

# When governance bundles backfire: institutional crowding in corporate sustainability<sup>1</sup>

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## Abstract

**Framing of the research:** Corporate sustainability research highlights the importance of governance mechanisms in driving sustainability outcomes. This study investigates whether governance bundles always enhance sustainability performance or whether their coexistence can generate institutional crowding.

**Purpose of the paper:** This paper investigates how different governance mechanisms, internal sustainability leadership and external sustainability affiliations, affect corporate sustainability performance. Although both approaches are increasingly adopted by firms to address sustainability challenges, their individual and joint effects remain unclear.

**Methodology:** The research employs a longitudinal quantitative design based on panel data of European listed companies over a fourteen-year period.

**Findings:** The results show that both internal sustainability leadership and external affiliations independently enhance corporate sustainability performance. However, their combination does not always yield additive benefits. Instead, the coexistence of the two mechanisms may lead to institutional crowding, a condition in which overlapping governance practices routinize sustainability initiatives and reduce the strategic influence of sustainability leaders.

**Research limits:** The study focuses on European listed firms, which may limit the generalizability of findings to other contexts. The quantitative design, while robust, captures associations rather than causal mechanisms, and future research could integrate qualitative insights to explore organizational processes underlying institutional crowding.

**Practical implications:** The findings suggest that firms should carefully design their governance architectures to ensure alignment between internal leadership and external affiliations. Without such integration, overlapping mechanisms risk diluting rather than reinforcing sustainability outcomes.

**Originality of the paper:** The paper introduces the concept of institutional crowding to explain why multiple governance practices may not always be complementary. By conceptualizing sustainability leadership and affiliations as part of broader governance bundles, the study advances theoretical understanding of how firms organize for sustainability and offers actionable insights for designing effective governance systems.

**Key words:** corporate sustainability; sustainability governance; governance bundles; institutional crowding; sustainability leadership; external affiliations; upper echelons theory; resource dependence theory

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## 1. Introduction

In recent years, firms have been called upon to move beyond symbolic gestures and demonstrate credible progress on sustainability. Rising expectations from regulators, investors, consumers, and civil society actors have made sustainability a defining challenge of corporate governance in the twenty-first century (Bansal and Song, 2017; Eccles and Klimenko, 2019). This shift has stimulated intense debate on how companies should organize their sustainability efforts, and which governance mechanisms are most effective in driving meaningful change.

Two mechanisms have gained prominence. The first is the development of sustainability leadership within the firm, expressed through executive roles, dedicated functions, and organizational structures designed to embed sustainability into decision-making processes. Firms increasingly appoint Chief Sustainability Officers (CSOs), establish board-level committees, and allocate responsibilities to ensure that sustainability is not relegated to peripheral activities but integrated into the firm's strategic core (Peters *et al.*, 2019). The second is the expansion of sustainability affiliations beyond the firm, whereby companies join global networks, voluntary standards, and multi-stakeholder initiatives, such as the United Nations Global Compact (UNGC), the Global Reporting Initiative (GRI), or the Science-Based Targets initiative, to align with international norms, gain legitimacy, and signal commitment to stakeholders (Rasche, 2009; Berliner and Prakash, 2015; Crilly *et al.*, 2012; Scherer *et al.*, 2016).

Existing scholarship has provided valuable insights into each of these governance mechanisms. Research on internal leadership highlights the importance of executive attention, top management characteristics, and managerial structures in advancing sustainability strategies and performance (Sharma, 2000; Waldman and Siegel, 2008; Crilly *et al.*, 2016; Velte and Stawinoga, 2020). Studies on external affiliations emphasize the role of networks, institutional frameworks, and transnational standards in shaping organizational behavior and conferring legitimacy (Matten and Moon, 2008; Rasche and Gilbert, 2012; Haack and Scherer, 2014; Marquis and Qian, 2014). Yet these strands of literature have largely evolved in parallel. As a result, we know relatively little about how the two governance mechanisms compare in their effectiveness, and even less about what happens when they coexist within the same organization.

This gap is important because firms rarely adopt governance mechanisms in isolation. Instead, they create bundles of governance arrangements (Delery and Doty, 1996; Aguilera *et al.*, 2015), combining internal and external elements in the hope of reinforcing their sustainability efforts. The implicit assumption is that “more is better”: that sustainability leadership within and sustainability affiliations beyond will complement one another and generate stronger outcomes when adopted together. However, this assumption remains largely untested. Do governance bundles always reinforce sustainability performance? Or can their interaction produce counterintuitive effects that undermine, rather than strengthen, corporate sustainability outcomes?

This paper addresses these questions by examining the role of sustainability leadership within the firm and sustainability affiliations beyond the firm, both separately and in combination. Drawing on upper echelons theory (Hambrick and Mason, 1984; Hambrick, 2007) and resource dependence theory (Pfeffer and Salancik, 1978), we analyze fourteen years of longitudinal data on European listed companies. Our results show that each governance mechanism independently contributes positively to sustainability performance. Yet, when combined, their effects are not necessarily complementary. Instead, we observe cases in which governance bundles appear to backfire, delivering weaker outcomes than expected. We explain this finding through the notion of institutional crowding (cf. Risi and Wickert, 2017), whereby overlapping governance mechanisms interact in ways that reduce their individual effectiveness. In particular, when internal leadership and external affiliations coexist without meaningful integration, external commitments may routinize sustainability practices and shift attention toward compliance, thereby diminishing the strategic influence of executive roles and constraining proactive decision-making.

This study makes two contributions. First, it advances theory by conceptualizing sustainability leadership and affiliations as components of governance bundles and demonstrating that such bundles are not inherently complementary. By introducing the concept of institutional crowding, we show how governance mechanisms can interact in ways that constrain rather than amplify sustainability performance. Second, the study offers practical insights for managers and policymakers. Designing effective sustainability governance architectures requires more than the accumulation of mechanisms; it requires careful alignment between leadership within and affiliations beyond, so that governance bundles strengthen-rather than dilute-the firm's capacity for transformative change.

The remainder of the paper proceeds as follows. We first review the literature on sustainability leadership within firms and sustainability affiliations beyond firms, identifying the theoretical underpinnings of each and highlighting the gap in research on their interplay. We then present our methodological approach, including data, measures, and analytical strategy. Next, we report our empirical findings on the separate and combined effects of internal leadership and external affiliations. Finally, we discuss the theoretical and practical implications of these results, introduce the concept of institutional crowding, and conclude by outlining directions for future research.

## 2. Theoretical background and hypotheses

### 2.1 Sustainability leadership within the firm

The idea that executive leadership plays a central role in shaping organizational outcomes has long been established in management and governance research. In the context of sustainability, sustainability leadership within the firm refers to the capacity of senior decision makers to direct organizational attention, allocate resources, and integrate

environmental and social priorities into strategic decision-making processes.

As sustainability challenges have become more complex and strategically relevant, firms have increasingly formalized such leadership through dedicated governance structures. Earlier efforts often relied on sustainability managers or dispersed responsibilities across departments; however, these arrangements are frequently insufficient to address the cross-functional and strategic nature of contemporary sustainability challenges.

Prior literature highlights these limitations of fragmented sustainability governance and emphasizes the need for more centralized and integrated leadership structures. Strand (2014) argues that sustainability responsibilities often lose influence when they are marginalized within lower-level functions or disconnected from strategic decision-making authority. Similarly, Peters *et al.* (2019) show that the effectiveness of sustainability leadership depends heavily on organizational positioning and access to top management processes. Velte and Stawinoga (2020) further note that governance mechanisms such as sustainability committees create value primarily when they are embedded in broader decision-making systems rather than operating as symbolic add-ons. Collectively, these studies suggest that dispersed and isolated sustainability roles may struggle to generate substantive organizational change unless supported by enterprise-wide authority and coordination mechanisms. Consequently, many organizations now appoint CSO to lead specialized sustainability units. Positioned at the upper levels of the organizational hierarchy, the CSO is typically responsible for articulating the firm's sustainability vision, embedding sustainability principles into corporate strategy, and ensuring the enterprise-wide integration of sustainability initiatives.

Beyond the appointment of CSOs, firms also create board-level sustainability committees or assign ESG responsibilities to senior executives. These arrangements can be understood as formalized manifestations of sustainability leadership because they signal, both internally and externally, that sustainability has become part of the firm's strategic agenda (Peters *et al.*, 2019; Velte and Stawinoga, 2020). At the same time, they provide the organizational infrastructure necessary to translate sustainability commitments into practice through target setting, monitoring, coordination across departments, and accountability mechanisms that ensure sustainability considerations influence investment and innovation decisions. Accordingly, the appointment of a CSO and related governance structures represents a meaningful proxy for sustainability leadership within the firm.

Prior empirical research provides growing evidence that such governance arrangements can improve corporate sustainability outcomes while also highlighting important boundary conditions. Studies show that firms with CSOs or sustainability committees are more likely to pursue proactive environmental strategies (Sharma, 2000), adopt ambitious climate policies (Eccles *et al.*, 2014), and achieve stronger ESG performance metrics (Velte and Stawinoga, 2020). Waldman and Siegel (2008) further argue that the values of sustainability-oriented leaders are crucial for

embedding responsible practices throughout the organization, while Crilly *et al.* (2016) suggest that leadership can reduce decoupling between symbolic sustainability communication and substantive implementation.

At the same time, research warns against overly deterministic assumptions, as the effectiveness of CSOs appears contingent rather than universal. Korendijk and Drogendijk (2024) examine CSOs as attention carriers for CSR activities and show that their influence depends on organizational attention principles. Similarly, Fu *et al.* (2020) find that appointing a CSO increases CSR and reduces CSiR (corporate social irresponsibility), with particularly strong effects for mitigating irresponsible behavior. These effects are amplified when firms operate in culpable industries and when sustainability committees are present. However, sustainability committees may weaken the positive effect of CSOs on CSR, suggesting a substitutive relationship for positive CSR activities but a complementary one for reducing CSiR. Other studies also caution that formal roles do not automatically guarantee effectiveness. Their impact depends on factors such as hierarchical position, access to top management teams, available resources, and integration into core decision-making processes (Strand, 2014; Peters *et al.*, 2019). Sustainability committees, for instance, may remain symbolic if disconnected from strategic governance processes (Velte and Stawinoga, 2020).

These findings reinforce the importance of examining not only the presence but also the functioning of sustainability leadership within firms. Therefore, building on upper echelons theory (UET), Hambrick and Mason (1984) famously argue that organizations are reflections of their top managers, insofar as executives' demographic characteristics, experiences, values, and cognitive orientations shape strategic choices. Later refinements of UET emphasize that executives influence not only the direction of corporate strategy but also how organizations attend to complex, ambiguous, or uncertain issues such as sustainability, making executives particularly consequential in contexts where strategic responses are not predetermined (Hambrick, 2007). Sustainability constitutes precisely such a domain, as firms must balance financial objectives with environmental and social expectations from multiple stakeholders.

From a UET perspective, formal sustainability leadership structures such as the appointment and presence of CSOs matter because they signal the embeddedness of sustainability-oriented perspectives within the upper echelons of the organization. These actors can shape strategic attention, champion long-term sustainability initiatives, allocate resources, and ensure that sustainability concerns are integrated into corporate policies and operations. As a result, firms with stronger sustainability leadership should be better positioned to translate sustainability priorities into measurable organizational outcomes. In this study, we operationalize sustainability leadership within the firm by using the appointment of a CSO as a proxy for formal executive-level sustainability authority, representing a critical organizational shift toward embedding sustainability within corporate governance. Taken together, these arguments lead to the following hypothesis:

*H1: Sustainability leadership within the firm is positively associated with corporate sustainability performance.*

## 2.2 Sustainability affiliations beyond the firm

While internal leadership roles anchor sustainability within the organizational hierarchy, firms also increasingly rely on external affiliations to address societal expectations and build legitimacy. According to resource dependence theory (RDT), organizations depend on their external environment for critical resources, legitimacy, and survival (Pfeffer and Salancik, 1978). Affiliations with external governance mechanisms, including global compacts, voluntary standards, and industry networks, can provide firms with both normative guidance and reputational benefits that help them secure critical resources.

One of the most prominent affiliations is the United Nations Global Compact (UNGC), which encourages firms to commit to ten principles covering human rights, labor standards, environmental protection, and anti-corruption (Rasche, 2009; Berliner and Prakash, 2015). Other initiatives such as the Global Reporting Initiative (GRI), the Carbon Disclosure Project (CDP), and the Science-Based Targets initiative (SBTi) represent complementary frameworks for disclosing sustainability information and aligning with global norms. Affiliations with these initiatives are often interpreted as signals of commitment to responsible practices, which can reduce stakeholder skepticism and enhance legitimacy in competitive markets (Haack and Scherer, 2014; Marquis and Qian, 2014).

From an instrumental perspective, affiliations provide access to resources, knowledge, and networks that may support the development of sustainability capabilities. Firms can learn from peers, benchmark practices, and participate in collective standard-setting processes (Matten and Moon, 2008; Rasche and Gilbert, 2012). Affiliations can also act as external constraints, compelling firms to conform to established practices through reporting requirements, third-party assessments, or peer scrutiny (Scherer *et al.*, 2016).

Empirical research supports the performance implications of external affiliations. Studies find that UNGC participation is associated with improved reporting quality (Rasche, 2009), enhanced CSR disclosure (Marquis and Qian, 2014), and better ESG ratings (Berliner and Prakash, 2015). Affiliations also contribute to reputation gains, which can translate into improved stakeholder relations and, ultimately, better financial performance (Ioannou and Serafeim, 2012). Sustainability affiliations, operationalized in this study through firms' participation in the UNGC, constitute principles-based governance arrangements that obligate signatory firms to align with internationally endorsed environmental, social, and governance norms. Participation in such initiatives entails a voluntary commitment to embed these principles within corporate strategies, policies, and operational routines, alongside an expectation of periodic disclosure regarding implementation efforts and progress. Affiliation with a sustainability initiative such as the UNGC therefore implies both normative and procedural obligations, which collectively

incentivize firms to deepen their sustainability engagement to preserve organizational legitimacy and retain membership. Furthermore, participation in these transnational sustainability networks affords firms access to shared expertise, best practices, and opportunities for peer learning, while increasing awareness of emerging regulatory expectations and evolving sustainability standards across institutional contexts. These mechanisms underpin the ongoing enhancement of sustainability-related processes and outcomes. Consequently, firms embedded in sustainability initiatives are better positioned to systematically strengthen their ESG practices, resulting in superior ESG performance.

At the same time, critical perspectives caution that affiliations can be used for symbolic purposes, leading to “bluewashing” or symbolic compliance without substantive change (Berliner and Prakash, 2015; Haack and Scherer, 2014). Thus, while affiliations offer potential benefits, their impact depends on how firms internalize external commitments. A study carried out by Mallidis *et al.* (2024), shows that engagement with the UNGC and ISO improves environmental and social outcomes while reducing CSR controversies. However, UNGC and ISO engagement weakens the positive effect of women directors on environmental and social performance.

Building on RDT, we argue that sustainability affiliations beyond the firm enable organizations to access legitimacy, knowledge, and reputational resources that strengthen their sustainability outcomes. Accordingly, we hypothesize:

*H2: Sustainability affiliations beyond the firm are positively associated with corporate sustainability performance.*

### 2.3 Towards bundles of sustainability governance mechanisms

Although research on internal leadership and external affiliations has generated important insights, these literatures have largely evolved in parallel. In practice, however, firms rarely rely on a single governance mechanism in isolation. Instead, they tend to develop bundles of governance arrangements (Delery and Doty, 1996; Aguilera *et al.*, 2015), combining multiple internal structures and external affiliations in the expectation that these will reinforce one another.

Prior research has examined interactions within sustainability governance bundles from two complementary angles. First, studies focusing on interactions between internal and external governance mechanisms suggest that their effectiveness is interdependent. For instance, Cheng *et al.* (2025) show that board diversity reduces CSR decoupling, but its effect depends on external governance conditions such as institutional ownership and analyst coverage. Kanashiro and Rivera (2019) similarly demonstrate that the impact of a CSO is contingent on regulatory pressure, highlighting how external institutional environments shape the effectiveness of internal governance structures.

Second, research on sustainability-related governance bundles highlights that multiple mechanisms within firms may interact in non-additive ways. Abweny *et al.* (2024) show that CSR committees, standalone

CSR reporting, and CSR contracting may either complement or substitute for one another in shaping CSR outcomes. Oh *et al.* (2018) further suggest that governance mechanisms do not always operate as intended complements but may generate substitution effects depending on their configuration.

Collectively, this research suggests that sustainability governance does not operate in a strictly additive manner, where more mechanisms automatically yield stronger outcomes. This assumption is nevertheless reflected in both practice and much of the literature, as firms increasingly combine internal governance structures (e.g., CSOs and sustainability committees) with external sustainability affiliations (e.g., UNGC or GRI membership). However, evidence from broader organizational research challenges this linear view. In human resource management, governance practices may interact in ways that produce diminishing or even negative returns when bundled inappropriately (Delery and Doty, 1996). Similarly, Aguilera *et al.* (2015) show that governance bundles may deviate from expected complementarities and generate unintended consequences. In the sustainability domain, Risi and Wickert (2017) further demonstrate how CSR professionalization can unintentionally marginalize sustainability within firms, suggesting that formalization processes may reshape rather than enhance sustainability engagement.

Building on these insights, we conceptualize institutional crowding as an integrative mechanism operating within governance bundles. Institutional crowding captures conditions in which multiple sustainability governance mechanisms that are individually effective coexist but interact in ways that generate overlap, redundancy, and competition for attention and authority, thereby reducing their combined effectiveness.

Institutional crowding is distinct from related constructs in three respects. First, unlike decoupling, which focuses on gaps between formal adoption and implementation, institutional crowding concerns interactions among implemented governance mechanisms. Decoupling research in sustainability and organizational governance highlights how organizations may symbolically adopt practices without fully enacting them in practice (e.g., Bromley and Powell, 2012; Christensen *et al.*, 2013). In contrast, institutional crowding assumes that governance arrangements are operationalized and directs attention to how these implemented mechanisms interact, potentially reinforcing or constraining one another.

Second, unlike institutional complexity, which emphasizes the coexistence of multiple and competing institutional logics within organizations, institutional crowding focuses on the organizational-level effects of overlapping governance arrangements. Institutional complexity research has shown how competing logics shape organizational responses and hybrid practices (e.g., Greenwood *et al.*, 2011; Raynard, 2016). While this literature explains variation in how organizations navigate multiple logics, institutional crowding is more specifically concerned with how overlapping governance mechanisms—often stemming from different logics—interact in practice to shape organizational functioning and outcomes.

Third, unlike substitution or complementary effects, which are typically treated as empirical outcomes, institutional crowding conceptualizes the underlying interaction process that produces such outcomes. The governance literature on bundles and complementarities demonstrates that combinations of practices can produce synergistic or substitutive effects on performance and organizational behavior (e.g., Delery and Doty, 1996; Aguilera *et al.*, 2015). Institutional crowding builds on this insight by theorizing the interaction dynamics among governance mechanisms themselves-prior to or independent of observed performance outcomes-thereby explaining why substitution or complementarity may emerge in the first place.

Taken together, institutional crowding integrates insights from these three streams while distinguishing itself by focusing on the interaction of implemented governance mechanisms as the central analytical object, through which overlapping structures routinize practices, dilute accountability, and constrain strategic discretion.

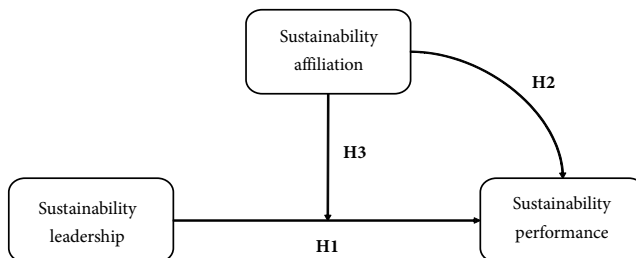
In sustainability contexts, institutional crowding may emerge when strong internal leadership structures and external sustainability affiliations coexist. While each mechanism can independently promote sustainability engagement, their simultaneous presence may shift organizational attention toward routinized and compliance-oriented practices. As sustainability responsibilities become dispersed across multiple internal governance mechanisms and reinforced by external expectations, managerial attention may increasingly gravitate toward fulfilling codified expectations rather than engaging in proactive strategic decision-making. This can constrain discretion, reduce experimentation, and weaken the marginal effectiveness of each individual mechanism.

Institutional crowding therefore challenges the assumption that accumulating governance mechanisms necessarily enhances sustainability performance. Instead, it suggests that the effectiveness of governance bundles depends on the degree of alignment among their components. Where such alignment is limited, internal leadership and external affiliations may interfere with rather than reinforce one another, thereby attenuating sustainability outcomes. Accordingly, we hypothesize:

*H3: The joint presence of sustainability leadership within the firm and sustainability affiliations beyond the firm does not necessarily reinforce sustainability performance; instead, their combination may generate institutional crowding that reduces their effectiveness.*

In Figure 1, we present the conceptual model of this study. The model posits that sustainability leadership is positively associated with sustainability performance (H1). In addition, sustainability affiliation is expected to have a direct positive effect on sustainability performance (H2). Finally, sustainability affiliation is hypothesized to exert an institutional crowding effect (H3), weakening the relationship between sustainability leadership and sustainability performance.

Fig. 1: Conceptual model



Source: Authors' elaboration

### 3. Methodology

#### 3.1 Research design

This study employs a longitudinal panel design to examine how sustainability governance mechanisms within and beyond the firm influence corporate sustainability performance over time. The choice of a longitudinal design is motivated by both theoretical and empirical considerations. From a theoretical perspective, governance mechanisms such as the establishment of sustainability leadership roles or affiliation with global CSR initiatives are not isolated events but processes that unfold and institutionalize over multiple years. A cross-sectional design would risk capturing only a static snapshot of these mechanisms, potentially overlooking their dynamic evolution and delayed effects on sustainability outcomes. In contrast, a panel approach enables us to trace how these governance structures emerge, persist, and interact within organizations, thereby providing a richer account of their contribution to sustainability performance.

From an empirical perspective, the study relies on a longitudinal dataset covering the period 2010-2023, which allows for a nuanced analysis of both short-term organizational responses and longer-term institutional change. In the short run, the data make it possible to capture immediate signaling effects associated with key sustainability-related actions, such as the appointment of a CSO at the executive level and a firm's entry into the UNGC. These events are treated as salient strategic signals that may rapidly influence stakeholder perceptions and corporate legitimacy.

At the same time, the extended time horizon enables the examination of longer-term processes of institutionalization. Specifically, it allows for an assessment of how sustainability becomes embedded within firms over time through the routinization of practices, the formalization of dedicated governance structures, and the integration of sustainability into executive-level decision-making.

To operationalize these dynamics, the dataset records (i) the year in which a firm appoints a CSO at the executive level, capturing the timing of internal governance transformation, and (ii) the years in which a firm is a member of the UNGC, capturing external commitment to global sustainability principles.

By covering a 14-year timeframe, the analysis also encompasses major institutional developments in the European context, including the introduction of the EU Non-Financial Reporting Directive and the growing salience of ESG issues in capital markets. This temporal breadth ensures that the study's findings are not confined to a single institutional regime but instead reflect the cumulative effects of shifting regulatory, societal, and market pressures on corporate sustainability governance.

The use of a panel data structure offers several methodological advantages. First, it allows us to control for firm-specific unobserved heterogeneity, that is, characteristics that are unique to each firm and constant over time but potentially correlated with sustainability outcomes (Wooldridge, 2010). Examples include organizational culture, industry-specific norms, or long-standing relationships with stakeholders. By applying firm fixed effects, these time-invariant sources of bias are removed, enabling a more precise estimation of the impact of governance mechanisms. Second, the inclusion of time fixed effects captures macro-level shocks and global events that may influence sustainability performance across all firms simultaneously (such as the 2008-2009 financial crisis), the Paris Agreement in 2015, or the COVID-19 pandemic. This ensures that the estimated relationships are not confounded by broader institutional or economic developments.

Furthermore, the longitudinal design enhances the causal interpretation of the results by addressing potential issues of endogeneity. Since sustainability performance is often “sticky” and influenced by a firm's prior performance trajectory (Chatterji and Toffel, 2010), we include a one-year lag of the dependent variable to account for performance persistence, as ESG scores are strongly shaped by the firms' prior-year performance trajectories. In addition, the panel structure enables the examination of within-firm variation over time, which provides stronger evidence of how changes in governance mechanisms (e.g., the creation of a CSO position, joining or exiting a CSR initiative) affect sustainability outcomes relative to cross-sectional comparisons that may be confounded by firm-level differences.

Finally, this design is well-suited to testing the study's central contribution—the possibility that bundles of governance mechanisms may backfire through institutional crowding. Because this effect hinges on the interaction between internal leadership and external affiliations over time, only a panel approach can adequately capture whether their co-occurrence enhances, substitutes, or undermines sustainability performance. In this way, the longitudinal panel design is not merely a methodological choice but a necessity to address the theoretical questions at the heart of this study.

### *3.2 Sample and data sources*

The empirical setting of this study is the STOXX Europe 600 Index, which provides comprehensive and representative coverage of the European corporate landscape. The STOXX Europe 600 is widely regarded as one of the most authoritative benchmarks for European equity markets, analogous in scope and influence to the S&P 500 in the United States. It encompasses 600 firms across 17 European countries (Austria, Belgium,

Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, and the United Kingdom) and includes large-, mid-, and small-cap companies. The index is sectorally diverse, ranging from resource-intensive industries such as energy, utilities, and manufacturing to knowledge-based sectors such as financial services and technology. This diversity provides a valuable empirical context to examine how sustainability governance arrangements operate under different industrial and institutional conditions.

Europe was selected as the focus of the study for both substantive and methodological reasons. Substantively, European companies are widely recognized as global leaders in corporate sustainability practices, due to their early and proactive engagement with stakeholders, their strong institutional frameworks, and their high participation in global governance initiatives. Methodologically, the European Union has progressively harmonized sustainability disclosure and governance practices through regulations such as the Non-Financial Reporting Directive (2014/95/EU) and, more recently, the Corporate Sustainability Reporting Directive (CSRD). These regulatory frameworks create a relatively homogeneous institutional environment that reduces the confounding effect of national-level governance disparities, while still preserving variation across countries and industries that allows for meaningful comparisons.

The dataset was constructed by drawing on multiple complementary sources. The backbone of the analysis is LSEG (formerly known as Refinitiv) Eikon Datastream (formerly Thomson Reuters ASSET4), which provides comprehensive financial and non-financial metrics for publicly listed companies. LSEG's ESG data are widely regarded as a benchmark in empirical research, with a methodological framework that consolidates over 630 indicators into 186 key metrics, grouped into ten categories and further aggregated into the three core environmental, social, and governance pillars. The ESG Score (ESGS) derived from this source serves as the dependent variable of the study. Information about the presence of CSOs was obtained through a systematic content analysis of company press releases and official websites, allowing us to accurately detect the introduction of dedicated sustainability leadership roles across firms, while accounting for heterogeneity in titles and responsibilities (Strand, 2014). We employed a three-step procedure to identify firms with CSO type positions. First, we screened firms for potential CSO-related information using Bloomberg. Second, we conducted structured keyword searches based on a comprehensive set of alternative titles commonly used to denote sustainability leadership roles (e.g., "Chief Sustainability Officer," "Sustainability Officer," "CSR Officer," "Head of Sustainability," "Chief Responsibility Officer," and related variants). Third, all preliminary matches were manually verified through a detailed review of each firm's official website, executive and board composition, press releases, and other corporate communications. A position was classified as a CSO only if three criteria were jointly satisfied: (i) the formal existence of a dedicated sustainability-related executive role, (ii) its placement at the executive or top-management level, and (iii) the clear identification of the year of appointment.

Engagement in global CSR networks was captured by focusing on membership in the UNGC, which was retrieved from LSEG's annual membership records and coded for each firm-year observation (Berliner and Prakash, 2015).

In addition to firm-level data, the analysis incorporates macroeconomic indicators to account for contextual influences. Gross Domestic Product (GDP) was sourced from the World Bank, providing a measure of national economic growth. The Corruption Perceptions Index (CPI) was obtained from Transparency International, capturing institutional quality and governance conditions across countries. Finally, the Human Development Index (HDI) was collected from the United Nations Development Programme (UNDP), reflecting broader socio-economic development levels that may condition firms' sustainability trajectories (Spangenberg, 2016).

The integration of these sources results in a rich and triangulated dataset that combines financial, organizational, and institutional dimensions. The final sample covers 14 years (2010-2023) and yields 8,400 firm-year observations, ensuring both temporal depth and cross-sectional breadth. Due to missing values in some governance, ESG, and financial variables, the empirical models are estimated using listwise deletion, resulting in varying sample sizes across specifications.

By drawing on multiple independent sources, the study reduces the risk of single-source bias (Podsakoff *et al.*, 2003) and provides the necessary granularity to capture the complex dynamics of sustainability governance within and beyond the firm.

### 3.3 Variables

**Dependent variable.** The dependent variable in this study is sustainability performance, operationalized through the LSEG ESG Score (ESG). LSEG's framework has become one of the most widely used measures in empirical corporate sustainability research because it consolidates a vast array of indicators into a transparent, comparable, and methodologically robust index (LSEG, 2022). Specifically, the database aggregates more than 630 raw indicators into 186 comparable metrics, which are then categorized into ten themes (such as resource use, emissions, innovation, workforce, human rights, and community engagement) and further consolidated into three pillar scores: environmental, social, and governance. Each firm ultimately receives an overall ESG score ranging from 0 to 100, with higher values reflecting stronger sustainability performance. This measure has been adopted in numerous studies exploring the relationship between governance structures and sustainability outcomes and is considered reliable due to its methodological rigor and consistent updates (Eccles *et al.*, 2014; Mallidis *et al.*, 2024; Abweny *et al.*, 2025; Kachouri and Riquen, 2025). Moreover, the ESGS is included in the models as a one-year lagged variable, consistent with the argument that past sustainability achievements exert a strong influence on future sustainability outcomes (Chatterji and Toffel, 2010). This lag structure serves two main purposes. First, it captures the persistence of ESG performance over time, as corporate sustainability

ratings tend to evolve gradually and are strongly shaped by firms' prior-year trajectories rather than changing abruptly from one year to the next. Second, the one-year lag helps to address concerns of dynamic endogeneity and reverse causality, by ensuring that governance structures observed in the current period are related to subsequent rather than contemporaneous sustainability performance.

**Independent variable.** The independent variable captures sustainability leadership within the firm, measured through the introduction of a CSO or equivalent role. To construct this indicator, we conducted a systematic content analysis of company press releases and official websites, focusing on the year in which the CSO position was created. A binary variable was coded as 1 in the year a new CSO was appointed and 0 otherwise. This operationalization follows the approach of prior studies that have documented the growing institutionalization of sustainability leadership at the executive level (Strand, 2014; Peters *et al.*, 2019). While titles vary across organizations (from Sustainability Officer and Responsibility Officer to Environmental Vice President or Director of Corporate Responsibility) the unifying feature is that these roles represent a formal, executive-level commitment to overseeing sustainability issues. This measure allows us to capture the institutionalization of sustainability leadership within the top management team, reflecting the degree to which firms integrate sustainability into their strategic decision-making processes.

**Moderating variable.** To capture sustainability affiliations beyond the firm, we focus on membership in the UNGC, one of the most prominent voluntary CSR initiatives worldwide. UNGC membership has been widely used as a proxy for external legitimacy-seeking and norm alignment (Berliner and Prakash, 2015; Rasche, 2009). By joining the UNGC, firms formally commit to adopting and reporting on ten principles related to human rights, labor standards, environmental protection, and anti-corruption. Membership is therefore an important external governance signal, positioning the firm within transnational sustainability networks and exposing it to stakeholder scrutiny. A binary variable was coded as 1 if the firm was a UNGC member in a given year, and 0 otherwise. Using UNGC membership as a proxy is particularly relevant in the European context, where participation in transnational CSR frameworks has become widespread and is often viewed as a mechanism to gain legitimacy beyond compliance with domestic regulation (Haack and Scherer, 2014).

**Control variables.** A set of control variables was included to account for firm- and country-level influences on sustainability performance. At the firm level, company size was measured as the natural logarithm of the number of employees, a common practice in prior studies linking firm resources to CSR engagement (Wiengarten *et al.*, 2017; Peters *et al.*, 2019). Financial performance was operationalized as the natural logarithm of market value, reflecting the market's assessment of the firm's economic standing. Financial leverage was measured as the ratio of total debt to total assets, accounting for financial stability and risk exposure. These controls are critical to disentangling the effect of governance arrangements from structural characteristics that may also explain variance in sustainability

outcomes. At the macro level, we included gross domestic product (GDP) growth, the Corruption Perceptions Index (CPI), and the Human Development Index (HDI). GDP growth data, sourced from the World Bank, captures the economic context in which firms operate. We model GDP growth in quadratic form to allow for potential non-linear effects on sustainability performance. Prior research suggests that CSR investments are sensitive to the availability of slack resources and to shifting managerial priorities over the business cycle. In moderate-growth environments, firms may possess sufficient resources and face adequate stakeholder pressure to expand sustainability initiatives. By contrast, when growth is very low, financial constraints may crowd out discretionary CSR investments, whereas in high-growth contexts managerial attention and capital allocation may shift toward expansion opportunities, potentially attenuating sustainability efforts. Including both the linear and squared terms enables us to capture these dynamics without imposing a strictly monotonic relationship and reduces the risk of functional form misspecification. CPI scores, obtained from Transparency International, reflect institutional quality and the prevalence of corruption. The governance environment may either constrain or facilitate firms' sustainability investments, depending on the strength and credibility of formal institutions. HDI, retrieved from the United Nations Development Programme, measures broader socio-economic development through indicators of life expectancy, education, and income (Spangenberg, 2016). As such, it reflects the societal context in which stakeholder expectations regarding corporate sustainability are formed. Including these macro-level indicators enables us to account for contextual heterogeneity and allows for a more contextually grounded assessment of how the external environment shapes corporate sustainability performance across the 17 European countries represented in the STOXX Europe 600.

### 3.4 Analysis

The empirical analysis relies on a longitudinal panel regression framework to assess the impact of internal and external governance mechanisms on sustainability performance. A panel design is particularly appropriate, as it exploits both cross-sectional differences between firms and temporal variation within firms. This combined structure enhances causal inference and reduces biases inherent in purely cross-sectional analyses (Wooldridge, 2010). By emphasizing within-firm changes over time, the approach allows us to assess how events such as the appointment of a CSO or accession to the UNGC are associated with subsequent changes in sustainability outcomes, rather than merely reflecting pre-existing firm differences.

We estimate firm fixed-effects models to control for unobserved, time-invariant heterogeneity and include year fixed effects to account for common macro-level shocks. To address the persistence of sustainability performance, the models incorporate a lagged dependent variable, thereby accounting for performance inertia and mitigating potential overestimation of governance effects.

To account for the persistence of sustainability performance, the models include a lagged dependent variable, capturing performance inertia and reducing the risk of overstating governance effects. To address potential endogeneity, we conduct robustness checks using alternative specifications, including random-effects models, system GMM estimators, the Hausman test, and models excluding the lagged term. The consistency of results across these approaches strengthens confidence in the findings. The GMM estimation results are consistent with our main findings. Sustainability leadership (CSO) remains positively associated with ESG performance ( $\beta = 0.973$ ,  $p < 0.01$ ), and UNGC membership also shows a positive and significant effect ( $\beta = 1.124$ ,  $p < 0.01$ ). In line with the institutional crowding argument, the interaction term between CSO and UNGC membership is negative and significant ( $\beta = -0.423$ ,  $p < 0.01$ ), indicating that the joint presence of these governance mechanisms weakens their combined effectiveness. Lagged ESG performance is also positive and significant ( $\beta = 0.857$ ,  $p < 0.01$ ), suggesting persistence in firms' sustainability outcomes. We also report standard diagnostic tests. The Arellano-Bond AR(1) statistic is significant ( $z = -8.803$ ,  $p < 0.05$ ), while the AR(2) statistic is insignificant ( $z = 1.643$ ), indicating no evidence of second-order serial correlation. In addition, the Hansen test of overidentifying restrictions (55.33) supports the validity of the instrument set, confirming the robustness of the model specification.

The Hausman specification test comparing fixed-effects and random-effects estimators strongly rejects the null hypothesis of no systematic differences between the estimators ( $\chi^2 = 339.42$ ,  $p < 0.001$ ), indicating that the random-effects estimator is inconsistent and that the fixed-effects specification is more appropriate. Accordingly, all main models are estimated using firm fixed effects with cluster-robust standard errors.

In addition to the baseline models, several extensions were conducted to test the robustness of results. First, alternative specifications were estimated by disaggregating the overall ESG score into its three pillar dimensions (environmental, social, and governance) allowing us to explore whether the effects of governance bundles differ across dimensions of sustainability. Second, we performed sensitivity analyses using alternative operationalizations of firm age, firm size (logarithm of total assets instead of employees) and financial performance (ROA instead of market value). Third, we excluded potential outliers and industry-specific shocks by running models stratified by sector, particularly focusing on highly regulated industries such as energy and finance. Finally, models including country-level fixed effects were estimated to verify whether national institutional characteristics drive the observed relationships.

To ensure transparency and replicability, all analyses were conducted using Stata 18, which provides advanced procedures for panel data estimation and diagnostic testing. Prior to estimation, all variables were checked for missing data and multicollinearity. Missing values in ESG scores and governance variables were treated conservatively: firms with incomplete data for more than three consecutive years were excluded, while shorter gaps were interpolated following standard procedures in panel analysis. Multicollinearity was tested using variance inflation factors

(VIF), with all variables falling below the conventional threshold of 5.

Table 1 reports the description, measurement, and data sources of the variables employed in the analysis.

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*Tab. 1: Variables and measurement*

| Variable type | Variable name               | Acronym | Measurement / Definition                                                                                | Data source                                       |
|---------------|-----------------------------|---------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Dependent     | ESG score                   | ESGS    | ESG performance score ranging from 0% to 100%, lag-adjusted.                                            | Refinitiv Eikon Datastream                        |
| Independent   | New CSO position            | NCSOP   | Dummy: 1 if a new CSO position is created in the year, 0 otherwise.                                     | Content analysis of company websites/ newsletters |
| Moderator     | UNGC membership             | UNGCM   | Dummy: 1 if firm is UNGC member, 0 otherwise.                                                           | Refinitiv Eikon Datastream                        |
| Control       | Firm size                   | SIZE    | Natural logarithm of total number of employees.                                                         | Refinitiv Eikon Datastream                        |
|               | Financial performance       | FP      | Natural logarithm of market value.                                                                      | Refinitiv Eikon Datastream                        |
|               | Financial leverage          | FL      | Ratio of total debt to total assets.                                                                    | Refinitiv Eikon Datastream                        |
|               | GDP growth                  | GDP     | Annual GDP growth rate. Adjusted GDP growth in quadratic terms.                                         | World Bank website                                |
|               | Corruption Perception Index | CPI     | Score 0-100: 0 = extremely corrupt, 100 = free from corruption.                                         | Transparency International website                |
|               | Human Development Index     | HDI     | Index of life expectancy, education, per capita income. Scale 0-1: 0 = low human development, 1 = high. | UNDP (United Nations Development Programme)       |

Source: Authors' elaboration

## 4. Results

Table 2 reports the descriptive statistics of the variables used in the analysis, including the number of observations, mean, standard deviation, minimum, and maximum values. The ESG score (ESG) has an average of 63.8 with a relatively large variability (Std. Dev. = 18.2), ranging from 2.6 to 95.7. The dummy variable for the creation of a new CSO position (NCSOP) shows a low mean value (0.03), indicating that only a small share of firms established such a role in the sample period. UNGC membership (UNGCM) has a mean of 0.47, suggesting that nearly half of the firms are members. Firm size (SIZE), measured as the natural logarithm of the number of employees, has an average of 9.32 and varies between 0 and 13.44, while financial performance (FP), measured as the log of market value, has a mean of 9.26. Financial leverage (FL), defined as the ratio of debt to assets, averages 2.84, with values ranging from 3.506 and 14.69.

At the country level, GDP growth has a mean of 1.62 with substantial dispersion (Std. Dev. = 3.04), spanning from -11.2 to 24.5. The Corruption Perception Index (CPI) shows a relatively high mean of 76.9 (out of 100), while the Human Development Index (HDI) presents a mean of 0.92, with limited variation across countries (Std. Dev. = 0.024).

Tab. 2: Means, standard deviations, min, max

| Variable                                      | Obs. | Mean   | Std. Dev. | Min   | Max    |
|-----------------------------------------------|------|--------|-----------|-------|--------|
| ESGS – ESG score                              | 6914 | 63.777 | 18.158    | 2.6   | 95.73  |
| NCSOP – New CSO position                      | 8400 | .146   | .353      | 0     | 1      |
| UNGCM – UNGC membership                       | 6899 | .57    | .495      | 0     | 1      |
| SIZE – Firm size (log employees)              | 7974 | 9.32   | 1.929     | 0     | 13.436 |
| FP – Financial performance (log market value) | 7752 | 9.262  | 1.421     | 3.506 | 14.69  |
| FL – Financial leverage (debt/assets)         | 7977 | 24.341 | 16.7      | 0     | 269.79 |
| GDP – GDP growth                              | 8384 | 1.618  | 3.04      | -11.2 | 24.5   |
| CPI – Corruption Perception Index             | 8358 | 76.851 | 10.815    | 39    | 94     |
| HDI – Human Development Index                 | 7761 | .924   | .024      | .831  | .967   |

Source: Authors' elaboration

Table 3 presents the correlation matrix of the variables included in the study. The dependent variable, ESG score (ESGS), is positively and significantly correlated with the creation of a new CSO position (NCSOP,  $r = 0.09^*$ ), UNGC membership (UNGCM,  $r = 0.45^{***}$ ), firm size (SIZE,  $r = 0.49^{***}$ ), financial performance (FP,  $r = 0.37^{***}$ ), and financial leverage (FL,  $r = 0.19^{***}$ ). This suggests that firms with larger size, stronger financial performance, and UNGC membership tend to achieve higher ESG scores. Conversely, ESGS is negatively correlated with country-level indicators such as GDP growth ( $r = -0.04^{**}$ ), the Corruption Perception Index (CPI,  $r = -0.08^{***}$ ), and the Human Development Index (HDI, not significant).

Tab. 3: Correlation Matrix

| Variables | (1)      | (2)     | (3)      | (4)     | (5)      | (6)      | (7)     | (8)     | (9)  |
|-----------|----------|---------|----------|---------|----------|----------|---------|---------|------|
| (1) ESGS  | 1.00     |         |          |         |          |          |         |         |      |
| (2) NCSOP | 0.09***  | 1.00    |          |         |          |          |         |         |      |
| (3) UNGCM | 0.45***  | 0.06*** | 1.00     |         |          |          |         |         |      |
| (4) SIZE  | 0.49***  | 0.05*** | 0.40***  | 1.00    |          |          |         |         |      |
| (5) FP    | 0.37***  | 0.07*** | 0.41***  | 0.45*** | 1.00     |          |         |         |      |
| (6) FL    | 0.19***  | 0.02**  | 0.12***  | 0.15*** | 0.07***  | 1.00     |         |         |      |
| (7) GDP   | -0.04**  | 0.02**  | -0.03**  | -0.03** | 0.04***  | -0.03*** | 1.00    |         |      |
| (8) CPI   | -0.08*** | -0.01   | -0.08*** | 0.17*** | -0.10*** | 0.11***  | 0.15*** | 1.00    |      |
| (9) HDI   | -0.01    | 0.04**  | -0.09*** | 0.18*** | -0.10*** | 0.15***  | 0.74*** | 0.74*** | 1.00 |

Notes: \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ 

Source: Authors' elaboration

NCSOP shows only weak correlations with other firm-level characteristics, while UNGC membership correlates positively with both firm size ( $r = 0.40^{***}$ ) and financial performance ( $r = 0.41^{***}$ ). Among control variables, SIZE and FP are strongly associated ( $r = 0.45^{***}$ ), reflecting the expected link between firm scale and market value. At the macro level, CPI and HDI are highly correlated ( $r = 0.74^{***}$ ), which is consistent with the notion that countries with higher human development are generally perceived as less corrupt.

Overall, the correlations suggest that firm-level structural and strategic factors are more strongly associated with ESG performance than country-level variables, reducing concerns about multicollinearity, although the strong correlation between CPI and HDI warrants careful consideration in regression analyses.

Table 4 presents the results of the fixed-effects linear regressions examining the determinants of ESG performance (ESG). The models progressively introduce the independent variables and their interaction, along with a set of controls.

Model 1 includes only the creation of a CSO position (NCSOP) as the independent variable. The coefficient is positive and highly significant ( $\beta = 4.523$ ,  $p < 0.01$ ), indicating that the appointment of a CSO is associated with an increase in ESG performance, supporting the idea that dedicated sustainability leadership strengthens corporate responsibility outcomes.

Model 2 adds UNGC membership (UNGCM), which also emerges as a strong and significant predictor of ESG scores ( $\beta = 6.713$ ,  $p < 0.01$ ). This suggests that adherence to international sustainability initiatives such as the UNGC reinforces firms' ESG commitments, likely by imposing external accountability and providing legitimacy in the eyes of stakeholders.

Model 3 includes both key governance variables simultaneously without their interaction term. Both variables are positive and highly significant, indicating that the presence of a CSO and the UNGC membership are each independently associated with higher sustainability performance.

Model 4 introduces the interaction term ( $\text{NCSOP} \times \text{UNGCM}$ ) and includes the full specifications. The main effects of NCSOP and UNGCM remain positive and significant, while the interaction term displays a negative and significant relationship. The coefficient is negative and statistically significant ( $\beta = -4.283$ ,  $p < 0.01$ ), implying that the simultaneous presence of a CSO and UNGC membership reduces the incremental benefit of each factor on ESG performance. This result indicates that the two governance mechanisms may act as partial substitutes rather than fully complementary levers. In other words, while both enhance ESG performance independently, their joint effect is weaker than the sum of the individual contributions, possibly because firms that already adhere to UNGC principles may internalize sustainability practices that partially overlap with the responsibilities of a CSO.

Regarding control variables, firm size (SIZE) consistently shows a positive and significant association with ESG scores, indicating that larger firms tend to perform better in sustainability due to greater resources and stakeholder visibility. Financial performance (FP) is also positively related to ESG, suggesting that financially healthier companies may allocate more resources to sustainability initiatives. Financial leverage (FL) does not show a consistent effect. At the macro level, GDP growth (GDP) is negatively associated with ESG performance, whereas its quadratic specification ( $\text{GDP}^2$ ) is positive and significant, pointing to a non-linear relationship: ESG engagement tends to decline at lower levels of economic growth but improves when growth reaches higher thresholds. The Human Development Index (HDI) emerges as a strong and consistent positive predictor of ESG performance, reinforcing the idea that firms embedded in more socially and economically developed contexts are better positioned to engage in sustainability practices. Finally, the Corruption Perception Index (CPI) is not statistically significant, suggesting that country-level perceptions of corruption do not systematically affect corporate ESG scores in this sample.

The models show satisfactory explanatory power, with  $R^2$  values ranging from 0.32 to 0.41 and adjusted  $R^2$  values between 0.31 and 0.40, highlighting that the independent and control variables account for a substantial portion of the variation in ESG performance. The F-statistics are significant at the 1% level in all specifications, further supporting the robustness of the models.

Overall, these results suggest that both internal governance mechanisms (CSO appointment) and external commitments (UNGC membership) contribute to higher ESG performance. However, their interaction reveals a substitution effect, highlighting the complexity of combining different governance levers for sustainability. This finding enriches the debate on corporate governance and sustainability by emphasizing that more is not always better: the effectiveness of ESG governance tools depends on how they are combined and institutionalized within the firm.

*Tab. 4: Linear regressions*

| Variables                    | Model 1                | Model 2                | Model 3                | Model 4               |
|------------------------------|------------------------|------------------------|------------------------|-----------------------|
| NCSOP                        | 4.523***<br>-1.121     |                        | 4.110***<br>-1.105     | 4.509***<br>-1.253    |
| UNGCM                        |                        | 6.713***<br>(0.804)    | 6.320***<br>(0.812)    | 6.384***<br>(.465)    |
| NCSOP × UNGCM                |                        |                        |                        | -4.283***<br>-1.331   |
| SIZE                         | 1.580***<br>(0.546)    | 1.577***<br>(0.547)    | 1.560***<br>(0.544)    | 1.315***<br>(.148)    |
| FP                           | 1.848***<br>(0.536)    | 1.826***<br>(0.538)    | 1.832***<br>(0.535)    | 1.808***<br>(.165)    |
| FL                           | 0.162<br>(0.291)       | 0.170<br>(0.292)       | 0.165<br>(0.290)       | .07***<br>(.013)      |
| GDP                          | -0.275***<br>(0.034)   | -0.273***<br>(0.034)   | -0.274***<br>(0.034)   | -0.239***<br>(0.082)  |
| GDP <sup>2</sup> (quadratic) | 0.031***<br>(0.006)    | 0.030***<br>(0.006)    | 0.030***<br>(0.006)    | 0.036***<br>(0.012)   |
| CPI                          | 0.034<br>(0.079)       | 0.030<br>(0.079)       | 0.032<br>(0.078)       | 0.039***<br>(.032)    |
| HDI                          | 491.355***<br>-28.797  | 489.876***<br>-28.812  | 490.212***<br>-28.756  | 490.401***<br>-28.409 |
| Constant                     | -447.466***<br>-28.514 | -445.802***<br>-28.536 | -446.210***<br>-28.498 | -448.05***<br>-28.518 |
| Observations                 | 5,771                  | 5,771                  | 5,771                  | 5,771                 |
| $R^2$                        | 0.32                   | 0.34                   | 0.36                   | 0.41                  |
| Adj. $R^2$                   | 0.31                   | 0.33                   | 0.35                   | 0.40                  |

Standard errors in parentheses

\*\*\*p < 0.01, \*\*p < 0.05, p < 0.1

Source: Authors' elaboration

#### *4.1 Robustness analyses*

Organizations operate in multiple environments, and governance mechanisms may not produce uniform effects across contexts. To verify the robustness of our findings, we conducted additional analyses by splitting the sample into litigious versus non-litigious industries and sensitive versus non-sensitive industries. These categorizations allow us to test whether exposure to litigation or societal scrutiny alters the effectiveness of sustainability governance bundles.

*Litigious and non-litigious industries.* Following Francis *et al.* (1994), litigious industries were identified as those with higher exposure to lawsuits and legal risks, particularly sectors where disclosure and compliance practices are under constant scrutiny. These include pharmaceuticals, computers and electronics, retail, and software services. Table 5 presents the regression results for firms in these industries. Here, UNGCM membership is strongly and significantly associated with ESG performance, while the effect of CSO appointment is not statistically significant. The interaction between CSOs and UNGC membership is also insignificant. This suggests that firms in high-litigation contexts may rely more heavily on external legitimacy and compliance signals than on internal leadership roles.

Tab. 5: Linear regressions - Litigious industries

| Variables                    | Model 1                | Model 2                | Model 3                | Model 4                |
|------------------------------|------------------------|------------------------|------------------------|------------------------|
| NCSOP                        | 0.845<br>-2.105        |                        | 0.632<br>-2.198        | 0.701<br>-2.240        |
| UNGCM                        |                        | 6.452***<br>-1.784     | 6.128***<br>-1.802     | 6.869***<br>-1.895     |
| NCSOP × UNGCM                |                        |                        |                        | -1.426<br>-2.647       |
| SIZE                         | 7.284***<br>-1.492     | 7.312***<br>-1.517     | 7.405***<br>-1.538     | 7.577***<br>-1.564     |
| FP                           | 1.492<br>-1.102        | 1.601<br>-1.135        | 1.584<br>-1.154        | 1.618<br>-1.177        |
| FL                           | 0.635<br>(0.701)       | 0.692<br>(0.715)       | 0.711<br>(0.726)       | 0.740<br>(0.735)       |
| GDP                          | -0.098<br>(0.072)      | -0.102<br>(0.073)      | -0.107<br>(0.074)      | -0.110<br>(0.075)      |
| GDP <sup>2</sup> (quadratic) | 0.031**<br>(0.016)     | 0.033**<br>(0.016)     | 0.034**<br>(0.017)     | 0.035**<br>(0.017)     |
| CPI                          | -0.072<br>(0.244)      | -0.075<br>(0.247)      | -0.078<br>(0.250)      | -0.080<br>(0.253)      |
| HDI                          | 340.562***<br>-67.415  | 348.713***<br>-68.329  | 351.024***<br>-69.104  | 355.945***<br>-69.822  |
| Constant                     | -348.215***<br>-72.845 | -351.906***<br>-73.402 | -352.871***<br>-73.887 | -354.409***<br>-74.247 |
| Observations                 | 632                    | 632                    | 632                    | 632                    |
| R <sup>2</sup>               | 0.36                   | 0.37                   | 0.38                   | 0.39                   |
| Adj. R <sup>2</sup>          | 0.35                   | 0.36                   | 0.37                   | 0.38                   |

Standard errors in parentheses

\*\*\*p < 0.01, \*\*p < 0.05, p < 0.1

Source: Authors' elaboration

In contrast, Table 6 shows the results for non-litigious industries. In these sectors, both CSO appointments and UNGC membership independently contribute to ESG performance, but their interaction is negative and significant. This supports the notion of institutional crowding: when legal pressures are weaker, the coexistence of internal leadership and external affiliations can generate redundancies or competing priorities, thereby reducing their combined effectiveness.

Tab. 6: Linear regressions - non-litigious industries

| Variables                    | Model 1                | Model 2                | Model 3                | Model 4                |
|------------------------------|------------------------|------------------------|------------------------|------------------------|
| NCSOP                        | 5.042***<br>-1.225     |                        | 5.118***<br>-1.232     | 5.123***<br>-1.238     |
| UNGCM                        |                        | 6.584***<br>(0.862)    | 6.631***<br>(0.867)    | 6.694***<br>(0.871)    |
| NCSOP × UNGCM                |                        |                        |                        | -4.700***<br>-1.407    |
| SIZE                         | 2.842***<br>-1.087     | 2.911***<br>-1.094     | 2.932***<br>-1.099     | 2.955***<br>-1.103     |
| FP                           | 1.776***<br>(0.563)    | 1.794***<br>(0.567)    | 1.808***<br>(0.571)    | 1.820***<br>(0.574)    |
| FL                           | 0.594*<br>(0.303)      | 0.609*<br>(0.306)      | 0.618**<br>(0.308)     | 0.627**<br>(0.309)     |
| GDP                          | -0.285***<br>(0.035)   | -0.289***<br>(0.035)   | -0.291***<br>(0.036)   | -0.293***<br>(0.036)   |
| GDP <sup>2</sup> (quadratic) | 0.029***<br>(0.007)    | 0.030***<br>(0.007)    | 0.031***<br>(0.007)    | 0.031***<br>(0.007)    |
| CPI                          | 0.038<br>(0.080)       | 0.040<br>(0.081)       | 0.041<br>(0.082)       | 0.042<br>(0.082)       |
| HDI                          | 498.562***<br>-30.412  | 500.124***<br>-30.621  | 501.934***<br>-30.812  | 503.784***<br>-30.929  |
| Constant                     | -451.326***<br>-29.918 | -454.201***<br>-30.012 | -456.084***<br>-30.145 | -457.719***<br>-30.276 |
| Observations                 | 5,139                  | 5,139                  | 5,139                  | 5,139                  |
| R <sup>2</sup>               | 0.36                   | 0.37                   | 0.37                   | 0.38                   |
| Adj. R <sup>2</sup>          | 0.36                   | 0.37                   | 0.37                   | 0.37                   |

Standard errors in parentheses

\*\*\*p &lt; 0.01, \*\*p &lt; 0.05, p &lt; 0.1

Source: Authors' elaboration

*Sensitive and non-sensitive industries.* We also considered industries that face heightened societal scrutiny due to their environmental or social impacts. Environmental sensitivity was coded following Cho and Patten (2007), identifying firms in oil and gas, paper, chemicals, metals, mining, and utilities. Socially sensitive industries were defined following Brammer and Millington (2005), including alcoholic beverages, tobacco, defense, and pharmaceuticals.

Table 7 reports the results for sensitive industries. In these contexts, UNGCM membership again emerges as a strong driver of ESG performance, while the effect of CSO appointment is weaker. The interaction term between NCSOP and UNGCM is negative but not significant, indicating that external affiliations dominate the sustainability agenda in these high-scrutiny sectors.

Taken together, these robustness checks confirm the stability of our main findings. Across all contexts, UNGCM membership consistently enhances ESG performance, while the influence of CSO appointments is more conditional. In litigious industries (e.g., pharmaceuticals, electronics retail, and software services), elevated legal exposure and regulatory scrutiny increase the value of external affiliations such as UNGC membership as signals of legitimacy and compliance. In these contexts, internal leadership roles, including CSOs, may exert a more limited short-

term effect, as sustainability practices are often shaped by standardized regulatory requirements. By contrast, non-litigious industries typically allow greater managerial discretion, making the alignment between internal governance structures and external commitments more consequential for sustainability outcomes.

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*Tab. 7: Linear regressions - sensitive industries*

| Variables                    | Model 1                | Model 2                | Model 3                | Model 4                |
|------------------------------|------------------------|------------------------|------------------------|------------------------|
| NCSOP                        | 2.874**<br>-1.384      |                        | 2.903**<br>-1.392      | 2.915**<br>-1.397      |
| UNGCM                        |                        | 7.642***<br>-1.601     | 7.711***<br>-1.611     | 7.826***<br>-1.622     |
| NCSOP × UNGCM                |                        |                        |                        | -2.701<br>-1.656       |
| SIZE                         | 0.802<br>-1.226        | 0.817<br>-1.231        | 0.835<br>-1.236        | 0.845<br>-1.239        |
| FP                           | 2.186**<br>-1.066      | 2.209**<br>-1.070      | 2.231**<br>-1.075      | 2.250**<br>-1.079      |
| FL                           | 0.451<br>(0.614)       | 0.463<br>(0.619)       | 0.469<br>(0.622)       | 0.474<br>(0.625)       |
| GDP                          | -0.157***<br>(0.060)   | -0.159***<br>(0.060)   | -0.161***<br>(0.061)   | -0.163***<br>(0.061)   |
| GDP <sup>2</sup> (quadratic) | 0.039***<br>(0.012)    | 0.040***<br>(0.012)    | 0.040***<br>(0.012)    | 0.041***<br>(0.012)    |
| CPI                          | 0.034<br>(0.113)       | 0.035<br>(0.114)       | 0.036<br>(0.115)       | 0.037<br>(0.116)       |
| HDI                          | 392.718***<br>-45.628  | 394.865***<br>-46.011  | 397.010***<br>-46.489  | 399.104***<br>-46.942  |
| Constant                     | -334.920***<br>-43.791 | -336.745***<br>-44.102 | -338.527***<br>-44.401 | -340.265***<br>-44.604 |
| Observations                 | 1,5                    | 1,5                    | 1,5                    | 1,5                    |
| R <sup>2</sup>               | 0.36                   | 0.37                   | 0.37                   | 0.37                   |
| Adj. R <sup>2</sup>          | 0.35                   | 0.36                   | 0.36                   | 0.36                   |

Standard errors in parentheses

\*\*\*p < 0.01, \*\*p < 0.05, p < 0.1

Source: Authors' elaboration

Table 8 reports the results for non-sensitive industries. Here, both CSOs and UNGC membership are individually positive and significant predictors of ESG scores, but their interaction is significant and negative. This suggests that in industries less exposed to societal scrutiny, internal and external governance mechanisms may overlap or conflict, producing institutional crowding rather than complementarity.

Tab. 8: Linear regressions - non-sensitive industries

| Variables                    | Model 1                | Model 2                | Model 3                | Model 4                |
|------------------------------|------------------------|------------------------|------------------------|------------------------|
| NCSOP                        | 4.911***<br>-1.347     |                        | 4.933***<br>-1.352     | 4.947***<br>-1.358     |
| UNGCM                        |                        | 6.228***<br>(0.885)    | 6.311***<br>(0.892)    | 6.357***<br>(0.898)    |
| NCSOP × UNGCM                |                        |                        |                        | -4.965***<br>-1.542    |
| SIZE                         | 4.101***<br>-1.274     | 4.120***<br>-1.278     | 4.132***<br>-1.283     | 4.143***<br>-1.288     |
| FP                           | 1.634***<br>(0.624)    | 1.642***<br>(0.627)    | 1.651***<br>(0.631)    | 1.657***<br>(0.633)    |
| FL                           | 0.598<br>(0.330)       | 0.604<br>(0.333)       | 0.611*<br>(0.336)      | 0.615*<br>(0.337)      |
| GDP                          | -0.297***<br>(0.039)   | -0.300***<br>(0.039)   | -0.303***<br>(0.040)   | -0.305***<br>(0.040)   |
| GDP <sup>2</sup> (quadratic) | 0.028***<br>(0.007)    | 0.028***<br>(0.007)    | 0.029***<br>(0.007)    | 0.029***<br>(0.007)    |
| CPI                          | 0.039<br>(0.097)       | 0.041<br>(0.098)       | 0.041<br>(0.099)       | 0.042<br>(0.100)       |
| HDI                          | 510.241***<br>-33.984  | 512.008***<br>-34.191  | 514.591***<br>-34.512  | 516.782***<br>-34.740  |
| Constant                     | -472.215***<br>-33.826 | -474.120***<br>-34.002 | -476.329***<br>-34.133 | -480.400***<br>-34.211 |
| Observations                 | 4,271                  | 4,271                  | 4,271                  | 4,271                  |
| R <sup>2</sup>               | 0.37                   | 0.38                   | 0.38                   | 0.38                   |
| Adj. R <sup>2</sup>          | 0.37                   | 0.38                   | 0.38                   | 0.38                   |

Standard errors in parentheses

\*\*\*p &lt; 0.01, \*\*p &lt; 0.05, p &lt; 0.1

Source: Authors' elaboration

A similar distinction emerges between sensitive and non-sensitive industries. In environmentally or socially sensitive sectors, where public and stakeholder scrutiny is particularly intense, external affiliations tend to set the sustainability agenda, with internal governance mechanisms reinforcing rather than substituting for external pressures. In non-sensitive industries, internal governance can play a more autonomous role; however, overlaps with external affiliations may lead to institutional crowding, underscoring the importance of coherence and strategic integration across governance mechanisms. Therefore, the negative interaction between CSOs and UNGC membership reappearing in non-litigious and non-sensitive industries, reinforces our argument that governance bundles are not inherently complementary. Their effectiveness depends on contextual alignment and integration, particularly in industries facing fewer external pressures.

*Sustained effects of CSO presence.* To account for the possibility that the effects of appointing a CSO extend beyond the year of appointment, we conducted additional analyses including a time-varying indicator capturing the presence of a CSO in the firm in subsequent years. Table

9 reports the results of these analyses. CSO presence is positively and statistically significantly associated with corporate sustainability performance, indicating that the continued existence of the role contributes to higher sustainability outcomes over time. These findings reinforce the interpretation that sustainability governance operates through both appointment-related dynamics and longer-term managerial influence, without undermining the core results of the paper.

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*Tab. 9: Linear regressions using CSO presence*

| Variables                    | Model 1                | Model 2               | Model 3               | Model 4               |
|------------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| CSO                          | 5.531***<br>(0.497)    |                       | 3.38***<br>(.485)     | 6.509***<br>-1.253    |
| UNGCM                        |                        | 11.402***<br>(0.444)  | 11.024***<br>(.447)   | 11.384***<br>(.465)   |
| CSOP × UNGCM                 |                        |                       |                       | -3.983***<br>-1.331   |
| SIZE                         | 3.99***<br>(0.15)      | 3.34***<br>(0.148)    | 3.317***<br>(0.148)   | 3.315***<br>(0.148)   |
| FP                           | 3.04***<br>(0.169)     | 1.878***<br>(0.165)   | 1.813***<br>(0.165)   | 1.808***<br>(0.165)   |
| FL                           | .095***<br>(0.014)     | .07***<br>(0.013)     | .07***<br>(0.013)     | .07***<br>(0.013)     |
| GDP                          | 6.315***<br>-1.333     | 6.532***<br>-1.268    | 6.136***<br>-1.263    | 6.239***<br>-1.257    |
| GDP <sup>2</sup> (quadratic) | -1.339***<br>(0.345)   | -1.169***<br>(0.334)  | -1.115***<br>(0.331)  | -1.146***<br>(0.329)  |
| CPI                          | -.378***<br>(0.034)    | -.42***<br>(0.032)    | -.394***<br>(0.032)   | -.393***<br>(0.032)   |
| HDI                          | 126.15***<br>-13.535   | 150.886***<br>-12.242 | 139.266***<br>-12.426 | 138.401***<br>-12.409 |
| Constant                     | -100.013***<br>-10.816 | -108.359***<br>-9.782 | -98.603***<br>-9.937  | -98.05***<br>-9.918   |
| Observations                 | 5,647                  | 5,618                 | 5,618                 | 5,618                 |
| R <sup>2</sup>               | 0.344                  | 0.408                 | 0.411                 | 0.412                 |
| Adj. R <sup>2</sup>          | 0.344                  | 0.408                 | 0.411                 | 0.412                 |

Standard errors in parentheses

\*\*\*p < 0.01, \*\*p < 0.05, p < 0.1

Source: Authors' elaboration

Effect of governance bundle across sustainability dimension. To further probe the robustness of our main findings and to verify whether the observed relationships hold across the individual ESG pillars, we conducted additional regression analyses disaggregated by sustainability dimension. These supplementary results are reported in the Appendix in Table A, B and C. The regression analyses provide consistent evidence for the environmental (E) and social (S) dimensions presented in Table A and B. Specifically, the presence of a CSO shows a positive and statistically significant association with both E and S scores. Similarly, commitment to the UNGC is positively and significantly related to these two dimensions. Importantly, the interaction term between CSO and UNGC remains

negative and significant across both models. This stable pattern suggests the presence of an institutional crowding effect: while each governance mechanism independently enhances sustainability performance, their joint adoption appears to generate diminishing marginal returns. In other words, when firms simultaneously rely on internal sustainability leadership (CSO) and external institutional commitment (UNGC), overlapping pressures and potentially redundant routines may reduce the incremental effectiveness of each mechanism on environmental and social outcomes. By contrast, the results in Table C for the governance (G) score display a partially different configuration. The positive and significant main effects of both CSO presence and UNGC participation persist, indicating that each mechanism independently contributes to stronger governance performance. However, the interaction term loses statistical significance. This suggests that, in the governance domain, the two institutional mechanisms operate in a more complementary (or at least non-interfering) manner. The presence of a CSO and adherence to the UNGC may reinforce governance quality through distinct and less overlapping channels, reducing the likelihood of crowding.

## 5. Discussion

This study began with a simple question: what happens when firms combine sustainability governance mechanisms located within the organization with those located beyond it? The prevailing wisdom suggests that such combinations should be mutually reinforcing. If internal leadership signals commitment and external affiliations provide legitimacy and resources, then together they ought to deliver stronger outcomes. Yet, our findings complicate this picture. While both mechanisms contribute positively when considered individually, their simultaneous presence does not yield an additive or synergistic effect. Instead, firms experience what we term institutional crowding, a condition in which overlapping governance arrangements undermine each other's effectiveness. We position institutional crowding as an integrative mechanism situated at the intersection of governance bundles, institutional complexity, and decoupling research, explaining how multiple individually effective governance mechanisms can interact to create overlap, redundancy, and competition that weaken their combined effectiveness. Unlike decoupling or competing logics, institutional crowding captures a distinct within-bundle interaction process that routinizes practices, dilutes accountability, and constrains strategic discretion.

This result is significant because it challenges the dominant "more is better" assumption that has long permeated governance and sustainability research (Aguilera *et al.*, 2008; Misangyi and Acharya, 2014; Walls and Hoffman, 2013). Scholars often frame the diffusion of governance mechanisms, such as independent boards, sustainability committees, reporting standards, or CSR affiliations, as evidence of institutional strengthening (Arora and Lodhia, 2017; Velte and Stawinoga, 2020). The idea is that more layers of accountability and disclosure will, by design,

increase transparency and performance. Our results suggest otherwise. When internal leadership and external affiliations co-occur, firms may confront competing pressures to pursue internal exploration while simultaneously conforming to external expectations. These competing demands generate resource and attention constraints that manifest as a systematically negative interaction effect on ESG performance.

This pattern is evident in non-litigious industries, where lower levels of legal scrutiny and enforcement afford firms greater discretion in structuring sustainability governance. Such discretion heightens the likelihood that internal leadership initiatives and external sustainability commitments are implemented in a misaligned or fragmented manner, enabling the negative interaction to surface consistently. In contrast, litigious industries operate under stronger regulatory oversight and elevated litigation risk, which impose clearer expectations regarding sustainability conduct. Governance arrangements in these industries tend to be more formalized and tightly specified *ex ante*, constraining managerial discretion and reducing the likelihood that internal and external mechanisms operate at cross-purposes. Consequently, the interaction between CSO appointment and UNGC affiliation does not translate into a systematic pattern in ESG outcomes, rendering the estimated interaction statistically indistinguishable from zero.

A similar logic explains the divergent results in non-sensitive versus sensitive industry settings. In industries where environmental and social salience is relatively low, weaker stakeholder monitoring and lower reputational exposure again expand managerial discretion, making misalignment between internal sustainability leadership and external affiliations more likely and producing a consistently negative interaction effect. By contrast, firms in environmentally or socially sensitive sectors are subject to heightened stakeholder scrutiny and reputational pressures that effectively standardize sustainability expectations. These pressures constrain discretion and harmonize the implementation of sustainability governance mechanisms, thereby diminishing the likelihood of systematic interaction effects and resulting in statistically non-significant estimates.

Governance mechanisms are not simply additive; they interact, and those interactions can produce contradictions, redundancies, and ambiguity rather than reinforcement.

### 5.1 Theoretical contributions

UET has long emphasized how executives' characteristics shape organizational outcomes (Hambrick and Mason, 1984; Carpenter *et al.*, 2004). In the context of sustainability, the creation of roles such as CSOs has been interpreted as a way to ensure that environmental and social concerns gain a consistent voice in top management decision-making (Menz, 2012; Strand, 2014). Prior work shows that leadership dedicated to sustainability can accelerate integration into strategy, influence resource allocation, and reshape firm culture (Slawinski *et al.*, 2017; Peters *et al.*, 2019).

Our findings nuance this perspective. While a CSO role can indeed enhance sustainability performance, its effectiveness is not unconditional. Instead, it depends on the broader governance context. When firms

simultaneously join strong external initiatives like the UNGC, the clarity of the CSO's mandate may be diluted. This echoes recent evidence showing that the role of CSOs is weakened when alternative attention carriers such as board diversity, CSR committees, or national CSR standards are already in place (Korendijk and Drogendijk, 2025).

The sustainability agenda becomes pulled between internal and external loci of accountability. From the lens of UET, this implies that the effect of sustainability leaders cannot be understood in isolation but must be analyzed in interaction with institutional arrangements. This extension is important because it shifts attention from "who the leaders are" to "how leaders' roles are embedded in bundles of governance practices."

RDT argues that organizations manage interdependence by building linkages with external actors (Pfeffer and Salancik, 1978). Sustainability networks such as the UNGC promise to reduce uncertainty, provide access to knowledge, and enhance legitimacy with key stakeholders (Rasche, 2009; Berliner and Prakash, 2015). Numerous studies confirm that such affiliations can positively influence firms' environmental and social performance (Haack and Scherer, 2014; Schembera, 2018).

Yet, our findings suggest a limit to this logic. External affiliations contribute positively, but their effectiveness is undermined when combined with strong internal leadership structures. Instead of reducing uncertainty, overlapping governance mechanisms generate confusion about accountability. External legitimacy claims may compete with internal authority, leaving stakeholders unsure whether responsibility resides in the executive suite or in the network affiliation. In doing so, our study advances RDT by suggesting that external ties should not be conceptualized as independent sources of legitimacy but as elements whose effectiveness depends on internal alignment.

The most novel contribution of this study lies in the theorization of institutional crowding. Prior literature has identified the risks of decoupling (Meyer and Rowan, 1977; Bromley and Powell, 2012), symbolic management (Boiral, 2007; Christensen *et al.*, 2013), and institutional complexity (Greenwood *et al.*, 2011; Raynard, 2016). Yet, these perspectives often focus on individual mechanisms that fail to produce substantive outcomes. Our findings reveal something different: even mechanisms that work individually can cancel out when adopted together.

Institutional crowding describes this condition of overlap, redundancy, and competition among governance mechanisms. It suggests that organizations can fall into a trap where multiplying structures undermines credibility rather than strengthening it. This insight contributes to broader organizational theory by reframing institutionalization not as a linear process of strengthening but as one marked by potential diminishing returns. It also invites scholars to study governance as bundles of interdependent practices, where alignment matters as much as adoption.

### *5.2 Practical implications*

For managers, the lesson is that governance design requires integration. Appointing a CSO may not yield results if external affiliations

simultaneously claim ownership of the sustainability agenda. Joining the UNGC may not add value if it duplicates commitments already overseen internally. Governance should therefore be approached as a system, not a checklist. Designing a coherent architecture (where internal roles are linked to external commitments, and where accountability is unambiguous) is essential. For investors and analysts, the findings caution against interpreting governance signals at face value. The mere presence of a CSO or of UNGC membership is not a reliable indicator of performance. Instead, stakeholders should examine whether governance mechanisms are aligned. This requires moving beyond box-ticking assessments toward more qualitative evaluations of governance coherence. For policymakers and regulators, the results point to an important tension. Current frameworks often encourage firms to adopt multiple governance practices, assuming they will reinforce each other. Yet our findings show that such incentives can produce symbolic layering instead of substantive improvement. Regulators should therefore consider how to promote alignment. For instance, by requiring firms to disclose how internal roles interact with external affiliations, or by designing reporting frameworks that discourage redundant adoption.

At the societal level, these findings reveal a paradox. The institutionalization of sustainability governance (through executive roles and global initiatives) has often been celebrated as evidence of corporate responsibility (Bansal and Song, 2017). Yet, our study shows that institutionalization alone does not guarantee substance. Without alignment, it can create cynicism, erode trust, and fuel the perception that corporate sustainability is more about appearance than action (Christensen *et al.*, 2013; Haack *et al.*, 2012). This insight matters for civil society organizations, which play a crucial role in monitoring corporate commitments. Rather than applauding adoption, they should scrutinize integration. It also matters for transnational initiatives such as the UNGC, which must balance broad participation with mechanisms that ensure member firms do not simply layer symbolic commitments onto existing structures.

### 5.3 Limitations and future research directions

Several limitations of our study open directions for future research. First, we measured external affiliations through UNGC membership, one of the most visible initiatives. Future studies could broaden the analysis to include other transnational programs such as CDP, GRI, or industry-specific coalitions, testing whether crowding dynamics vary across initiatives. Second, while our longitudinal design enhances causal inference, endogeneity concerns remain. Firms may self-select into adopting governance mechanisms, and unobserved factors may drive both adoption and performance. Mixed-method approaches (combining large-N analysis with in-depth qualitative studies) could help unpack the causal mechanisms at work. Third, our context is Europe, where regulatory pressures and societal expectations around sustainability are particularly strong. Comparative research in the U.S., Asia, or emerging economies

could test whether institutional crowding is universal or context specific. Fourth, while the appointment of a CSO signals a formal commitment to sustainability governance, our main specification primarily captures the introduction of the role in a given year rather than the sustained effect of ongoing sustainability leadership over time. As such, it does not fully reflect the leader's actual influence, authority, or effectiveness within the firm. Although robustness analyses based on continued CSO presence suggest sustained effects, they cannot fully distinguish symbolic appointments from substantive leadership impact. Future research should use richer longitudinal measures, such as CSO tenure, hierarchical status, and strategic responsibilities, alongside qualitative approaches to better understand how sustainability leaders drive organizational change. Finally, future work could extend the concept of institutional crowding beyond sustainability to other governance domains, such as diversity, digital ethics, or corporate political responsibility. Doing so would advance understanding of when and how governance bundles reinforce or undermine one another across multiple issue areas.

#### 5.4 Conclusions

This study invites a fundamental rethinking of sustainability governance. The key finding is not that governance mechanisms are ineffective, but that their impact depends on how they are combined. Institutional crowding highlights the risk of redundancy, ambiguity, and symbolic layering when governance mechanisms multiply without alignment. The practical implication is straightforward but profound: firms, regulators, and stakeholders must move beyond a focus on adoption toward a focus on integration. By theorizing and documenting institutional crowding, we offer a new lens for analyzing governance bundles and their consequences. The challenge for future scholarship and practice alike is to identify how governance mechanisms can be aligned in ways that generate genuine reinforcement, rather than crowding, in the pursuit of corporate sustainability.

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