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Bridging the ESG Credibility Gap: The Role of Institutional Investors in Mitigating ESG Decoupling

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ABSTRACT

Because of their capacity for sustained and informed monitoring, institutional investors are uniquely positioned to enhance corporate transparency and mitigate ESG decoupling, the gap between corporate sustainability rhetoric and reality. This study examines whether and under what circumstances institutional ownership contributes to aligning ESG disclosure with actual sustainability performance. Analysing an international sample of 3465 listed companies (13,488 firm-year observations) from 2009 to 2023, we find that institutional investors play a crucial role in reducing ESG decoupling. However, this effect depends on their investment horizon: long-term institutional investors mitigate ESG decoupling, whereas short-term institutional investors exacerbate it. These findings contribute to the corporate governance and sustainability literature by showing that institutional investors are not a homogeneous group and that their monitoring effectiveness varies depending on their investment horizon. From a practical perspective, our results highlight the need for regulatory initiatives that incentivise long-term institutional engagement and more stringent ESG reporting requirements to curb opportunistic disclosure practices.

1 | Introduction

Environmental, social and governance (ESG) information disclosure has expanded significantly as a result of the growing need for greater transparency on firms' ESG performance (García-Sánchez, Hussain, et al. 2022). However, the inherent flexibility of ESG reporting frameworks, coupled with the predominantly qualitative nature of ESG disclosures, has allowed many firms to strategically structure their ESG reporting to present a more favourable image of their performance. This often results in a misalignment between reported information and actual corporate practices (Sauerwald and Su 2019; Zhang 2022). This phenomenon, known as ESG decoupling, raises serious concerns about the credibility and usefulness of ESG disclosures (García-Sánchez, Hussain, et al. 2022; Di and Li 2023) and

limits their potential to drive meaningful corporate and societal change (Pizzi et al. 2023).

As a result, academic interest in analysing ESG decoupling has grown considerably in recent decades (Velte 2023a; Talpur et al. 2024; Cepêda et al. 2025), driven by the need to understand its drivers and consequences, as well as the factors that may exacerbate or mitigate it. Scholars have examined the strategic motivations behind ESG decoupling, its implications for corporate legitimacy and investor decision-making and the role of regulatory frameworks, stakeholder pressure and corporate governance mechanisms in mitigating this type of reporting practice (Wedari et al. 2021; Eliwa et al. 2023; Gull, Hussain, Khan, Nadeem, et al. 2023; W. Li et al. 2023; Wang et al. 2023). In particular, research has paid particular attention to external

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and internal monitoring mechanisms and demonstrated their effectiveness in limiting ESG decoupling (Marquis and Qian 2014; García-Sánchez, Hussain, et al. 2022; Y. Huang et al. 2022; Gull, Hussain, Khan, Khan, et al. 2023; Gull, Hussain, Khan, Nadeem, et al. 2023; Velte 2023a, 2025a).

Given their central role in contemporary capital markets, institutional investors have the ability to monitor and influence corporate behaviour (Bena et al. 2017; Brandon et al. 2020). In this context, and as a result of the increasing integration of ESG considerations into their investment strategies (Dimson et al. 2015; Dyck et al. 2019), institutional investors have a significant influence on ESG performance and disclosure practices (Ferreira and Matos 2008; Saleh et al. 2010; Amel-Zadeh and Serafeim 2018; Brandon et al. 2020; García-Sánchez, Rodríguez-Ariza, et al. 2020; Ali et al. 2024). Their dual role as capital providers and corporate monitors positions them as key actors in ensuring alignment between reported ESG performance and actual business practices, putting pressure on companies to improve the credibility and transparency of their sustainability reporting (Oh et al. 2011; Zhu et al. 2025). As a result, institutional investors can play an important role in mitigating ESG decoupling (Yu et al. 2020; Gidage et al. 2024; Zhu et al. 2025).

The influence of institutional investors on corporate behaviour, however, is not homogeneous (Ferreira and Matos 2008; Velte 2023b, 2024) but rather varies significantly depending on their investment horizon (Graves and Waddock 1994; Cox et al. 2004; Saleh et al. 2010). A key distinction is between long-term investors, such as pension funds and mutual funds, and short-term investors, such as banks and insurance companies (García-Sánchez, Rodríguez-Ariza, et al. 2020). These different types of investors prioritise different business objectives, shaping their influence on corporate sustainability (Oh et al. 2011; García-Sánchez, Aibar-Guzmán, et al. 2020; Velte 2023b). Long-term institutional investors typically emphasise the integration of sustainability into business strategy, promoting practices that enhance resource efficiency, environmental protection and social equity, whereas short-term investors tend to prioritise immediate financial returns, potentially at the expense of long-term sustainability goals (McCahery et al. 2016; García-Sánchez, Aibar-Guzmán, et al. 2020). This heterogeneity highlights the critical role of investment horizon in shaping institutional investors' impact on corporate sustainability (Oh et al. 2011; Velte 2023b).

Most existing studies on ESG decoupling have focused on the impact of regulatory frameworks, stakeholder pressure or the board of directors on ESG decoupling (Velte 2023a; Talpur et al. 2024; Cepêda et al. 2025). However, limited attention has been given to how investor-driven accountability mechanisms shape firms' ESG decoupling behaviour (Zhu et al. 2025). This study seeks to fill this research gap by investigating the extent to which institutional ownership affects ESG decoupling. Specifically, this research aims to analyse whether and under what circumstances the presence of institutional investors in a company's share capital helps to mitigate ESG decoupling, thereby contributing to the broader debate on the effectiveness of market-based governance in promoting credible ESG reporting.

Using a comprehensive dataset spanning the period 2009–2023 and covering 3465 listed firms worldwide (13,488 firm-year observations), our findings indicate that institutional investor ownership generally reduces ESG decoupling, strengthening their role in promoting genuine ESG reporting practices (García-Sánchez, Aibar-Guzmán, et al. 2022). However, this effect depends on institutional investment horizons. Although ownership by long-term investors mitigates ESG decoupling, ownership by short-term institutional investors exacerbates it. Notably, these findings hold across different levels of corporate governance quality, sector ESG sensitivity and home country development, further confirming their robustness.

To our knowledge, this study is the first empirical examination of the relationship between institutional investors' investment horizons and ESG decoupling. This is particularly relevant at a time when ESG decoupling poses significant risks to stakeholder trust and financial market integrity. Our research advances the literature in several ways. First, we provide empirical evidence that institutional investors play a monitoring role by demanding greater transparency and accountability, thereby mitigating ESG decoupling risk, although their impact varies significantly depending on their investment horizon. Second, we highlight the critical role of long-term investors in promoting sustainable practices and increasing the transparency of sustainability disclosures. Third, our findings underscore the importance of considering investment horizon when assessing institutional investors' influence on corporate behaviour (Yin et al. 2018). In doing so, we contribute to shedding light on the circumstances under which institutional investors enhance the credibility of ESG disclosures.

The remainder of the paper is structured as follows: after this introduction, the theoretical framework and the development of the research hypotheses are set out in the second section. The empirical design is then outlined in the third section. The fourth section reports the results, followed by complementary analyses in the fifth section to assess the robustness of the findings. The results are discussed in the sixth section, and the main conclusions of the study are summarised in the last section.

2 | Background, Literature Review and Hypothesis Development

2.1 | Institutional Investors and Sustainability Information

The Principles for Responsible Investment (PRI) were launched by the United Nations in 2006 with the aim of promoting the integration of ESG factors into investment decisions (Jansson and Biel 2014). They establish 'new rules of the game in the relationship of institutional investors with corporate social responsibility and corporate transparency' (García-Sánchez, Rodríguez-Ariza, et al. 2020), reinforcing the idea that ESG considerations go beyond financial concerns to encompass broader social and environmental responsibilities (Brandon et al. 2020; Velte 2023b). Their growing adoption underscores a shift in institutional investment from a purely financial investment paradigm to socially responsible investing (SRI), where ESG considerations are no longer peripheral

but central to risk mitigation and long-term value creation (Derwall et al. 2011; Jansson and Biel 2014; Dyck et al. 2019; Chen et al. 2020).

Institutional investors have thus played a key role in shaping corporate sustainability, often acting as primary drivers of sustainable business practices in listed companies (Sparkes and Cowton 2004; Brossard et al. 2013; Dyck et al. 2019; Kavadis and Thomsen 2023; Velte 2023b). Their influence stems not only from the volume of assets they control but also from their ability to act as vigilant monitors of corporate behaviour (Ferreira and Matos 2008; Oh et al. 2011; Yin et al. 2018). This monitoring role allows them to mitigate managerial myopia, which often leads managers to prioritise short-term results at the expense of long-term value creation, thereby aligning corporate strategies with broader stakeholder interests (García-Sánchez, Aibar-Guzmán, et al. 2020; Aibar-Guzmán et al. 2023). Through their active engagement and ESG screening strategies, institutional investors can influence corporate behaviour and encourage companies to adopt more substantive and transparent sustainability practices (McCahery et al. 2016; García-Sánchez, Aibar-Guzmán, et al. 2022; Ali et al. 2024). Thus, empirical evidence shows that institutional ownership is positively associated with improved environmental and social performance (Dyck et al. 2019; Jiang et al. 2022; Liu et al. 2023; Wang et al. 2023).

Given their exposure to long-term risks, institutional investors demand high-quality ESG information to assess corporate performance beyond traditional financial metrics (Sparkes and Cowton 2004; Brossard et al. 2013; Amel-Zadeh and Serafeim 2018), which has led to greater transparency in corporate ESG disclosures (Saleh et al. 2010; Lin et al. 2018). In this sense, research shows that institutional ownership is associated with improved ESG disclosure (García-Sánchez, Rodríguez-Ariza, et al. 2020; Qasem et al. 2022; Ali et al. 2024), not only at the firm level but also across industries, where a spillover effect promotes broader market-wide improvements in ESG reporting (Lin et al. 2018), promoting best practices in corporate governance and social responsibility while mitigating information asymmetries (Siew et al. 2016; García-Sánchez, Aibar-Guzmán, et al. 2022; García-Sánchez et al. 2023).

2.2 | Theoretical Framework

Agency theory (Jensen and Meckling 1976) provides a robust framework for understanding the relationship between principals (shareholders) and agents (managers) within corporate governance structures (Fama and Jensen 1983). It posits that the separation of ownership and control in modern firms creates agency problems (Jensen and Meckling 1976), which require effective monitoring mechanisms and incentive alignment strategies to mitigate (Almarayeh et al. 2022).

Due to their significant shareholdings, institutional investors play a key role in reducing agency costs by acting as active monitors of management behaviour (Barroso-Casado et al. 2016; García-Sánchez, Aibar-Guzmán, et al. 2020; Ali et al. 2024). Through active engagement and voting strategies, they put pressure on management to adopt more transparent and reliable reporting practices (García-Sánchez, Aibar-Guzmán, et al. 2022),

thereby reducing information asymmetries, especially in ESG areas where such asymmetries tend to be higher (Oh et al. 2011; Siew et al. 2016). Given that ESG decoupling, defined as the discrepancy between disclosed sustainability information and actual performance (Zhang 2022), is often attributed to managerial opportunism and the strategic use of ESG disclosure to project legitimacy without substantive operational change (Kim and Lyon 2015; Sauerwald and Su 2019; García-Sánchez, Hussain, et al. 2020; García-Sánchez et al. 2021; García-Sánchez, Hussain, et al. 2022; Velte 2023a; Cepêda et al. 2025), from an agency theory perspective, institutional investors, as sophisticated principals, are uniquely positioned to promote accountability and mitigate ESG decoupling by ensuring that ESG disclosure accurately reflects corporate performance (Yu et al. 2020; Velte 2023b).

2.3 | Research Hypotheses

2.3.1 | Institutional Investors and ESG Decoupling

Institutional investors exert a dual influence on corporate sustainability, improving both actual sustainability performance and sustainability disclosure (Brandon et al. 2020; Dyck et al. 2019; García-Sánchez, Rodríguez-Ariza, et al. 2020). Through their monitoring capabilities and active engagement strategies, they pressure companies to adopt practices that reduce environmental impacts, improve social outcomes and strengthen governance structures (García-Sánchez, Aibar-Guzmán, et al. 2022; Velte 2023b; Aibar-Guzmán et al. 2024). In addition, institutional investors often demand greater transparency and accountability, compelling firms to disclose detailed and reliable sustainability-related information (Saleh et al. 2010; García-Sánchez, Rodríguez-Ariza, et al. 2020; Qasem et al. 2022; Ali et al. 2024).

As discussed above, institutional investors act as active monitors, using their expertise, resources and substantial equity stakes to reduce information asymmetries and limit managerial opportunism (García-Sánchez, Hussain, et al. 2020; García-Sánchez et al. 2021; J. Huang et al. 2025). It is therefore reasonable to expect that their active monitoring, engagement and advocacy for transparent ESG reporting will align management actions with stakeholder expectations, promote accountability, and ensure that ESG disclosures accurately reflect corporate performance, thereby reducing ESG decoupling.

However, the empirical evidence on this relationship remains inconclusive. The few studies that have examined the impact of institutional ownership on ESG decoupling have yielded mixed results. Based on data from an international sample of 1925 large firms over the period 2012–2016, Yu et al. (2020) found that the presence of institutional investors in a firm's share capital reduces its greenwashing behaviour, whereas Gidage et al. (2024) documented a negative but statistically insignificant effect of institutional ownership on greenwashing using data from 49 Indian listed firms for the fiscal year 2022–2023. Using institutional ownership as a control variable, Gull, Hussain, Khan, Khan, et al. (2023) and Gull, Hussain, Khan, Nadeem, et al. (2023) documented a negative and significant relationship between it and ESG decoupling. In contrast, Zhu et al. (2025),

examining data from highly polluting Chinese listed firms from 2012 to 2021, found that institutional investors may indeed contribute to greenwashing in ESG disclosure, whereas Y. Li and Xiao (2025), also focusing on Chinese-listed firms, reported a negative and significant relationship between institutional investor site visits and firms' greenwashing behaviour. These divergent findings may be due to the different institutional, economic and regulatory environments in developed and developing countries that shape the effectiveness of corporate governance mechanisms as monitoring tools (Oh et al. 2011; Almarayeh et al. 2024).

Despite these mixed results, the overarching role of institutional investors as key governance actors (Ferreira and Matos 2008; Bena et al. 2017; Dyck et al. 2019; Velte 2024) suggests that their presence could mitigate ESG decoupling. By pressuring companies to improve both ESG performance and disclosure practices (Saleh et al. 2010; Amel-Zadeh and Serafeim 2018; Brandon et al. 2020; Liu et al. 2023; Wang et al. 2023; Ali et al. 2024; J. Huang et al. 2025), institutional investors are expected to reduce the gap between what companies report and their actual ESG performance. Accordingly, we propose the following hypothesis:

Hypothesis 1. *Ownership by institutional investors mitigates ESG decoupling.*

2.3.2 | The Role of Investment Horizon in Shaping Institutional Investors' Influence on ESG Decoupling

Despite the growing consensus on the importance of ESG integration in institutional investors' investment criteria (Velte 2023b), institutional investors are not a homogeneous group (Brickley et al. 1988; Ferreira and Matos 2008; García-Sánchez, Rodríguez-Ariza, et al. 2020). Their interests, objectives, influence and monitoring capacity vary according to their investment horizon: long or short term (Cox et al. 2004; McCahery et al. 2016; Yin et al. 2018; Velte 2024). Consequently, the effectiveness of institutional investors in promoting corporate sustainability and transparency depends on their investment horizon (Oh et al. 2011; García-Sánchez, Aibar-Guzmán, et al. 2020; García-Sánchez, Rodríguez-Ariza, et al. 2020; García-Sánchez, Aibar-Guzmán, et al. 2022; Velte 2023b).

Long-term investors play a crucial role in promoting sustainability initiatives because of their commitment to sustainable value creation (Oh et al. 2011). Because of their longer investment horizons, they are more likely to engage with corporate boards, hold management accountable, ensure that companies integrate ESG principles into their business strategies (Aguilera et al. 2006; Brandon et al. 2020; García-Sánchez, Aibar-Guzmán, et al. 2020; Aibar-Guzmán et al. 2024) and enhance ESG transparency (García-Sánchez, Rodríguez-Ariza, et al. 2020, Velte 2023b). Empirical evidence suggests that companies with significant ownership by long-term institutional investors have higher levels of sustainability disclosure (Johnson and Greening 1999; García-Sánchez, Rodríguez-Ariza, et al. 2020, Ali et al. 2024; J. Huang et al. 2025). This influence also extends to the adoption of third-party assurance services for ESG reporting, which further

enhances the credibility and reliability of disclosed information (García-Sánchez, Aibar-Guzmán, et al. 2022).

Conversely, short-term investors may perceive sustainability initiatives as secondary to immediate profitability (Oh et al. 2011; García-Sánchez, Aibar-Guzmán, et al. 2020; Aibar-Guzmán et al. 2023), thereby pressuring companies to prioritise financial performance over sustainability outcomes (Johnson and Greening 1999; Kavadis and Thomsen 2023). Their shorter investment horizons reduce their willingness to challenge management decisions or demand substantive sustainability disclosures, as such efforts may not yield immediate financial returns (McCahery et al. 2016; García-Sánchez, Aibar-Guzmán, et al. 2022).

The monitoring role of institutional investors also varies according to their investment horizon (Yin et al. 2018; Kavadis and Thomsen 2023; Velte 2023b, 2024). Although long-term institutional investors tend to engage in sustained and informed monitoring, short-term institutional investors often adopt a more passive monitoring approach (McCahery et al. 2016). Agency theory supports this difference in behaviour (Velte 2023b). From this perspective, long-term institutional investors act as active monitors, reducing information asymmetry and ensuring that managers act in the best interests of stakeholders by aligning disclosed ESG information with actual performance (Velte 2023b). Short-term investors, however, may exacerbate agency problems by tolerating superficial or exaggerated ESG disclosures as long as they do not compromise short-term profitability (Meng and Wang 2020).

Based on the above discussion, we propose the following hypotheses:

Hypothesis 2a. *Ownership by long-term institutional investors negatively affects ESG decoupling.*

Hypothesis 2b. *Ownership by short-term institutional investors positively affects ESG decoupling.*

3 | Empirical Design

3.1 | Sample

This study is based on data from a sample of the world's largest listed companies, for which financial and sustainability data were collected from the Refinitiv database. Refinitiv was selected for its robust, standardised and comprehensive ESG database with advanced analytics (Velte 2023a). The analysis period spans from 2009 to 2023 and covers significant ESG events (Velte 2025a).

To obtain the sample, we therefore started with an unbalanced panel dataset of 96,135 observations. We then removed from the sample those firm-year observations that did not have the information on the variables needed for the analysis, leaving 13,488 firm-year observations. The final sample consists of 3465 companies.

As shown in Table 1, the sample covers 80 countries and 11 sectors, with a predominance of companies from the United States

TABLE 1 | Sample distribution by country and sector.

Country	Companies		Country	Companies	
	No.	%		No.	%
Argentina	7	0.20%	New Zealand	24	0.69%
Australia	142	4.10%	Norway	13	0.38%
Austria	17	0.49%	Oman	1	0.03%
Belgium	26	0.75%	Panama	0	0.00%
Bermuda	13	0.38%	Peru	3	0.09%
Brazil	34	0.98%	Philippines	16	0.46%
Canada	156	4.50%	Poland	14	0.40%
Cayman Islands	1	0.03%	Portugal	9	0.26%
Chile	13	0.38%	Puerto Rico	1	0.03%
China	224	6.46%	Qatar	8	0.23%
Colombia	0	0.00%	Saudi Arabia	18	0.52%
Cyprus	0	0.00%	Singapore	24	0.69%
Czech Republic	1	0.03%	South Africa	43	1.24%
Denmark	21	0.61%	Spain	34	0.98%
Egypt	5	0.14%	Sweden	70	2.02%
Finland	22	0.63%	Switzerland	64	1.85%
France	84	2.42%	Taiwan	75	2.16%
Germany	99	2.86%	Thailand	27	0.78%
Gibraltar	1	0.03%	Turkey	18	0.52%
Greece	11	0.32%	United Arab Emirates	10	0.29%
Guernsey	2	0.06%	United Kingdom	214	6.18%
Hong Kong	54	1.56%	United States of America	1,196	34.52%
Hungary	3	0.09%	Uruguay	1	0.03%
India	94	2.71%	Total	3,465	100%
Indonesia	25	0.72%	Sector	Companies	
Ireland	23	0.66%		No.	%
Isle of Man	1	0.03%	Academic and educational services	10	0.29%
Israel	11	0.32%	Basic materials	379	10.94%
Italy	43	1.24%	Consumer cyclicals	557	16.08%
Japan	230	6.64%	Consumer noncyclicals	253	7.30%
Jersey	1	0.03%	Energy	232	6.70%
South Korea	100	2.89%	Financials	114	3.29%
Kuwait	3	0.09%			

(Continues)

TABLE 1 | (Continued)

Country	Companies		Country	Companies	
	No.	%		No.	%
Luxembourg	13	0.38%	Healthcare	317	9.15%
Malaysia	33	0.95%	Industrials	646	18.64%
Mexico	26	0.75%	Real estate	246	7.10%
Monaco	3	0.09%	Technology	555	16.02%
Morocco	1	0.03%	Utilities	156	4.50%
Netherlands	39	1.13%	Total	3465	100%

(34.52%), China (6.46%) and Australia (4.10%), as well as companies from the industrial (18.64%), consumer cyclical (16.08%) and technology (16.02%) sectors.

3.2 | Variables

Following prior literature (e.g., Tashman et al. 2019; García-Sánchez, Hussain, et al. 2022; Gull et al. 2024; Velte 2025a) and considering the study's objectives, a comprehensive set of variables was defined.

The dependent variable (CSRGap) measures ESG decoupling. According to Cepêda et al. (2025), the proxy developed by Hawn and Ioannou (2016) is the most widely used to measure ESG decoupling (e.g., García-Sánchez, Hussain, et al. 2022; Zhao et al. 2022; Tang et al. 2023; Velte 2025a). It is based on the absolute difference between a company's internal (policies) and external (disclosures) ESG actions, measured by dummy variables constructed from selected ESG items in the Refinitiv database. Consistent with García-Sánchez, Hussain, et al. (2022), a modified version of the Hawn and Ioannou (2016) proxy is used, with certain items excluded to avoid duplication. Specifically, the CSRGap variable consists of 18 external items and 20 internal items (see Appendix 1). Both sets of items are then normalised, and the CSRGap variable is calculated as the difference between the normalised variables at the same time intervals (t and $t - 1$).

Regarding the independent variables, three dummy variables were created to capture the influence of institutional investors: institutional investors (InstInv), long-term institutional investors (LTInstInv) and short-term institutional investors (STInstInv). The InstInv variable takes the value of 1 if institutional ownership exceeds 5% of the company's share capital. The variables LTInstInv and STInstInv distinguish institutional investors according to their investment horizon, as defined by García-Sánchez, Aibar-Guzmán, et al. (2022). The LTInstInv variable includes pension funds, endowments and government agencies (Harford et al. 2018; Kim et al. 2019; García-Sánchez, Rodríguez-Ariza, et al. 2020; Velte 2023b), whereas STInstInv includes banks and other financial institutions (Brickley et al. 1988; Yan and Zhang 2009; García-Sánchez, Rodríguez-Ariza, et al. 2020).

Finally, following previous research on this topic (Parra-Domínguez et al. 2021; Aluchna et al. 2022; Wang et al. 2023; Gull et al. 2024; A. P. Monteiro et al. 2025; Velte 2025a), a wide range of control variables were included to avoid potential bias. These include the following firm and board characteristics: firm size (Size), capital investment intensity (CAPEX), economic profitability (ROA), leverage, firm market value (TobinsQ), firm operating liquidity (CashFlowOA), financial losses (DLOSS), total accruals scaled by cash flow (Accruals), total ESG transparency score (ESGS), board size (BSize), board independence (BIndep), board gender diversity (BgenderDiv), presence of an audit committee (AUCommittee), corporate governance committee (GovCommittee) and CSR committee (CSRCommittee) and assurance on sustainability reports (Assurance).

We also control for the standardisation of ESG information disclosed by companies using three variables (García-Sánchez, Sierra-García, et al. 2022; García-Sánchez et al. 2023): EUTaxonomy, CSRD and ReportingTCFD. Finally, the categorical variables (country, year and industry) are included as control variables. Table 2 provides a description of all variables included in the study.

3.3 | Models

Two models have been developed to analyse the impact of institutional investors on ESG decoupling. The first model (Model 1) analyses the overall impact of institutional ownership, whereas the second model (Model 2) assesses the impact of institutional investors' investment horizon (short or long term).

$$\begin{aligned} \text{CSRGap}_{i,t} = & \alpha_0 + \alpha_1 \text{InstInv}_{i,t} + \alpha_2 \text{Size}_{i,t} + \alpha_3 \text{CAPEX}_{i,t} \\ & + \alpha_4 \text{CashFlowOA}_{i,t} + \alpha_5 \text{ROA}_{i,t} + \alpha_6 \text{Leverage}_{i,t} \\ & + \alpha_7 \text{TobinsQ}_{i,t} + \alpha_8 \text{DLOSS}_{i,t} + \alpha_9 \text{Accruals}_{i,t} + \alpha_{10} \text{ESGS}_{i,t} \\ & + \alpha_{11} \text{BSize}_{i,t} + \alpha_{12} \text{GovCommittee}_{i,t} + \alpha_{13} \text{AUCommittee}_{i,t} \\ & + \alpha_{14} \text{BIndep}_{i,t} + \alpha_{15} \text{BgenderDiv}_{i,t} + \alpha_{16} \text{CSRCommittee}_{i,t} \\ & + \alpha_{17} \text{Assurance}_{i,t} + \alpha_{18} \text{EUTaxonomy}_{i,t} + \alpha_{19} \text{CSRD}_{i,t} \\ & + \alpha_{20} \text{ReportingTCFD}_{i,t} + \alpha_{21} \text{Industry}_{i,t} + \alpha_{22} \text{Country}_i \\ & + \alpha_{23} \text{Year}_t + \varepsilon_{it} + \eta_i \end{aligned}$$

Model (1)

TABLE 2 | Variable description.

Name	Measurement	Literature
CSRGap	Absolute difference between internal (policies) and external (disclosures) CSR actions, calculated as a modified version of the Hawn and Ioannou (2016) ESG decoupling proxy developed by García-Sánchez, Hussain, et al. (2022)	García-Sánchez, Hussain, et al. (2022)
InstInv	Dummy variable that takes the value of 1 if institutional ownership exceeds 5% of the firm's share capital	(Gull, Hussain, Khan, Khan, et al. 2023; Gull et al. 2024)
LTInstInv	Dummy variable that takes the value of 1 if ownership by long-term institutional investors (i.e., pension funds, endowments and government agencies) exceeds 5% of the firm's share capital	García-Sánchez, Aibar-Guzmán, et al. (2020); García-Sánchez, Aibar-Guzmán, et al. (2022); Aibar-Guzmán et al. (2023)
STInstInv	Dummy variable that takes the value of 1 if ownership by short-term institutional investors (i.e., banks and other financial institutions) exceeds 5% of the firm's share capital	García-Sánchez, Aibar-Guzmán, et al. (2020); García-Sánchez, Aibar-Guzmán, et al. (2022); Aibar-Guzmán et al. (2023)
Size	Firm size, measured by the natural logarithm of total assets	Parra-Domínguez et al. (2021); Eliwa et al. (2023); Gull et al. (2024); Velte (2025a)
CAPEX	Investments in property, plant and equipment	About et al. (2024); Aibar-Guzmán et al. (2023)
CashFlowOA	Operational cash flow	García-Sánchez et al. (2021)
ROA	Economic profitability as measured by return on assets	Parra-Domínguez et al. (2021); Eliwa et al. (2023); Gull, Hussain, Khan, Khan, et al. (2023); Gull, Khan, Mushtaq, et al. (2023); Gull et al. (2024)
Leverage	Financial indebtedness measured as the ratio of long-term debt to total assets	García-Sánchez, Hussain, et al. (2022); Gull et al. (2024); Velte (2025b)
TobinsQ	The market value of the company in relation to its book value	Aluchna et al. (2022); Aibar-Guzmán et al. (2023); Bothello et al. (2023); Gull, Khan, Mushtaq, et al. (2023); Gull et al. (2024)
DLOSS	Dummy variable that takes the value 1 if the company's firm reports a loss and zero otherwise The loss (DLOSS) is calculated as the net profit/loss relative to total assets and financial loss	Gull et al. (2024)
Accruals	Total accruals scaled by cash flow	García-Sánchez et al. (2021)
ESGS	Refinitiv's overall ESG score ranging from 0 to 100	Wang et al. (2023); López-de-Silanes et al. (2024)
BSize	Total number of board directors	García-Sánchez, Hussain, et al. (2022); Eliwa et al. (2023)
GovCommittee	Dummy variable that takes the value of 1 if there is a governance committee and 0 otherwise	H. Huang et al. (2009); Honey et al. (2025)
AUCommittee	Dummy variable taking the value 1 if an audit committee exists and 0 otherwise	Velte (2025b)
BIndep	Proportion of independent directors on the board	García-Sánchez, Aibar-Guzmán, et al. (2022); García-Sánchez, Hussain, et al. (2022); Eliwa et al. (2023); Gull, Hussain, Khan, Khan, et al. (2023); Gull, Hussain, Khan, Nadeem, et al. (2023); Gull et al. (2024)
BgenderDiv	Percentage of women on the board	García-Sánchez, Hussain, et al. (2022); Gull, Hussain, Khan, Mushtaq, et al. (2023); Gull et al. (2024)

(Continues)

TABLE 2 | (Continued)

Name	Measurement	Literature
CSRCommittee	Dummy variable taking the value 1 if a CSR committee exists and 0 otherwise	García-Sánchez, Aibar-Guzmán, et al. (2022); García-Sánchez, Hussain, et al. (2022); Eliwa et al. (2023); Gull, Hussain, Khan, Khan, et al. (2023); Gull et al. (2024)
Assurance	Dummy variable that takes the value 1 if the company's sustainability report has been assured and 0 otherwise	Sauerwald and Su (2019); García-Sánchez, Aibar-Guzmán, et al. (2022); García-Sánchez, Hussain, et al. (2022); Aboud et al. (2024); Bothello et al. (2023)
EUTaxonomy	A variable that takes a value of 1 for firms whose parent company was located in an EU country during the period 2020–2023, taking a value of 0 otherwise	García-Sánchez et al. (2023)
CSRD	Dummy variable identifying the effect of the adoption and entry into force of the CSRD, taking the value 1 for those firms whose parent company was located in an EU country in 2022 and 2023 and 0 otherwise	Own elaboration based on García-Sánchez, Sierra-García, et al. (2022), García-Sánchez et al. (2023) and Aboud et al. (2024)
ReportingTCFD	Dummy variable that takes the value 1 if the company follows the recommendations of the Task Force on Climate-related Financial Disclosures in preparing its sustainability reports and 0 otherwise	Moses et al. (2025)

$$\begin{aligned} \text{CSRGap}_{i,t} = & \alpha_0 + \alpha_1 \text{LTInstInv}_{i,t} + \alpha_2 \text{STInstInv}_{i,t} + \alpha_3 \text{Size}_{i,t} \\ & + \alpha_4 \text{CAPEX}_{i,t} + \alpha_5 \text{CashFlowOA}_{i,t} + \alpha_6 \text{ROA}_{i,t} \\ & + \alpha_7 \text{Leverage}_{i,t} + \alpha_8 \text{TobinsQ}_{i,t} + \alpha_9 \text{DLOSS}_{i,t} + \alpha_{10} \text{Accruals}_{i,t} \\ & + \alpha_{11} \text{ESGS}_{i,t} + \alpha_{12} \text{BSize}_{i,t} + \alpha_{13} \text{GovCommittee}_{i,t} \\ & + \alpha_{14} \text{AUCommittee}_{i,t} + \alpha_{15} \text{BIndep}_{i,t} + \alpha_{16} \text{BgenderDiv}_{i,t} \\ & + \alpha_{17} \text{CSRCommittee}_{i,t} + \alpha_{18} \text{Assurance}_{i,t} \\ & + \alpha_{19} \text{EUTaxonomy}_{i,t} + \alpha_{20} \text{CSRD}_{i,t} + \alpha_{21} \text{ReportingTCFD}_{i,t} \\ & + \alpha_{22} \text{Industry}_{i,t} + \alpha_{23} \text{Country}_i + \alpha_{24} \text{Year}_t + \varepsilon_{it} + \eta_i \end{aligned}$$

Model (2)

For the empirical analysis, the random effects regression model is used according to the Hausman test results, as it allows for unobserved heterogeneity across firms while incorporating both cross-sectional and time series data (Aibar-Guzmán et al. 2023).

4 | Results

4.1 | Descriptive Statistics

Table 3 shows the descriptive statistics of the variables under study. As can be seen, the average value of CSRGap is negative (−0.149), indicating that the sample companies tend to understate their ESG performance. This finding is consistent with that of Gull, Hussain, Khan, Khan, et al. (2023), who also found that their sample companies tended to understate their ESG performance in their sustainability reports, although it contrasts with that of Parra-Domínguez et al. (2021) and García-Sánchez, Hussain, et al. (2022), who found that most of their sample companies had lower ESG performance than they disclosed in their

sustainability reports. In terms of institutional ownership, institutional investors hold more than 5% of the share capital in 84% of the sample companies, with the majority being long-term investors (83%). Gull, Hussain, Khan, Khan, et al. (2023) found a slightly higher percentage of institutional ownership in their sample companies (56%).

In terms of control variables, the companies on average have good financial indicators (Size, CAPEX, CashFlowOA, ROA, Leverage, TobinsQ, DLOSS, Accruals and ESGS), whereas the ESG score (ESGS) is on average 57%. Almost half of the companies provide assurance on their sustainability reports (43.7%) and 22.6% follow the recommendations of the Task Force on Climate-related Financial Disclosures. More than half have CSR, governance and audit committees (78.1%, 54.4% and 93.7%, respectively). The average board size is 10 members, the majority of which are independent (72%), although gender diversity is low (27.7%). Overall, these findings are consistent with prior studies.

Table 4 shows the Pearson correlation matrix. It can be seen that there is no correlation between the CSRGap variable and the independent and control variables, as the absolute values are less than 0.8 in all cases.

We confirm that there is no multicollinearity by checking that all variables in the model have a centred VIF (variance inflation factor) less than 10 (Table 5), as done by other researchers such as Gull, Hussain, Khan, Khan, et al. (2023); Gull, Hussain, Khan, Mushtaq, et al. (2023); Gull, Hussain, Khan, Nadeem, et al. (2023); and Almarayeh et al. (2022, 2024).

TABLE 3 | Descriptive statistics.

Variable	Obs.	Mean	Std. dev.	Min	Max
Dependent variable					
CSRGap	13,488	-0.148	0.132	-0.574	0.532
Independent variables					
InstInv	13,488	0.844	0.372	0	1
STInstInv	13,488	0.059	0.236	0	1
LTInstInv	13,488	0.83	0.376	0	1
Control variables					
Size	13,488	22.454	1.558	16.177	28.446
CAPEX	13,488	168.306	2963.792	0.01	208535.32
CashFlowOA	13,488	1.539e+09	5.316e+09	-1.010e+11	1.730e+11
ROA	13,488	0.113	0.224	-0.8	1
Leverage	13,488	0.555	0.328	0	0.999
TobinsQ	13,488	2.348	2.897	0	25.2
DLOSS	13,488	0.158	0.365	0	1
Accruals	13,488	-6.770e+08	2.624e+09	-4.260e+10	1.095e+11
ESGS	13,488	57.062	17.881	0.83	96.02
BSize	13,488	9.813	3.011	1	98
GovCommittee	13,488	0.543	0.498	0	1
AUCommittee	13,488	0.937	0.244	0	1
BIndep	13,488	0.722	0.324	0.042	1
BgenderDiv	13,488	25.704	13.715	0	80
CSRCommittee	13,488	0.781	0.414	0	1
Assurance	13,488	0.437	0.496	0	1
EUTaxonomy	13,488	0.46	0.498	0	1
CSRD	13,488	0.078	0.268	0	1
ReportingTCFD	13,488	0.226	0.418	0	1

4.2 | Main Findings

Table 6 reports the main regression results. Model (1) shows that there is a significant negative relationship between the presence of institutional investors in a company's share capital and ESG decoupling ($\beta = -0.050179$, $p < 0.01$), suggesting that institutional ownership mitigates ESG decoupling, as hypothesised in Hypothesis 1.

Model (2) reflects the findings on the impact of institutional investors' investment horizon on ESG decoupling. First, as hypothesised in Hypothesis 2a, the results show that the presence of long-term institutional investors in a company's share capital is negatively and significantly associated with ESG decoupling ($\beta = -0.0379108$, $p < 0.01$), confirming that ownership by these institutional investors has a mitigating effect on ESG decoupling. In contrast, the results show a positive and statistically

significant relationship between the presence of short-term institutional investors in a company's share capital and ESG decoupling ($\beta = 0.0070855$, $p < 0.01$). This finding supports Hypothesis 2b, suggesting that these institutional investors' focus on immediate financial returns leads them to exacerbate ESG decoupling, as substantive sustainability disclosures may not yield immediate financial benefits.

Among the control variables, company size, gender diversity of the board, the presence of an audit committee, the adoption and entry into force of the CSRD and the fact that the company follows the recommendations of the Task Force on Climate-related Financial Disclosures in preparing its sustainability reports have a negative impact on ESG decoupling practices, whereas operating cash flow, leverage and the EU Taxonomy have a positive impact on ESG decoupling. Surprisingly, board independence (as a measure of board effectiveness), the presence of a

TABLE 4 | Pearson correlations.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
(1) CSRGap	1.000																						
(2) InstInv	-0.203*	1.000																					
(3) STInstInv	0.061*	0.562*	1.000																				
(4) LIInstInv	-0.283*	0.859*	0.058*	1.000																			
(5) Size	-0.044*	-0.288*	-0.499*	-0.039*	1.000																		
(6) CAPEX	0.009	0.030*	0.031*	0.017	-0.002	1.000																	
(7) CashFlowOA	0.006	-0.016	-0.071*	0.025*	0.421*	-0.016	1.000																
(8) ROA	-0.021*	-0.070*	-0.123*	-0.008	0.127*	0.005	0.118*	1.000															
(9) Leverage	-0.075*	-0.033*	-0.205*	0.077*	0.304*	-0.015	0.022*	0.063*	1.000														
(10) TobinsQ	0.021*	0.138*	0.158*	0.068*	-0.169*	0.062*	0.059*	0.236*	-0.176*	1.000													
(11) DLOSS	0.013	0.143*	0.161*	0.073*	-0.165*	-0.003	-0.089*	-0.358*	0.054*	-0.015	1.000												
(12) Accruals	0.005	0.011	0.062*	-0.025*	-0.357*	0.036*	-0.738*	-0.037*	-0.069*	0.008	-0.050*	1.000											
(13) ESGS	-0.167*	-0.062*	-0.256*	0.084*	0.471*	-0.013	0.203*	0.115*	0.178*	-0.071*	-0.114*	-0.180*	1.000										
(14) BSize	-0.033*	-0.056*	-0.206*	0.060*	0.434*	-0.010	0.147*	0.079*	0.176*	-0.049*	-0.073*	-0.147*	0.281*	1.000									
(15) GovCommittee	-0.066*	0.244*	0.001	0.294*	0.069*	0.016	0.056*	-0.027*	0.128*	0.105*	0.101*	-0.049*	0.081*	0.052*	1.000								
(16) AUCommittee	-0.246*	0.501*	0.050*	0.573*	-0.048*	0.010	0.015	0.016	0.117*	0.047*	0.044*	-0.020*	0.102*	0.019*	0.242*	1.000							
(17) BIdenp	0.044*	0.099*	0.039*	0.096*	-0.092*	-0.008	-0.011	0.030*	-0.032*	0.081*	0.020*	0.032*	-0.102*	-0.252*	0.221*	-0.035*	1.000						
(18) BgenderDiv	-0.176*	0.214*	-0.015	0.268*	0.000	-0.008	0.028*	0.021*	0.110*	0.004	0.023*	-0.035*	0.322*	0.070*	0.115*	0.244*	0.017	1.000					
(19) CSRCCommittee	-0.093*	-0.108*	-0.213*	0.001	0.324*	-0.021*	0.108*	0.079*	0.114*	-0.155*	-0.093*	-0.099*	0.519*	0.199*	-0.014	-0.017*	-0.057*	0.149*	1.000				
(20) Assurance	-0.055*	-0.193*	-0.189*	-0.115*	0.385*	-0.015	0.171*	0.067*	0.126*	-0.101*	-0.095*	-0.153*	0.528*	0.272*	-0.121*	-0.052*	-0.179*	0.156*	0.372*	1.000			
(21) EUtaxonomy	0.019*	-0.050*	-0.028*	-0.043*	0.026*	-0.021*	-0.001	0.014	0.035*	0.007	0.001	-0.011	0.059*	0.068*	-0.118*	0.002	-0.109*	0.062*	-0.024*	0.076*	1.000		
(22) CSRSD	-0.066*	-0.042*	-0.041*	-0.026*	0.043*	-0.012	0.003	-0.009	0.048*	-0.058*	-0.016	-0.010	0.148*	0.096*	-0.153*	0.062*	-0.179*	0.239*	0.095*	0.217*	0.315*	1.000	
(23) ReportingTCFD	-0.032*	-0.085*	-0.088*	-0.048*	0.208*	0.008	0.085*	0.023*	0.020*	-0.086*	-0.057*	-0.058*	0.245*	0.120*	-0.019*	-0.092*	0.010	0.094*	0.226*	0.266*	0.145*	0.804*	

*** $p < 0.01$, ** $p < 0.05$ and * $p < 0.1$.

TABLE 5 | Variance inflation factor (VIF) test.

Variables	Model (1)		Model (2)	
	Uncentred VIF	Centred VIF	Uncentred VIF	Centred VIF
Dependent variable				
CSRGap				
Independent variables				
InstInv	1.62	0.617180		
STInstInv			1.65	0.605692
LTInstInv			1.42	0.706577
Control variables				
Size	2.20	0.454946	2.45	0.408081
CAPEX	1.01	0.991784	1.01	0.991406
CashFlowOA	2.50	0.400073	2.52	0.397604
ROA	1.27	0.785453	1.28	0.784079
Leverage	1.21	0.824923	1.21	0.823523
TobinsQ	1.21	0.826588	1.21	0.825072
DLOSS	1.24	0.805122	1.24	0.803902
Accruals	2.31	0.433171	2.31	0.433057
ESGS	2.08	0.481907	2.08	0.481504
BSize	1.36	0.736697	1.36	0.735383
GovCommittee	1.27	0.790425	1.27	0.788350
AUCommittee	1.48	0.677304	1.60	0.626857
BIndep	1.19	0.837899	1.20	0.834001
BgenderDiv	1.30	0.766824	1.32	0.758754
CSRCommittee	1.45	0.688828	1.45	0.687415
Assurance	1.61	0.620687	1.62	0.616270
EUTaxonomy	1.17	0.852953	1.17	0.852921
CSRD	1.27	0.788540	1.27	0.788283
ReportingTCFD	1.18	0.850172	1.18	0.849668
Mean VIF		1.50		1.51

CSR committee on the board and the assurance of sustainability reports have no statistically significant effect on ESG decoupling practices.

5 | Robustness and Complementary Analyses

To provide a more complete assessment of the impact of institutional ownership on ESG decoupling, we conducted several complementary analyses. Thus, considering that the influence of institutional investors may vary across different organisational and environmental contexts, we analyse the moderating role of corporate governance quality, industry ESG sensitivity and the firm's home country development level on the influence of institutional investors on ESG decoupling.

5.1 | Corporate Governance Quality

The effectiveness of institutional investors in mitigating ESG decoupling may depend on the quality of corporate governance at the firm level (Gillan and Starks 2003; McCahery et al. 2016; Yin et al. 2018; Velte 2024). From an agency theory perspective, strong corporate governance reduces agency costs by enhancing monitoring and curbing managerial opportunism (Almarayeh et al. 2022, 2024; Velte 2023a) and is often associated with more transparent and substantive CSR practices (Jo and Harjoto 2012; Jain and Jamali 2016; Gull, Hussain, Khan, Khan, et al. 2023; Gull, Hussain, Khan, Nadeem, et al. 2023). As such, it provides a conducive environment for institutional investors to effectively exercise their monitoring role and ensure that ESG disclosures accurately reflect ESG performance.

TABLE 6 | Random effects panel data results—Main analysis.

Variables	Model (1)	Model (2)
Dependent variable		
CSRGap	Coef. (std. err.)	Coef. (std. err.)
Independent variables		
InstInv	−0.050179 (0.0065675)***	
STInstInv		0.0070855 (0.0062496)***
LTInstInv		−0.0379108 (0.0038969)***
Control variables		
Size	−0.0103438 (0.0014918)***	−0.0077762 (0.0015434)***
CAPEX	7.26e-08 (3.42e-07)	6.62e-08 (3.41e-07)
CashFlowOA	1.00e-12 (3.51e-13)***	8.51e-13 (3.51e-13)**
ROA	0.0094332 (0.0062136)	0.0106583 (0.006201)*
Leverage	0.0126035 (0.0046056)***	0.0130404 (0.0045927)***
TobinsQ	0.0005142 (0.0005333)	0.0002492 (0.0005335)
DLOSS	0.0038133 (0.0026045)	0.0031956 (0.0026053)
Accruals	4.38e-13 (5.04e-13)	3.93e-13 (5.04e-13)
ESGS	0.0001587 (0.0001071)	0.0001841 (0.000107)*
BSize	0.0005573 (0.0004678)	0.0006389 (0.0004672)
GovCommittee	0.0044754 (0.0040599)	0.00441 (0.0040484)
AUCommittee	−0.0209393 (0.0064421)***	−0.0139296 (0.0065387)**
BIndep	0.0047672 (0.0038834)	0.0055752 (0.0038804)
BgenderDiv	−0.0007044 (0.0001117)***	−0.0006736 (0.0001116)***
CSRCommittee	−0.0013401 (0.0029717)	−0.0012352 (0.0029683)
Assurance	−0.0047541 (0.0029016)	−0.0054679 (0.0028999)*
EUTaxonomy	0.0108897 (0.0015166)***	0.0109028 (0.0015168)***
CSRD	−0.0059205 (0.003404)*	−0.0056786 (0.0034048)*
ReportingTCFD	−0.0147599 (0.00224)***	−0.0149866 (0.0022395)***
Industry, country and year variables included		
R ²	18.71	19.30
Obs.	13,488	13,488
Groups	3833	3833

Note: Standard errors are given in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$ and * $p < 0.1$.

Following Gull, Hussain, Khan, Khan, et al. (2023); Gull, Hussain, Khan, Mushtaq, et al. (2023); Gull, Hussain, Khan, Nadeem, et al. (2023); and Gull et al. (2024) the sample companies were divided into two groups based on their corporate governance performance scores. Thus, the first group (good corporate governance) consists of companies with a corporate performance score above the sample average, whereas the second group (poor corporate governance) consists of companies with a corporate performance score below the sample average.

As shown in Table 7, in line with our previous findings, institutional ownership is negatively and significantly associated with ESG decoupling in both groups ($\beta = -0.0408165$, $p < 0.01$, for companies with good corporate governance; $\beta = -0.0598389$, $p < 0.01$, for companies with poor corporate governance). Regarding the investment horizon of institutional investors, we also find a negative and significant association between ownership by long-term institutional investors and ESG decoupling in both groups of companies ($\beta = -0.0368597$, $p < 0.01$, for firms

TABLE 7 | Random effects panel data results—Analysis by level of corporate governance.

Variables	Good corporate governance		Poor corporate governance	
	Coef. (std. err.)	Coef. (std. err.)	Coef. (std. err.)	Coef. (std. err.)
Independent variables				
InstInv	−0.0408165 (0.0093002)***		−0.0598389 (0.0093764)***	
STInstInv		0.0139819 (0.0082611)**		0.004672 (0.0092621)
LTInstInv		−0.0368597 (0.005678)***		−0.0391212 (0.0055045)***
Control variables				
Size	−0.0110552 (0.0018169)***	−0.0084729 (0.0018789)***	−0.0090581 (0.002428)***	−0.0065435 (0.0025498)***
CAPEX	9.24e-08 (3.41e-07)	9.20e-08 (3.39e-07)	−1.79e-06 (1.76e-06)	−2.02e-06 (1.76e-06)
CashFlowOA	1.11e-12 (3.65e-13)***	9.76e-13 (3.65e-13)***	9.43e-13 (1.08e-12)	5.66e-13 (1.09e-12)
ROA	0.0093757 (0.0073916)	0.0100199 (0.0073736)	−0.0025742 (0.0106241)	−0.0006089 (0.0106274)
Leverage	0.0084905 (0.0057653)	0.0092607 (0.0057499)	0.0159192 (0.0071417)**	0.0158162 (0.0071307)**
TobinsQ	0.0006409 (0.0007082)	0.0004272 (0.0007073)	0.0002896 (0.0007643)	0.000094 (0.0007656)
DLOSS	0.0009804 (0.0031448)	0.0005951 (0.0031445)	0.0105479 (0.0046758)**	0.0095281 (0.0046843)**
Accruals	5.95e-13 (5.41e-13)	5.45e-13 (5.41e-13)	6.81e-13 (1.25e-12)	5.97e-13 (1.25e-12)
ESGS	0.0004148 (0.0001497)***	0.0004343 (0.0001494)***	0.00024 (0.0001821)	0.000253 (0.000182)
BSize	0.0011332 (0.0006794)*	0.0012165 (0.0006782)*	−0.0000937 (0.0006652)	−0.0000212 (0.000665)
GovCommittee	0.0063904 (0.005049)	0.0062905 (0.0050333)	0.0007294 (0.0065278)	0.0004949 (0.0065191)
AUCommittee	−0.0168187 (0.0142085)	−0.0060426 (0.0143505)	−0.0264705 (0.0078118)***	−0.0214968 (0.0079613)***
BIndep	0.0021838 (0.0048477)	0.0032381 (0.0048446)	0.0051567 (0.0066139)	0.0057874 (0.0066107)
BgenderDiv	−0.0007413 (0.0001378)***	−0.0007037 (0.0001377)***	−0.0005054 (0.0001874)***	−0.0004897 (0.0001873)***
CSRCommittee	−0.0031996 (0.0038808)	−0.0033001 (0.0038761)	0.0016203 (0.0047224)	0.0017924 (0.0047186)
Assurance	−0.0058352 (0.0035554)	−0.0064153 (0.003552)*	0.0004987 (0.00501)	−0.0001214 (0.0050091)
EUTaxonomy	0.0118961 (0.0018867)***	0.0118607 (0.0018872)***	0.0090743 (0.002669)***	0.009153 (0.0026683)***
CSRD	−0.0036229 (0.0042586)	−0.003402 (0.00426)	−0.0094725 (0.0062163)	−0.0091075 (0.0062155)
ReportingTCFD	−0.0131979 (0.0026579)***	−0.0135051 (0.0026577)***	−0.0199226 (0.0042713)***	−0.0199754 (0.0042691)***
R ²	12.15	12.83	23.49	23.86
Obs.	8360	8360	5128	5128
Groups	2728	2728	1977	1977

Note: Standard errors are given in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$ and * $p < 0.1$.

with good corporate governance; $\beta = -0.0391212$, $p < 0.01$, for firms with poor corporate governance), whereas ownership by short-term institutional investors is positively and significantly associated with ESG decoupling only in firms with good corporate governance ($\beta = 0.0139819$, $p < 0.05$).

5.2 | Industry ESG Sensitivity

Prior research has shown that the sector in which a firm operates significantly shapes its ESG disclosure practices and performance (Garcia et al. 2017; Jansen et al. 2024; Loureiro

et al. 2024). Firms operating in industries classified as ‘sensitive’ (i.e., those associated with higher environmental and social impacts, such as oil, gas, chemicals, mining, metals and forest products) typically face greater stakeholder scrutiny and pressure to improve their ESG performance and disclosure than firms in ‘nonsensitive’ industries (Hawn and Ioannou 2016; Garcia et al. 2017). Moreover, industry ESG sensitivity has been shown to moderate the effectiveness of corporate governance mechanisms in influencing ESG performance and disclosure, which is higher for companies operating in sensitive industries (Gull, Hussain, Khan, Khan, et al. 2023; Amin et al. 2025).

Following S. M. Monteiro and Aibar-Guzmán (2010), Garcia et al. (2017) and Gull et al. (2023b, 2024), we classify companies into two groups according to the environmental sensitivity of the industry in which they operate. Thus, the first group (sensitive industry) consists of firms operating in mining, oil and gas, paper, chemicals (excluding pharmaceuticals) and metals, whereas the second group (nonsensitive industry) includes firms belonging to the remaining industries.

As shown in Table 8, institutional ownership is negatively and significantly associated with ESG decoupling in both industry types, although its impact is slightly higher for companies belonging to sensitive industries ($\beta = -0.0547266$, $p < 0.01$) than for those operating in nonsensitive industries ($\beta = -0.0484602$, $p < 0.01$). The results for the investment horizon of institutional investors follow a similar pattern. We find a negative and significant relationship between long-term institutional ownership and ESG decoupling in both sensitive ($\beta = -0.0357952$, $p < 0.01$) and nonsensitive ($\beta = -0.0386845$, $p < 0.01$) industries and a positive, though marginally significant, relationship in the case of short-term institutional ownership (sensitive industries: $\beta = 0.0016739$; nonsensitive industries: $\beta = 0.0083334$, $p < 0.05$).

5.3 | Home Country Development Level

The institutional, regulatory, economic and cultural environment of a company’s home country plays a crucial role in shaping its sustainability practices (Ortas et al. 2015; Mooneepen et al. 2022; Singhanian et al. 2023). Developed countries tend to have more stringent sustainability reporting requirements, stronger enforcement mechanisms and greater stakeholder awareness, whereas emerging markets are often characterised by weaker regulatory frameworks, less mature financial markets and lower levels of stakeholder activism, which may facilitate ESG decoupling (Tashman et al. 2019). These contextual differences also shape the monitoring role of institutional investors and their engagement in corporate governance (Gillan and Starks 2003) and may therefore affect the effectiveness of institutional investors in promoting transparency and accountability.

Following Gull, Hussain, Khan, Khan, et al. (2023), the sample companies were divided into two groups according to their country of origin. Thus, the first group (developed countries) consists of companies from developed countries,¹ whereas the remaining companies were grouped in the second group (emerging countries). The results reported in Table 9 show

that our main results are not affected by differences in the level of development of the firm’s home country, thus confirming their validity.

6 | Discussion

This research aimed to analyse whether and under what circumstances their presence in a company’s share capital contributes to mitigating ESG decoupling. The results confirm both hypotheses and provide important insights into the role of institutional investors in reducing ESG decoupling, as well as the differentiated influence of these investors depending on their investment horizon. First, we show that, as hypothesised in Hypothesis 1, institutional ownership mitigates ESG decoupling. This result is consistent with prior research suggesting that institutional investors act as stewards of corporate governance (Serafeim 2018), align managers’ actions with stakeholder interests (García-Sánchez, Aibar-Guzmán, et al. 2020; García-Sánchez et al. 2021; J. Huang et al. 2025) and improve both actual sustainability performance and ESG disclosure (Brandon et al. 2020; Dyck et al. 2019; García-Sánchez, Rodríguez-Ariza, et al. 2020). In particular, this result corroborates the findings of Yu et al. (2020), who found that institutional ownership reduces greenwashing behaviour, as well as those of Gull, Hussain, Khan, Khan, et al. (2023) and Gull et al. (2024), who, considering institutional ownership as a control variable, documented a negative and significant association between it and ESG decoupling. Moreover, our result is consistent with the findings of Y. Li and Xiao (2025), who found a negative association between institutional investors’ site visits and greenwashing in Chinese listed companies.

Second, we show that the effect of institutional ownership on ESG decoupling varies according to their investment horizon, and in particular, that ownership by long-term institutional investors reduces ESG decoupling (Hypothesis 2a), whereas ownership by short-term institutional investors exacerbates it (Hypothesis 2b). Again, these results are consistent with prior studies showing that the effectiveness of institutional investors in promoting corporate sustainability and transparency depends on their investment horizon (Oh et al. 2011; García-Sánchez, Aibar-Guzmán, et al. 2020; García-Sánchez, Aibar-Guzmán, et al. 2022; Velte 2023b). In particular, our results confirm the positive effect of long-term investors on ESG disclosure (Johnson and Greening 1999; García-Sánchez, Rodríguez-Ariza, et al. 2020, Ali et al. 2024; J. Huang et al. 2025). Regarding short-term institutional investors, our findings support the ‘myopic investor hypothesis’, which suggests that short-term investors prioritise short-term returns over long-term strategic initiatives, including sustainability (García-Sánchez, Aibar-Guzmán, et al. 2020; Meng and Wang 2020).

With respect to the control variables, we found that firm size, gender diversity of the board, the existence of an audit committee, the adoption and enactment of the CSRD and the fact that the company follows the recommendations of the Task Force on Climate-related Financial Disclosures in preparing its sustainability reports negatively affect ESG decoupling. With respect to the CSRD, our result is consistent with the findings of Aboud et al. (2024), who found that both the adoption and the effective implementation of

TABLE 8 | Random effects panel data results—Analysis by sector ESG sensitivity.

Variables	Sensitive industries		Nonsensitive industries	
	Coef. (std. err.)	Coef. (std. err.)	Coef. (std. err.)	Coef. (std. err.)
Independent variable				
InstInv	−0.0547266 (0.010831)***		−0.0484602 (0.008293)***	
STInstInv		0.0016739 (0.0111786)		0.0083334 (0.0075725)**
LTInstInv		−0.0357952 0 (0.0062406)***		−0.0386845 (0.0050041)***
Control variables				
Size	−0.0061128 (0.0026442)**	−0.0044054 (0.0026967)	−0.0121414 (0.001846)***	−0.0092416 (0.001926)***
CAPEX	−7.62e-07 (2.91e-06)	−6.16e-07 (2.91e-06)	1.12e-07 (3.44e-07)	1.01e-07 (3.44e-07)
CashFlowOA	4.27e-13 (4.92e-13)	3.37e-13 (4.93e-13)	1.63e-12 (5.01e-13)***	1.41e-12 (5.02e-13)***
ROA	0.0253525 (0.0105922)**	0.0255008 (0.0105775)**	−0.0008955 (0.0076961)	0.0008646 (0.0076885)
Leverage	0.0198503 (0.0074398)***	0.0202938 (0.007417)***	0.0040229 (0.0059295)	0.0045082 (0.0059184)
TobinsQ	0.0025107 (0.0013139)*	0.0024062 (0.0013089)*	0.0000883 (0.0005857)	−0.0001963 (0.0005872)
DLOSS	0.0047106 (0.0040342)	0.0039504 (0.0040498)	0.0019996 (0.0034341)	0.001645 (0.00343)
Accruals	7.21e-13 (9.95e-13)	7.57e-13 (9.95e-13)	9.18e-13 (6.38e-13)	8.00e-13 (6.38e-13)
ESGS	−0.0002364 (0.0001757)	−0.0002235 (0.0001754)	0.0004073 (0.0001361)***	0.0004399 (0.000136)***
BSize	0.0019801 (0.000911)**	0.0020553 (0.0009092)***	0.0000122 (0.0005491)	0.000094 (0.0005485)
GovCommittee	0.0083487 (0.0065035)	0.008078 (0.0064805)	0.0013474 (0.0052447)	0.0013814 (0.0052345)
AUCommittee	−0.0146928 (0.0104939)	−0.0102291 (0.010635)	−0.0233188 (0.0082102)***	−0.015334 (0.0083435)*
BIndep	0.0062155 (0.0060736)	0.0067934 (0.0060759)	0.0031937 (0.0050673)	0.0039935 (0.0050615)
BgenderDiv	−0.0011576 (0.0001796)***	−0.0011208 (0.0001797)***	−0.0004384 (0.000143)***	−0.0004151 (0.0001429)***
CSRCommittee	0.0092405 (0.0049849)*	0.0093866 (0.0049843)*	−0.0076485 (0.0037326)**	−0.0076178 (0.0037268)**
Assurance	−0.007338 (0.0045197)	−0.0076152 (0.0045183)*	−0.0030827 (0.0037936)	−0.0040304 (0.003792)
EUTaxonomy	0.0125936 (0.0023778)***	0.0126588 (0.0023842)***	0.0092202 (0.0019721)***	0.0091981 (0.0019697)***
CSRD	−0.0059153 (0.0050732)	−0.0059758 (0.0050871)	−0.0055056 (0.0045703)	−0.0050186 (0.0045657)
ReportingTCFD	−0.0170067 (0.0034376)***	−0.0170611 (0.0034435)***	−0.0131829 (0.0029498)***	−0.0135053 (0.0029465)***
R ²	21.60	22.09	18.50	19.01
Obs.	5376	5376	8112	8112
Groups	1535	1535	2298	2298

Note: Standard errors are given in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$ and * $p < 0.1$.

Directive 2014/95 (known as the NFRD) have a mitigating effect on ESG decoupling, whereas the negative effect of following the recommendations of the Task Force on Climate-related Financial Disclosures could be assimilated to that of other sustainability reporting guidelines (in particular, the Global Reporting Initiative [GRI] reporting guidelines), as documented by Sauerwald and

Su (2019) and García-Sánchez, Hussain, et al. (2022). With respect to firm size, our result is consistent with that of Y. Huang et al. (2022), whereas the negative effect of board gender diversity is consistent with the findings of Aboud et al. (2024); García-Sánchez, Hussain, et al. (2022); Eliwa et al. (2023); Gull, Hussain, Khan, Nadeem, et al. (2023); and Velte (2025a).

TABLE 9 | Random effects panel data results—Analysis by level of development of firms' home country.

Variables	Emerging countries		Non-emerging countries	
	Coef. (std. err.)	Coef. (std. err.)	Coef. (std. err.)	Coef. (std. err.)
Independent variables				
InstInv	−0.0717432 (0.0128948)***		−0.0333463 (0.007904)***	
STInstInv		−0.0227553 (0.020317)		0.0108626 (0.0066304)***
LTInstInv		−0.037482 (0.0068462)***		−0.0324125 (0.0049801)***
Control variables				
Size	−0.0064759 (0.0036881)*	−0.0060035 (0.0037487)	−0.0095125 (0.0016809)***	−0.0070091 (0.0017425)***
CAPEX	4.23e-07 (5.44e-07)	4.26e-07 (5.44e-07)	−1.55e-07 (4.39e-07)	−1.47e-07 (4.38e-07)
CashFlowOA	1.79e-13 (6.60e-13)	1.57e-13 (6.60e-13)	1.29e-12 (4.21e-13)***	1.12e-12 (4.22e-13)***
ROA	0.0158156 (0.0193671)	0.0154493 (0.0193729)	0.0090097 (0.0065755)	0.0097625 (0.0065627)
Leverage	0.0175081 (0.0112102)	0.0175291 (0.011205)	0.0124608 (0.0051097)**	0.012871 (0.0050986)**
TobinsQ	0.0020807 (0.001763)	0.0020102 (0.0017651)	0.0002302 (0.0005604)	3.51e-06 (0.0005608)
DLOSS	−0.000535 (0.0078011)	−0.0006067 (0.0078044)	0.0052601 (0.0027963)*	0.0046588 (0.0027971)*
Accruals	−6.26e-13 (1.42e-12)	−6.15e-13 (1.42e-12)	6.90e-13 (5.55e-13)	6.29e-13 (5.55e-13)
ESGS	0.0003878 (0.0002312)*	0.0003868 (0.0002312)*	0.0001098 (0.0001229)	0.0001382 (0.0001228)
BSize	0.0019329 (0.0012859)	0.0019687 (0.0012867)	0.0004209 (0.0005057)	0.00048 (0.0005052)
GovCommittee	−0.001973 (0.0079485)	−0.0019161 (0.0079464)	0.0111053 (0.005036)**	0.0112712 (0.0050237)**
AUCommittee	−0.0116985 (0.0135495)	−0.0106426 (0.0136394)	−0.0243663 (0.0079349)***	−0.0151346 (0.008126)*
BIndep	0.023375 (0.0085852)***	0.0238206 (0.0086101)***	−0.0002865 (0.0044452)	0.0003007 (0.0044411)
BgenderDiv	−0.0001156 (0.0002695)	−0.0001139 (0.0002695)	−0.000697 (0.0001241)***	−0.00067 (0.0001241)***
CSRCommittee	−0.003227 (0.0079839)	−0.0033223 (0.0079848)	−0.0022401 (0.0032285)	−0.0020827 (0.0032253)
Assurance	−0.0058625 (0.0070884)	−0.0058327 (0.0070885)	−0.0071708 (0.0032064)**	−0.0079481 (0.003206)**
EU Taxonomy	0.008369 (0.0035475)**	0.0083738 (0.0035494)**	0.0103606 (0.0016934)***	0.0104629 (0.0016933)***
CSRD	−0.002152 (0.0172216)	−0.0018291 (0.0172379)	−0.006364 (0.0034439)*	−0.0059759 (0.0034443)*
ReportingTCFD	−0.003747 (0.0061563)	−0.0036336 (0.0061607)	−0.015994 (0.0024335)***	−0.0163005 (0.0024331)***
R ²	20.16	20.26	16.74	17.28
Obs.	2359	2359	10,707	10,707
Groups	774	774	2929	2929

Note: Standard errors are given in parentheses. Significance levels: *** $p < 0.01$, ** $p < 0.05$ and * $p < 0.1$.

On the other hand, operating cash flow, leverage and the EU taxonomy have a positive impact on ESG decoupling. Like us, Velte (2025a) found that corporate leverage favours decoupling in sustainability reporting. Regarding the positive effect of the EU taxonomy on ESG decoupling, our results contrast with those of García-Sánchez et al. (2023), who found that the EU

taxonomy regulation favours the materiality of environmental disclosures. Furthermore, the lack of a statistically significant impact of board independence, the presence of a CSR committee on the board and sustainability assurance on ESG decoupling contrasts with the findings of Sauerwald and Su (2019); Aboud et al. (2024); Eliwa et al. (2023); Gull, Hussain, Khan,

Khan, et al. (2023); Gull, Hussain, Khan, Nadeem, et al. (2023); Gull et al. (2024); and Velte (2025a) and partially with those of García-Sánchez, Hussain, et al. (2022), who find a negative effect of sustainability assurance on ESG decoupling but, like us, no effect of board independence and CSR committees.

From a theoretical perspective, our results contribute to agency theory in two ways. First, we show that institutional ownership mitigates agency problems by reducing ESG decoupling. Thus, we confirm that institutional investors play a relevant monitoring role within a firm's corporate governance structure. Second, we show that the investment horizon of institutional investors significantly affects their influence on ESG decoupling, and therefore, not all institutional investors play the same monitoring role (Yin et al. 2018; Meng and Wang 2020).

The findings extend previous research on the diverse influence of institutional investors on corporate sustainability, reflecting their different investment horizons and strategic priorities (Oh et al. 2011; García-Sánchez, Aibar-Guzmán, et al. 2020; García-Sánchez, Aibar-Guzmán, et al. 2022; Velte 2023b; Aibar-Guzmán et al. 2024). They highlight the importance of taking investor heterogeneity into account when analysing the dynamics of sustainability disclosure and its impact on corporate governance (Yin et al. 2018). Our findings also provide pioneering evidence in the research on ESG decoupling, by showing that not all institutional investors are equally effective in reducing ESG decoupling and by highlighting the critical role of investment horizon, which helps to explain previous mixed results. The fact that these findings are unaffected by differences in the corporate governance quality of the company, the ESG sensitivity of the sector in which it operates and the level of development of its home country not only confirms their validity but also provides a more nuanced understanding of the relationship between institutional ownership and ESG decoupling.

The findings also have important practical and policy implications. First, they highlight the value of regulatory initiatives that encourage long-term investment strategies, such as incentives for pension funds and other long-term institutional investors to engage in active monitoring. In addition, policymakers and standard setters could consider introducing more stringent ESG reporting requirements to reduce the scope for ESG decoupling, particularly in companies with significant short-term institutional ownership.

7 | Concluding Remarks

ESG decoupling, often driven by managerial opportunism that uses ESG disclosure as a window-dressing tool to satisfy stakeholders or enhance corporate legitimacy without corresponding substantive action (Kim and Lyon 2015; Tashman et al. 2019), poses significant risks to stakeholder trust and the integrity of financial markets (García-Sánchez, Hussain, et al. 2022; Talpur et al. 2024; Cepêda et al. 2025). In this context, the monitoring role of institutional investors is particularly critical, given their influence on corporate sustainability strategies and disclosure practices. This study analyses whether and under what circumstances institutional ownership helps to bridge the gap between corporate sustainability rhetoric and reality. Based on data from

3465 listed companies worldwide from 2009 to 2023 (13,488 firm-year observations), the findings suggest that institutional investors help align ESG disclosure and actual performance, thereby reducing ESG decoupling. However, their impact varies significantly depending on their investment horizon: whereas long-term institutional investors help mitigate ESG decoupling, short-term institutional investors exacerbate it.

This study makes several theoretical and practical contributions. Theoretically, it advances the literature on agency theory and corporate governance by demonstrating that institutional investors play a critical monitoring role in mitigating ESG decoupling, although their effectiveness depends on their investment horizon. By distinguishing between long-term and short-term investors, the study provides insights into the heterogeneous influence of institutional ownership on corporate sustainability practices. From a practical perspective, the findings have important implications for policymakers, regulators and investment professionals. They highlight the need for regulatory initiatives that incentivise long-term institutional investment and active shareholder engagement, as well as the importance of strengthening ESG reporting requirements to reduce the risk of decoupling.

Despite the theoretical and practical relevance of its findings, this study, like any empirical research, has certain limitations that open avenues for future research. First, although it distinguishes between long- and short-term institutional investors, it does not account for potential heterogeneity within these categories (García-Sánchez, Rodríguez-Ariza, et al. 2020). Future research could explore whether differences in investor characteristics, such as investment objectives or corporate ties, further shape their influence on ESG decoupling, as well as individually analysing the influence of specific types of institutional investors. Second, although the study identifies robust patterns across developed and emerging markets, further research is needed to assess how cultural, regulatory and macroeconomic factors mediate the relationship between institutional investors and ESG decoupling. In addition, future studies could analyse the role of specific internal corporate governance mechanisms, such as board composition, executive incentives or sustainability committees, as potential mediators or moderators of this relationship. Expanding research in these areas would provide a more comprehensive understanding of how institutional investors influence corporate sustainability transparency and performance alignment.

Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

¹ The developed country group consists of firms from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging economies sub-sample included companies from Brazil, China, Colombia, the Czech Republic, Greece, India, Indonesia, Korea, Malaysia, Mexico, the Philippines, Poland, the Russian Federation, South Africa, Taiwan, Thailand and Turkey.

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Appendix

Calculation of the CSRGap Measure Based on García-Sánchez, Hussain, et al. (2022)

External CSR practices	Internal CSR practices
1. The firm reports that it produces or commercialises products or services that promote health and safety benefits for users.	1. Proportion of nonexecutive directors on the audit committee.
2. The firm states that it favours internal promotion.	2. Proportion of nonexecutive directors on the nomination committee.
3. The firm discloses information about HIV/AIDS policies and programmes in the workplace or elsewhere.	3. The firm has a policy in place to encourage employee training or career development.
4. The firm discloses information on crisis management systems or reputational disaster recovery plans to mitigate or minimise the impact of reputational damage.	4. The firm has a policy in place for improving workers' health and safety both in the firm and in its supply chain.
5. The firm discloses information on environmentally friendly facilities and/or offices.	5. The firm applies environmental criteria in selecting its suppliers.
6. The firm discloses information on measures taken to minimise, reuse, substitute or eliminate toxic chemicals or substances.	6. The firm utilises renewable energy.
7. The firm discloses information on its efforts to reduce the environmental impact of transporting its products or personnel.	7. The firm has an energy efficiency policy.
8. The firm discloses information on measures to minimise, replace or eliminate CO ₂ equivalents in its manufacturing processes.	8. The firm has a water efficiency policy.
9. The firm discloses information on initiatives to reduce, reuse, substitute, treat or eliminate total waste.	9. The firm develops products or technologies to treat or purify water or to improve the efficiency of water use.
10. The firm discloses information on volatile organic compound (VOC) reduction, substitution or phase-out initiatives.	10. The firm has an emissions reduction policy.
11. The firm discloses information on measures to reduce or eliminate sulphur oxides (SO _x) or nitrogen oxides (NO _x) emissions.	11. The firm has a policy to ensure that minority shareholders are treated equally, to facilitate shareholder participation or to limit the use of antitakeover devices.
12. The firm discloses information on measures to reduce or replace ozone-depleting substances (CFC-11 equivalent chlorofluorocarbons).	12. The firm's articles of association or bylaws require that share options can only be granted with a vote at a shareholders' meeting.
13. The firm states or demonstrates a willingness to terminate relationships with suppliers that fail to meet human rights criteria.	13. The firm has a performance-related compensation policy in place to attract and retain senior executives and directors.
14. The firm discloses or demonstrates that it applies human rights criteria in selecting or monitoring its suppliers.	14. The firm has a policy in place to ensure a balanced composition of the board of directors.
15. The firm states that it offers its employees a pension fund, healthcare or other types of insurance.	15. The firm has an audit committee consisting of at least three members and at least one 'financial expert' as defined by the Sarbanes–Oxley Act.
16. The firm states that it offers a bonus scheme to the majority of its employees.	16. The firm has a policy in place that ensures freedom of association, notwithstanding local laws and a policy prohibiting the use of child, forced or compulsory labour.
17. The firm states that it offers childcare for its employees.	17. The firm has a policy to ensure competitive employee benefits or good labour relations in its supply chain and a policy in place to encourage long-term employment growth and stability.
18. The firm has a good corporate citizenship policy or supports the Global Sullivan Principles and has a business ethics policy or is a signatory to the UN Global Compact or adheres to the OECD Guidelines.	18. The firm has a policy on work–life balance and a policy on diversity and equal opportunities.
19. The firm states that it offers flexible working hours and supports work–life balance.	
20. The firm states that it provides regular human resources and business management training for its managers.	
CSR reporting decoupling calculation	

Following the procedure of García-Sánchez, Hussain, et al. (2022), we create the variables 'External CSR practices' and 'Internal CSR practices' by summing each of the above items for each company and year. We then normalise each variable. Lastly, we calculate the variable CSRGap as the difference between the normalised value of the variable 'External CSR practices' at t and the normalised value of the variable 'Internal CSR practices' at $t-1$.

Source: Adapted from García-Sánchez, Hussain, et al. (2022, 137–138).