e-09 ***
Industry	11.24	2.79	4.02	0.001 ***
ROA	23.39	23.88	0.98	0.329
Ownership Structure	-5.09	2.93	-1.74	0.084
Firm Age	-2.16	1.42	-1.51	0.134
R^2	0.39			
Adjusted R^2	0.36			
F-statistics: 12.9 on 6 and 119 DF, p-value: 3.427e-11 ***				

Significance levels: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

As in the correlation analysis, several variables emerge as statistically significant predictors of ESG perception in the OLS model. In fact, firm size is highly and positively correlated with

ESG perception (β = 4.07, p < .001). It suggests that, ceteris paribus, larger firms are more likely to be perceived better in the online ESG environment. Similarly, the sensitive industry variable also exerts strong and positive effects on ESG perception (β = 11.24, p = .001). Firms operating in sectors traditionally associated with environmental or social externalities tend to score higher on the ESG perception index. Family control, on the other hand, has a marginally significant negative coefficient (β = –5.09, p = .084), meaning family-controlled firms are less favorably perceived in online ESG narratives. The MDI variable is positive (β = 4.59) but not statistically significant at p = 0.175, suggesting a not meaningful relationship with ESG perception in the OLS model. Also Return on Assets (ROA) (β = 23.39, p = 0.329) and firm age (β = -2.16, p = 0.134) are above traditional levels of statistical significance, indicating a very weak positive association for ROA and a negative association for firm age. Finally, the OLS model explains a moderate proportion of the variance (Adjusted R^2 = 0.36) and the model, as a whole, is statistically significant (F = 12.9, p < .001).

However, the Breusch–Pagan test for heteroskedasticity generated a p-value of 0.056, suggesting marginal violation of the homoskedasticity assumption. This result raises concerns about the efficiency of OLS estimate and the reliability of standard errors. Therefore, a Weighted Least Squares (WLS) model was estimated to remove any potential bias in the inference process.

Table 4
WLS Model

Coefficients:		**Estimate**	**Std. Error**	**t value**	**Pr(>|t|)**
Intercept		-44.91	16.08	-2.79	0.006 **
Made in Italy		7.83	3.18	2.47	0.016 *
Company Size		3.80	0.66	5.74	7.48e-08 ***
Industry		11.08	3.29	3.36	0.001 **
ROA		-49.74	16.15	-3.08	0.003 **
Ownership Structure		-3.46	3.09	-1.12	0.267
Firm Age		-2.43	1.48	-1.64	0.103
R^2	0.35				
Adjusted R^2	0.31				
F-statistics: 10.48 on 6 and 119 DF, p-value: 2.565e-09 ***					

Signif. Codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

The WLS model, reported in Table 4, confirms the statistical significance and direction of some variables, while revising the significance levels of others. Firm size remains a very significant and positive predictor ($\beta = 3.80$, $p < .001$), reinforcing its critical contribution to ESG perception. Likewise, the sensitive industry dummy has a strong positive coefficient ($\beta = 11.08$, $p = .001$), confirming the idea that companies in high-impact industries draw more attention and critical scrutiny in online sustainability discourse. However, there is a strong change that emerges with the Made in Italy variable. While not significant in the OLS, it becomes both statistically significant and positively related to ESG perception in WLS ($\beta = 7.83$, $p = .016$). This indicates that, when controlling for heteroskedasticity, firms that emphasize their cultural identity, through Italian heritage or national storytelling, do have higher sustainability perception. This change in interpretation suggests that MDI firms may have been

underestimated in the first OLS estimates due to heteroskedasticity. ROA also becomes significant in the WLS model, but with a negative sign ($\beta = –49.74$, $p = .003$), which means that more profitable firms receive lower scores on ESG perception measures. This reversed finding, under variance correction, could imply skepticism toward firms perceived as profit-driven over purpose-driven. Interestingly, family ownership loses significance in the WLS model ($\beta = –3.46$, $p = .267$), which may indicate that the previously observed negative effect in the OLS regression might have been due to heteroskedastic error variance. Firm age remains non-significant ($p = .103$), and this might be an indication that historical presence does not affect ESG perception even when other controls are accounted for. Finally, the WLS model has an adjusted R^2 of 0.31, slightly lower than the OLS model, but it should be expected due to the adjustment for error variance. The F-statistic ($F = 10.48$, $p < .001$) confirms the significance of the overall model and, given the improvement in the reliability of standard errors, its application for inferential purposes.

5.4 Suppression Effect

As the above analysis shows, the Made in Italy (MDI) variable exhibits a negative bivariate correlation with ESG perception ($r = –0.21$, $p < .05$). This suggests that Italian branded firms are associated with lower sustainability perception. However, this initial interpretation contradicts the findings of the multivariate analysis: in the WLS model, the MDI coefficient not only becomes positive but also statistically significant ($\beta = 7.83$, $p = .015$). This discrepancy between the bivariate and multivariate results suggests the presence of a suppression effect, under which the true effect of the MDI label on ESG perception is masked by other firm-level characteristics unless properly controlled for. To explore this further, particular emphasis was put on two control variables, firm size and industry sensitivity, both of which correlate negatively with MDI ($r = –0.35$ and $r = –0.28$, respectively) but highly positively with ESG

perception (r = 0.53 and r = 0.34). These conditions make them strong theoretical candidates to act as suppressor variables, meaning they could mask the true impact of MDI on ESG perception when omitted from the equation. To test this, a series of nested regression models were estimated, beginning with a simple bivariate equation (MDI only) and then progressively adding the control variables.

Table 5
Regression Models for testing Suppression Effect

Coefficients:	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**
Intercept	35.82 (<2e-16)***	-57.49 (0.001)***	30.95 (<2e-16)***	-61.87 (2.45e-05)***	-64.74 (1.92e-05)***	-58.84 (0.001)***	-52.56 (0.001)***
Made in Italy	-8.18 (0.017)*	-1.18 (0.707)	-5.01 (0.138)	1.91 (0.534)	1.46 (0.641)	3.87 (0.249)	4.59 (0.175)
Control variables							
Company Size		4.08 (4.43e-09)***		4.06 (8.83e-10)***	4.16 (8.19e-10)***	3.99 (3.16e-09)***	4.07 (1.68e-09)***
Industry			11.32 (0.001)***	11.17 (0.001)***	11.16 (0.001)***	11.28 (0.001)***	11.24 (0.001)***
ROA					19.92 (0.412)	21.77 (0.366)	23.39 (0.329)
Ownership Structure						-5.55 (0.061) .	-5.09 (0.085) .
Firm Age							-2.15 (0.134)
R^2	0.05	0.28	0.13	0.36	0.36	0.38	0.39
Adjusted R^2	0.04	0.27	0.12	0.35	0.34	0.36	0.36
F statistic	5.91	23.83	9.09	22.93	17.32	14.87	12.9

Signif. Codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

The analysis confirmed that company size and industry sensitivity act as partial suppressors. In the initial bivariate model (Model 1), MDI was significantly negatively related to ESG perception (β = –8.181, p = .0165) with a low adjusted R^2 of 3.78%, indicating poor explanatory power. With the addition of company size (Model 2), the MDI coefficient decreased dramatically in size and also became statistically insignificant (β = –1.1840, p = 0.7067), while

the adjusted R^2 jumped to 26.76%, highlighting firm size as a major suppressor. A similar phenomenon occurs when industry variable is included without size (Model 3): MDI coefficient remains negative, but its magnitude decreases, which is consistent with partial suppression. Also, R^2 increases but more modestly, to around 11.5%. Hence, industry appears to be a less dominant suppressor than size, but still meaningful. This was also confirmed in Model 4, where the inclusion of both firm size and industry sensitivity not only increased the model's explanatory power (adjusted R^2 = 34.88%), but also reversed the sign of the MDI coefficient from negative to positive (β = 1.9138). When additional controls such as ROA, ownership structure and firm age were added in subsequent models (Models 5–7), the coefficient of MDI continued to rise, reaching the value of 4.5845 in the complete OLS model. However, it never became statistically significant, even in its positive form. Most importantly, this reinforces the interpretation that the negative bivariate effect was misleading and mainly driven by omitted-variable bias. The progressive improvement in adjusted R^2 values, from 3.78% in the bivariate model to 36.36% in the full model, demonstrate that adding relevant controls significantly improves model fit. However, statistical significance for MDI was achieved only in the WLS model that controlled for heteroskedasticity (β = 7.83, p = .015), confirming that both suppression and variance distortion were acting simultaneously. Combined, these findings strongly support the existence of a suppression effect and highlight the importance of stepwise model building as well as more robust estimation techniques in revealing the true relationship between MDI and ESG perception.

6. Discussion

This study addresses a growing need to understand how digital communications, corporate reputation and public sentiment drive the ESG narrative in interconnected and media-sensitive

environment. In particular, the theoretical model and empirical analysis investigate how “Made in Italy” status correlate to these perceptions, controlling for firm-specific factors such as size, age, profitability, industry sensitivity, family control and specifically status. The control variables were selected both for their empirical relevance in the literature and their conceptual fit with the hypothesis that perception is influenced by the way a firm positions itself in the public domain. The outcomes of the analysis offer insights on how an authenticity image can thrive or fail to create a positive ESG reputation on the web.

The most notable result is the statistically significant and positive relationship between the “Made in Italy” (MDI) factor and ESG perception, confirming the hypothesis of this study. This indicates that companies leveraging the MDI identity, by emphasizing values of craftsmanship, cultural heritage, design quality and authenticity (Fortis & Realacci 2009; Ancarani et al. 2020), are likely to be evaluated more favorably in terms of their ESG commitment. Even though MDI is not a sustainability label, its symbolic power can be interpreted as a reputational benefit in the online ecosystem addressed in the ESG Perception Index. This index, indeed, measures not just the volume of sustainability content associated with a brand but also its value in reputational terms, visibility in search engines and the strength of corporate sustainability narratives on proprietary digital channels. In this context, MDI - a symbolic signal of credibility, tradition and identity (Costabile & Mazzù 2020) - can influence how companies are represented in online sustainability rankings. The MDI label can add credibility and resonance to a firm's sustainability message, even if not explicitly connected with ESG-specific actions. Therefore, in the digital age, where companies are evaluated by human audiences and algorithmic systems, the ability to convey symbolic alignment with sustainability values, through culturally significant labels like “Made in Italy”, can be a competitive advantage in shaping ESG perception online.

Beyond the main explanatory variable, the results offer useful insights into the control variables, each of which yields information on different structural and contextual drivers of ESG perception. First, firm size was found to be positively related to ESG perception, a finding consistent with earlier studies suggesting that larger firms are exposed to more media coverage, and regulation pressure (Achour & Boukattaya 2021). Such firms also tend to have greater resources available for sustainability communications, stakeholder engagement and digital visibility, all of which help to shape online perception (Reverte 2009). The industry sensitivity variable also clarified the reputational hazards faced by firms operating in high-risk sectors such as energy, transportation and heavy industry. These companies tend to be more visible in environmental and social debates and are thus subject to higher scrutiny. This also supports existing research that indicates firms operating in sensitive industries need to incur higher costs to build legitimacy and overcome negative baseline assumptions (Garcia et al., 2017). This "legitimacy-seeking" behavior can lead to higher levels of ESG perception online, since such companies tend to create more sustainability content, be more active on digital channels and invest more in stakeholder engagement activities.

Contrary to some earlier expectations, financial performance was inversely related with ESG perception in the model. While prior literature expects a positive relation as a result of slack resources at disposal and reputational spillover (Orlitzky, Schmidt, and Rynes 2003), the result could be seen as an indicator of distrust towards the ESG initiatives of profit-seeking companies. In fact, in situations of perceived discrepancy between profitability and ethical commitment, higher financial performance can undermine perceived sustainability. This highlights the importance of perceived intention over capability in shaping ESG narratives. From the perspective of ownership structure, regression results suggested a negative, non-significant, correlation between family control and perception of ESG, suggesting that family firms may face more difficulty in expressing their sustainability values online. This contradicts

prior assumptions, including those of the Socioemotional Wealth (SEW) theory, which suggests that family firms are more likely to engage in sustainable initiatives in order to protect their reputation (Berrone et al. 2010; Craig & Dibrell 2006). A possible explanation lies in the observed gap between internal sustainability efforts and external communication strategies. Venturelli, Caputo, Leopizzi, and Pizzi (2021), examining Italian regional family businesses, conclude that while such businesses are inclined to perform well in concrete CSR practice ("Walk"), they are significantly less so in engaged in formal CSR communication ("Talk"), particularly when family members are heavily involved in management. This reluctance to disclose is driven by a desire to keep proprietary information secret and avoid exposing the firm to reputational or competitive risk, an approach that aligns with SEW's protection dimension. Translating these dynamics into online ESG perception context means that family firms will not be effective in developing a credible ESG identity. In fact, in this study, ESG perception reflects not only the volume of sustainability content associated with the brand online, but also its reputational weight and the firm's communicative efforts. Hence, low "Talk" orientation can undermine ESG perception scores directly, regardless of actual sustainable behaviors. Contrary to expectations, firm age did not have a statistically significant relationship with ESG perception. This result might suggest that even if older companies often have stronger reputational legacy, this does not necessarily translate into increased visibility in terms of sustainability in the online environment. A possibility is that ESG perception is driven more by recent communicative efforts than by corporate maturity per se.

6.2 Limitations and areas of improvement

Due to data availability constraints, possible relevant variables may have been omitted. For example, variables that capture firms' visibility and reputation aside from structural or financial characteristics, such as the degree of media exposure, the degree of international presence or

brand recognition, could help explain additional heterogeneity in online ESG perception that is not fully accounted for by firm size, industry or financial metrics alone. The results of the Ramsey RESET test do point to potential misspecification of the model. However, the WLS regression model still produces statistically significant and theoretically grounded estimates. Future research could integrate such dimensions or adopt advanced econometric techniques that allow for interaction effects and non-linear specifications, which may increase the explanatory power of the model.

In addition, while the cross-sectional design of the research is relevant because it provides a snapshot of the relationship between national branding and ESG perception at a specific point in time, offering an initial basis for comparison across firms, it is de facto susceptible to temporal limitations. ESG perception in digital and media-driven environments is dynamic and can change rapidly in response to events such as public scandals, policy shifts, leadership changes or corporate communication strategies. The cross-sectional data cannot fully capture these temporal shifts. In this way, a longitudinal approach would allow future researchers to track changes in ESG perception across time, identify patterns of change and better assess causality in response to time-sensitive stimuli.

This thesis also offers a theoretical direction for further research. While this research focuses on the reputational and symbolic role of national branding in shaping online ESG perception, future studies may explore the link between ESG perception and ESG performance more directly. Such research might investigate whether symbolic signals like "Made in Italy" simply amplify visibility and enhance perception, or whether they also correspond with firms' actual sustainability practices. Answering this question would clarify whether national identity functions primarily as a reputational enhancer or as a tangible indicator, therefore helping to

enrich the debate on signaling theory, national identity and sustainability narrative in digital contexts.

7. Conclusion

This study sought to investigate whether, and how much, national branding symbolic capital in the form of the “Made in Italy” (MDI) label impacts the online perception of corporate ESG efforts. With a quantitative analysis of 126 Italian firms and their online sustainability visibility, the research confirmed a statistically significant and positive relationship between MDI branding and ESG perception online. The present work offers a new perspective by demonstrating how national origin cues can be symbolic indicators that enhance the credibility of sustainability narratives in digital environments. The findings confirm that a firm can improve its perceived alignment with ESG values through the strategic presence of cultural symbols in digital brand communication. MDI not only conveys heritage and quality but can also enhance trust in a company's sustainability claims. National branding, therefore, emerges as both a commercial identifier and a driver of reputation, engaging with the evolving expectations of digitally connected audiences. From a practical standpoint, this research suggests that firms with a strong national identity should be aware of the dual nature of origin labels: while they endorse brand capital, they can also influence perceptions of ESG efforts. The study, hence, underscores the importance of cultural cues, such as the “Made in Italy” label, in shaping stakeholder perceptions of sustainability, particularly in digital environments where perception plays an important role in determining reputational outcomes. Ultimately, the study confirms the idea that the perception of ESG should be considered a separate concept, shaped not only by formal disclosure, but also by symbolic consistency and narrative credibility. As

digital platforms increasingly influence corporate legitimacy, it will be crucial for businesses to understand the intersection of national branding and sustainability communication.

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9. Appendix

Table 6
Normality Tests, Heteroskedasticity Test; Collinearity Statistics

Normality Tests

	Statistic	p
Shapiro-Wilk	0.991	0.638
Kolmogorov-Smirnov	0.0839	0.337
Anderson-Darling	0.533	0.169

Note. Additional results provided by *moretests*

Heteroskedasticity Tests

	Statistic	p
Breusch-Pagan	12.3	0.056
Goldfeld-Quandt	1.12	0.333
Harrison-McCabe	0.424	0.125

Note. Additional results provided by *moretests*

Collinearity Statistics

	VIF	Tolerance
Made in Italy	1.51	0.664
Industry	1.08	0.924
Company size	1.22	0.817
Ownership Structure	1.31	0.761
ROA	1.12	0.890
Firm Age	1.06	0.943

Table 7
RESET Test

RESET	**df1**	**df2**	**p-value**
6.9775	2	117	0.001372