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Does mandating ESG reporting reduce ESG decoupling? Evidence from the European Union's Directive 2014/95

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Abstract

This paper investigates the impact of Directive 2014/95 (hereafter, 'the Directive') issued by the European Union (EU) that mandates the disclosure of ESG information on ESG decoupling behaviour by EU-listed firms and whether the strength of national enforcement systems of member states plays a moderating role in this relationship. Using a difference-in-differences design and employing a propensity score matched sample of 3020 firm-year observations from the EU and the United States, we find that both the passage of the Directive in 2014 and the implementation of the Directive in 2017 have a mitigating effect on ESG decoupling. We also find that the strength of national enforcement systems has no impact on the relationship between the Directive and ESG decoupling. Furthermore, our additional analysis indicates that the effect of the Directive is less pronounced for firms that have their ESG information independently audited. Additionally, we find that the impact of the Directive is more pronounced for firms operating in non-controversial industry sectors. While the Directive is under ongoing revision by the EU Parliament and Commission to be replaced by the new Corporate Sustainability Reporting Directive (CSRD), our study provides timely insights into the effectiveness of the Directive and its impact on ESG information.

KEYWORDS
enforcement, ESG audit, ESG decoupling, ESG strategy, European Union's Directive 2014/95

1 | INTRODUCTION

This paper aims to investigate the impact of the European Union's (EU) Directive 2014/95 (hereafter, 'the Directive') on ESG decoupling by EU-listed firms and whether the strength of the national enforcement system plays a moderating role in this relationship. In 2014, the EU passed the Directive to increase ESG disclosure transparency by large EU-listed firms. The Directive defined large EU-listed firms as firms that meet the minimum threshold of 500 employees and €20 million in total assets or €40 million in sales. The objective of the Directive is to enhance transparency and comparability of ESG disclosures by EU-listed firms. The regulator aims to improve firms' disclosure of ESG information and promote consistent and comparable ESG information across the EU. The regulator acknowledges the existing heterogeneity in ESG disclosures and emphasises the need to raise the transparency and consistency of ESG information.

The Directive requires annual ESG reports to include information on policies, main risks and outcomes related to environmental matters, social and employee factors, human rights, anti-corruption issues and diversity in the board of directors. Firms have the option to use existing national or international reporting frameworks, such as the Global Reporting Initiative (GRI) standards or the Organisation for Economic Co-operation and Development (OECD) corporate social responsibility (CSR) reporting framework. The EU Commission has

developed implementation guidelines to facilitate relevant and comparable disclosure of ESG information, including key performance indicators. The EU regulator views increased ESG transparency as a mean to promote ESG activities of EU-listed firms. ESG disclosure assists in measuring, monitoring and managing firms' performance and their impact on society. It plays a vital role in driving change towards a sustainable global economy that balances long-term profitability with social justice and environmental protection.

Following the passage of the Directive 2014 and its mandatory implementation in 2017, firms' ESG practices have improved in order to comply with the new regulation (Aureli et al., 2020; La Torre et al., 2018). While prior studies provide evidence of an increase in ESG disclosure following the introduction of the Directive (Agostini et al., 2022; Aureli et al., 2020; Carmo & Ribeiro, 2022; Lippai-Makra et al., 2022; Posadas & Tarquinio, 2021; Venturelli et al., 2022), it is still unclear whether the inconsistencies between ESG disclosure and actual ESG performance still exist due to the symbolic adoption of ESG disclosure (Eliwa et al., 2021, 2023; Maglio et al., 2020; Michelon et al., 2015). We focus on the ESG decoupling as an implication of the Directive because inconsistencies in how organisational values applied are obvious when companies publish glowing ESG reports while the underlying performance is different.

In this regard, ESG decoupling represents a socially irresponsible behaviour and contradicts a firm's obligations to society, ultimately leading to detrimental consequences for societal well-being. Corporate managers may engage in deceitful behaviour to decouple ESG performance and disclosure for signalling purposes to respond to the contradictory requirements and pressures of different groups of stakeholders (Cho et al., 2015; Luo et al., 2017). This irresponsible behaviour has created a wave of criticism to many firms in the last decade that questioned their ESG practices (e.g. Deegan, 2017; Deegan & Shelly, 2014). Existing studies investigating ESG decoupling are limited but growing (e.g. García-Sánchez et al., 2022; Graafland & Smid, 2019; Sauerwald & Su, 2019; Sendlhofer, 2020; Shahab et al., 2021; Tashman et al., 2019; Zhang, 2022). However, the impact of the Directive on ESG decoupling remains unexplored.

This study integrates the legitimacy and institutional theories (Clemens & Douglas, 2005; DiMaggio & Powell, 1983; Eliwa et al., 2021) to develop a theoretical framework that helps to improve our understanding of firms' responses to external challenges (i.e. the Directive), and how it affects ESG decoupling behaviour, measured as the gap between firm's ESG disclosure and its actual ESG performance. Legitimacy theory posits that an organisation operates within a framework established by members of society (Deegan, 2010; Eliwa et al., 2021). According to this theory, the disclosure of ESG information by organisations is a response to social and political pressures, driven by the need to maintain legitimacy and address changing perceptions among relevant stakeholders (Cho et al., 2012; Kuruppu et al., 2019). In the context of our study, institutional theory is complementary to legitimacy theory in that it provides another lens through which to understand the impact of the Directive on ESG decoupling. The work of DiMaggio and Powell (1983) emphasises the role of external forces in shaping organisational behaviour. The institutional isomorphism pressures exerted by the institutional environment influence firms to align their practices with prevailing norms and expectations, thus ensuring their acceptance and legitimacy within the broader social context.

One of the controversial features of the Directive is the lack of clear guidance on how enforcement institutions and their activities should be involved in enforcing the Directive (Fiechter et al., 2022). According to institutional theory, corporate decisions, including ESG decoupling, are influenced by the institutional environment in which the firm is operating (e.g. Ball et al., 2003; Ball & Shivakumar, 2005; Burgstahler et al., 2006; Leuz, 2003). Moreover, existing research demonstrates a notable role of enforcement in preventing corporate misconduct and unethical behaviour, such as earnings management (Hitz et al., 2012; Leuz, 2003), and accounting misstatements (Srinivasan et al., 2015). This raises a question on whether the strength of the national enforcement system would have a moderating effect on the relationship between the Directive and ESG decoupling, given that until now, the EU has yet to issue official documents clarifying procedures that member states should follow to enforce the Directive.

Using a difference-in-differences design, our analysis reveals that the passage and implementation of the Directive reduce ESG decoupling, which implies that regulatory actions not only increase the quality of ESG reporting but mitigate the gap between disclosure and performance. We further show that the mitigation effects on ESG decoupling are reported in the periods after the introduction of the Directive, with further reduction in the periods after the implementation. However, no evidence was found on the moderating role of enforcement. Our additional analysis shows that the mitigating effects of the passage and mandate of the Directive on ESG decoupling are more pronounced for firms operating in non-controversial industries compared to firms operating in controversial industries. However, the mitigation impact of the Directive mandate is less pronounced when firms have their ESG audited. This finding indicates that normative institutional pressures following the passage of the Directive, and coercive institutional pressures following the mandatory implementation of the Directive can become a potent force for improved ESG practices in general, and reducing ESG decoupling in particular.

Our study contributes to the ESG literature in three different ways: First, it focuses on how regulatory actions are central to ESG ethical choices. In particular, we addressed the Directive 2014/95/EU as one of the critical regulatory changes in the EU on ESG decoupling. Indeed, the primary objective of the Directive is to enhance the disclosure of relevant and useful information that affects firms' development and performance and impacts their activity. Nevertheless, prior studies address the direct impact of the Directive on ESG disclosure (Agostini et al., 2022; Aureli et al., 2020; Carmo & Ribeiro, 2022; Lippai-Makra et al., 2022; Posadas & Tarquinio, 2021; Venturelli et al., 2022). Thus, it is still unclear whether the potential increase in ESG disclosure is linked to an increase in ESG performance and less ESG decoupling. So, we contribute to the debate on the role of regulatory changes in shaping the unethical behaviour around ESG practices. We extend the existing literature by examining whether corporate legitimation strategies have been affected by the shift from voluntary to mandatory ESG disclosure regimes. We also examine whether

firms, in mandatory disclosure regimes, continue to report in a symbolic manner or they provide substantive disclosures that are reflective of their ESG performance.

Second, this study contributes to institutional theory by showing how firms' ESG practices become institutionalised over time. We benefit from a longer sample period covering the passage and mandate of the Directive to address its role over two periods. Our sample covers 4 years before the passage of the Directive, 3 years after the passage of the Directive and before the Directive becomes mandatory and 4 years after the mandatory implementation of the Directive. While prior studies mainly focused on the passage date to test the impact of the directive on ESG practices, we provide empirical evidence on the effects of passage as well as the implementation of ESG regulation. In particular, we demonstrate that the mitigation impact of the Directive started from the year 2014 onwards (the year in which the EU passed the Directive) and continued after the implementation date.

Third, the Directive indicates that member states should put national laws, regulations and administrative provisions in place and clarify enforcement institutions and their activities that should be involved in enforcing the Directive. Nevertheless, there are several unexplored aspects concerning the Directive that warrant further investigation. In addition to analysing the direct impact of such regulations on ESG practices, it is crucial to consider the moderating effects of national enforcement systems. To address this gap in knowledge and gain a deeper understanding of the impact of the Directive on ESG decoupling, we aim to examine the moderating role of national enforcement systems. By investigating the interplay between the strength of national enforcement systems and the Directive on ESG decoupling. By exploring these dynamics, we can enhance our understanding of how the Directive operates within different institutional contexts and how the strength of enforcement systems can influence ESG decoupling. This research will contribute to a more comprehensive understanding of the complexities and nuances surrounding the implementation and outcomes of the Directive, providing valuable insights for policymakers and regulators into their approach to harmonisation of the Directive enforcement.

The following section presents a review of the related literature and research hypotheses. Section 3 describes the research design. The main results are discussed in Section 4. Section 5 discusses our additional and robustness tests. Finally, section 6 provides our conclusions.

2 | LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 | Theoretical framework

ESG disclosure has primarily been considered as a voluntary practice used by firms to satisfy their stakeholders' needs, meet their expectations and obtain legitimacy (Cho et al., 2012; Deegan, 2010). Yet, many prior studies indicate that the quality of voluntary ESG reporting information is still ineffective and follow a symbolic management practice (Eliwa et al., 2021; Michelon et al., 2015). Consequently, regulators and researchers have started to call for mandatory ESG reporting. As a response, the EU in 2014 passed the Directive 2013/34/EU regarding the disclosure of ESG information. According to this Directive, large EU-listed firms that meet the minimum threshold of 500 employees and €20 million in total assets or €40 million in sales should include in the management report a non-financial statement containing the necessary information to understand the firm's position and performance that linked with environmental, social and employees' issues.

Legitimacy and institutional theories provide a more comprehensive conceptual framework for understanding the impact of the Directive on ESG decoupling. According to legitimacy theory, an organisation can only operate within a framework that is established by members of society (Deegan, 2010). It suggests that ESG disclosure is a result of social and political pressure, which firms use in response to change perceptions among relevant stakeholders (Cho et al., 2012; Kuruppu et al., 2019). Although legitimacy theory may not explain all motives for ESG practices, it is beneficial for justifying organisational responses to changes in the business environment, such as mandating ESG reporting (Ahmed Haji & Anifowose, 2016; Kuruppu et al., 2019). In the same vein, institutional theory views organisation as operating within a social framework of norms and values about what constitutes appropriate or acceptable economic behaviour (Oliver, 1997). Scott (1987) argues that organisations conform to institutional pressures for change, including ESG practices because such conformity brings rewards in the form of increased legitimacy.

The work of DiMaggio and Powell (1983) suggests that the various actors operating in and around firms can create institutional isomorphism pressures that lead individual firms to adopt specific structures and procedures. These institutional isomorphism pressures can be broken down into three different isomorphism mechanisms: coercive isomorphism, mimetic isomorphism and normative isomorphism (DiMaggio & Powell, 1983). The first of these mechanisms is coercive isomorphism, which relates to external factors, such as the government and its agencies. Under coercive isomorphism, firms conform to rules, laws and regulations that are mandatory for them to follow. The second of these mechanisms is normative isomorphism, which refers to the pressures that firms experience from the diffusion of norms, values, assumptions and beliefs within professional business circles. These pressures can influence firms to adopt best practices and conform to prevailing standards of behaviour. When certain practices are widely accepted and deemed appropriate within a professional community or industry, firms may face normative pressures to align their behaviour accordingly.

We argue that, following the passage of the Directive, normative isomorphic institutional pressure results from the opportunity for firms to early adopt the Directive leading to reducing their ESG

decoupling. Following the mandatory implementation of the Directive, coercive isomorphic institutional pressure will prevail, as firms must conform to it leading to incremental impact on ESG decoupling in the form of reducing this type of manipulative behaviour.

2.2 | The EU's Directive 2014/95 and ESG decoupling

The objective of this Directive is to improve the transparency of ESG information provided by EU-listed firms within the scope of the Directive. The EU believes that firms correspond positively to ESG disclosure requirements due to their positive relationship with legitimacy and thus economic gain. In this regard, prior studies examining the impact of the Directive on the transparency of ESG information disclosed by listed firms in a single European state provide evidence of an increase in ESG information. For example, Agostini et al. (2022) find that, following the passage of the Directive, the overall quantity of ESG information disclosed by Italian-listed firms. Focusing on Italian public interest entities, Venturelli et al. (2020) provide evidence that after the passage of the Directive, comparability of ESG information is still at low levels, concluding that the objective of the Directive still needs to be achieved. In Hungary, Lippai-Makra et al. (2022) find that the passage of the Directive resulted into increasing the quantity of ESG information disclosed from low to medium levels. Furthermore, in Portugal, Carmo and Ribeiro (2022) provide evidence that the Directive positively impacted the disclosure of ESG information by the first year of implementation of the Directive in 2017 rather than the passage of the Directive in 2014. Moreover, Cuomo et al. (2022) find that EU non-financial firms have higher CSR transparency and CSR performance after the 2014 EU Non-Financial Reporting Directive.

It is more likely that more ESG disclosure, due to the Directive, will lead to more ESG performance. Supporting this view, Fiechter et al. (2022) examine the impact of the Directive on both ESG disclosure and its related activities by a sample of EU-listed firms and find that the Directive has increased in both ESG information disclosed and activities conducted by firms. Our study builds on Fiechter et al.'s (2022) study and examines whether the passage and implementation of the Directive results in an increase in ESG information transparency that is proportionate to the increase in ESG performance by EU-listed firms. This research question has not been explored by prior studies. While ESG information disclosed by a firm should fairly reflect its related activities, we argue that managers might feel that ESG disclosure is not essential or not legitimate. This situation may increase the risk of 'window dressing' and generate inconsistencies between ESG performance and ESG disclosure (La Torre et al., 2018). This symbolic adoption might create ESG decoupling (Meyer & Rowan, 1977). The term decoupling in organisation studies refers to policies and organisational actions that are loosely coupled, which challenges the traditionally tight integration approach (Weick, 1976). Firms usually engage in such deceitful behaviour for signalling purposes to respond to the varying requirements and pressure from different stakeholders (Cho et al., 2015; Luo et al., 2017). These contradictory pressures motivate firms to camouflage their ESG disclosure to obfuscate their ESG performance (Eliwa et al., 2021). Therefore, we posit the following hypotheses:

H1a. There is a significant negative relationship between the passage of the Directive and ESG decoupling.

H1b. The significant negative relationship between the Directive and ESG decoupling is stronger after its mandatory implementation.

2.3 | The moderating effect of the strength of national enforcement systems

Following its passage by the EU in 2014, the responsibility of enforcing the Directive was to be transposed into national laws, regulations and administrative provisions of member states that must comply with it by 6 December 2016. This means that member states are required to ensure that adequate and effective national enforcement mechanisms and procedures are in place to guarantee the disclosure of non-financial information by EU-listed firms within the scope of the Directive. Although the significance of harmonisation of the Directive enforcement, there are no official documents issued by the EU that provide guidance for the nature of national laws, regulations and administrative provisions that member states should put in place or enforcement institutions and their activities that should be involved in enforcing the Directive (Fiechter et al., 2022). In such circumstances, where member states have absolute freedom to establish the enforcement system relevant to the Directive, we need to ask whether the strength of the national enforcement system would have a moderating effect on the relationship between the Directive and ESG decoupling.

Consistent with institutional theory, numerous theoretical and empirical studies have confirmed that well-designed enforcement systems of high quality play a crucial role in shaping corporate decisions. These decisions include financial and non-financial disclosure quality, corporate compliance levels and other ethical decisions made by corporations (Ball et al., 2003; Ball & Shivakumar, 2005; Burgstahler et al., 2006; Leuz et al., 2003). In addition, Ioannou and Serafeim (2012) discovered that the strength of a country's enforcement systems has an impact on firms' social and environmental practices. Furthermore, Jackson and Apostolou et al. (2010) revealed that firms from Anglo-Saxon countries provide higher levels of CSR disclosure than those in Continental Europe.

Previous studies also demonstrate that the strength of an enforcement system affects corporate misconduct and unethical decision-making. For example, Leuz et al. (2003) find that companies situated in countries with robust investor protection have less earnings management. Moreover, Hitz et al. (2012) noted that firms operating in countries that have reformed their enforcement systems tend

TABLE 1 Sample description.

Panel A: Sample selection	
Selection criteria	**Observations**
Start: Listed firms from the EU and US (2010–2020) with ESG data available	9820
Less observations of firms	
With a number of employees ≤500	(1023)
Without control variables data	(1290)
Final sample before matching	7507
Final sample after matching	3020

Panel B: Country distribution of firm-year observations		
Country	**Firm-year observations**	**Percent**
Austria	26	1%
Belgium	53	2%
Czech Republic	2	0.02%
Denmark	56	2%
Finland	63	2%
France	199	7%
Germany	184	6%
Greece	26	1%
Hungary	4	0%
Ireland	24	1%
Italy	83	3%
Luxembourg	3	0.02%
Netherlands	58	2%
Poland	30	1%
Portugal	18	1%
Spain	80	3%
Sweden	82	3%
United Kingdom	519	17%
United States	1510	50%
Total	**3020**	**100%**

Notes: This table presents firm-year observations distribution as per country. The matched sample consists of 3020 firm-year observations over the period 2010–2020 (eight industries).

to have lower levels of earnings management and higher levels of earnings quality in their financial reports. Furthermore, Srinivasan et al. (2015) present evidence of the impact of a robust enforcement system on reducing accounting misstatements. Therefore, it is expected that the relationship between the Directive and ESG decoupling is more pronounced in countries with stronger enforcement systems.

It is worth mentioning here that the EU securities regulator (ESMA) imposes no penalties or fines on listed firms in the last 2 years that failed to satisfy the requirements of the Directive. In fact, the EU securities regulator (ESMA) disclosed that 45 and 30 enforcement actions had been taken against listed firms in 2021 and 2022, respectively (ESMA, 2022, 2023), all in the form of requiring companies to correct the relevant matter in future non-financial statements. Therefore, we further investigate the relationship between the Directive and ESG decoupling by examining the moderating effect of the strength of the national enforcement system on this relationship. Therefore, we posit the following hypothesis:

H2a. The strength of the national enforcement system moderates the negative relationship between the passage of the Directive and ESG decoupling.

H2b. The strength of the national enforcement system moderates the negative relationship between the mandatory implementation of the Directive and ESG decoupling.

3 | RESEARCH DESIGN

3.1 | Research sample

We use difference-in-differences analyses to examine the impact of the Directive on ESG decoupling. In the EU context, the European Parliament endorsed and approved Directive 2014/95 to mandate ESG reporting for large EU-listed firms that meet the minimum threshold of 500 employees and €20 million in total assets or €40 million in sales. The Directive has a mandatory effective date of 1 January 2017. Our sample period covers the years from 2010 until 2020. It, therefore, provides an avenue to address the change in the ESG decoupling after the passage and the mandate of the EU directive. We include 4 years before the passage of the directive (2010–2014) and 3 years after the passage (2014–2016) and 4 years after the Directive became mandatory in 2017.

While our treatment firms are all EU-listed companies that meet the conditions specified in the Directive, we used a matched sample from the United States. We argue that US firms are suitable as a control group for two reasons. First, ESG in the US context is still voluntarily reported by listed firms, and there is no country-wide regulatory requirement to mandate ESG reporting (Christensen et al., 2021; Fiechter et al., 2022). Second, the coverage of US firms is relatively high in most of the databases, specifically ESG data.

As shown in Table 1 Panel A, our initial sample includes all firms from the EU and the United States with ESG data available in both *Refinitiv* and *Bloomberg* databases, leading to 9820 firm observations. We exclude firms that do not meet the threshold of the Directive and firms with missing data to obtain 7507 firm-year observations. Furthermore, using propensity-score matching, we tie EU firms with US benchmark firms based on the level of ESG, industry and firm-level attributes we use in our main model. The final number of observations after matching is 3020 firm-year observations.[1] Panel B of Table 1 presents the sample distribution across countries.

[1]We employ a calliper of 0.05 permitting replacement.

3.2 | Research models and variables definition

Using the following model, we examine the impact of the Directive passage on ESG decoupling.

$$\begin{aligned} ESG-gap_{it} = {} & \alpha+\beta_1\, PASS^{*}EU_{it}+\beta_2\, STRATEGY_{it}+\beta_3\, B-SIZE_{it}+\beta_4\, B \\ & -GENDER_{it}+\beta_5\, AUDIT_{it}+\beta_6\, SIZE_{it}+\beta_7\, PROFIT_{it} \\ & +\beta_8\, CAPITAL_{it}+\beta_9\, ENF-PUBLIC_{it}+\beta_{10}\, ENF-AUDIT_{it} \\ & +\beta_{11}\, PASS^{*}EU^{*}ENF-PUBLIC_{it}+\beta_{12}\, PASS^{*}EU^{*}ENF \\ & -AUDIT_{it}+\beta_{11}\, YearEffect_t+\beta_{12}\, IndustryEffect_i+v_{it} \end{aligned} \tag{1}$$

Our dependent variable is ESG decoupling. Following prior studies, we define ESG decoupling (*ESG-gap*) as the gap between a firm's ESG actions and activities and a firm's ESG disclosure (Eliwa et al., 2023; García-Sánchez et al., 2022; Tashman et al., 2019). Thus, our proxy of decoupling capture to what extent a firm's ESG performance is inconsistent with the level of ESG disclosure and vice versa. The *ESG-gap* is computed as the absolute difference between the ESG performance and disclosure scores. Following prior studies, we used the *Refinitiv* ESG database to measure ESG performance and *Bloomberg* ESG score to reflect a company's ESG disclosure level (Eliwa et al., 2021, 2023). Both the *Refinitiv* and *Bloomberg* ESG scores are calculated annually.

We design our models using difference-in-differences estimation. These models have been used to get around the difficulties of modelling endogeneity and selecting appropriate instrumental analysis (Roberts & Whited, 2013). It is mainly used to recuperate the treatment effects stemming from changes in the economic environment, government policy or institutional environment. The difference-in-differences estimators avoid the problem of omitted trends by comparing two groups over the same time period and the problem of the unobserved differences between two different groups of firms by looking at the same firms before and after the change (Armstrong et al., 2022; Gippel et al., 2015; Roberts & Whited, 2013). To test for causality effects, our approach benefits from cross-sectional differences between the treatment group (EU firms) and control groups (matched US firms) as well as compare the outcome after event (EU directive) with the outcome before the directive for just the treatment group (Armstrong et al., 2022; Gippel et al., 2015). Prior studies conclude that difference-in-differences models provide a solution to mitigate endogeneity concerns and outperform other techniques (Armstrong et al., 2022; Deng et al., 2022; Gippel et al., 2015; Roberts & Whited, 2013).

In model (1), we examine whether ESG decoupling decreased following the passage of the Directive in 2014. Therefore, model (1) estimates the treatment effects of the passage of Directive on firms' ESG decoupling for EU firms. Thus, it includes the period between 2010 and 2016. The primary variable of interest is *PASS*EU*, where the dummy variable *EU* differentiates between EU-treated companies and matched US companies, and *PASS* is an indicator variable reflecting all years after the Directive was passed in 2014 until the mandatory adoption year in 2017. Our sample period begins in 2010, so 4 years before the introduction of the Directive and 3 after the introduction of the Directive.[2] Our key variable *PASS*EU* offers evidence on the impact of the passage of the Directive on ESG decoupling. In this model, we further introduce two interaction terms (*PASS*EU*ENF-PUBLIC$_{it}$ and PASS*EU*ENF-AUDIT$_{it}$*) to address the impact of enforcement in shaping the effect of the Directive passage. The first proxy of enforcement (*ENF-PUBLIC*) captures the rule of law on country level, including the quality of contract enforcement, property rights, the police and finally, the courts, as well as the likelihood of crime and violence. The second proxy of enforcement (*ENF-AUDIT*) captures the strength and oversight of auditing on country level, including indicators such as litigation risk, quality assurance programme, the oversight body sanction, extensive licence requirements and level of audit fees (Brown et al., 2014).

To test the mandatory impact of EU directive, we use the following model:

$$\begin{aligned} ESG-gap_{it} = {} & \alpha+\beta_1\, MANDATE^{*}EU_{it}+\beta_2\, STRATEGY_{it}+\beta_3\, B-SIZE_{it} \\ & +\beta_4\, B-GENDER_{it}+\beta_5\, AUDIT_{it}+\beta_6\, SIZE_{it}+\beta_7\, PROFIT_{it} \\ & +\beta_8\, CAPITAL_{it}+\beta_9\, ENF-PUBLIC_{it}+\beta_{10}\, ENF-AUDIT_{it} \\ & +\beta_{11} MANDATE^{*}EU^{*}ENF-PUBLIC_{it} \\ & +\beta_{12}\, MANDATE^{*}EU^{*}AUDIT\_ENF_{it}+\beta_{11}\, YearEffect_t \\ & +\beta_{12}\, IndustryEffect_i+v_{it} \end{aligned} \tag{2}$$

In model (2), we examine whether ESG decoupling decreased in response to the mandate of the Directive relative to the passage period. Thus, it includes the period between 2014 and 2020. Our key variable is the *MANDATE*EU*, which tests the mandatory effect of the Directive on ESG decoupling. The indicator variable (*MANDATE*) reflects only the 4 years after the Directive became mandatory in 2017 relative to the 3 years when the Directive was voluntarily used (2014–2016). The *EU* distinguishes between EU-treated firms and match US firms.[3] We further introduce two interaction terms in model (2) (*MANDATE*EU*ENF-PUBLIC$_{it}$* and *MANDATE*EU*ENF-AUDIT$_{it}$*) to test the impact of enforcement in shaping the mandatory effect of the Directive on ESG decoupling.

Our study accounts for pertinent firm characteristics that are frequently employed in prior studies (Eliwa et al., 2023; García-Sánchez et al., 2022; Tashman et al., 2019). In particular, we control for the following. *STRATEGY$_{it}$* measures the clarity of ESG strategy. This score reflects a company's practices to communicate that it integrates economic (financial), social and environmental dimensions into its day-to-day decision-making processes. We expect firms with a high score in ESG strategy to have a higher level of ESG disclosure and therefore larger ESG decoupling. *B-SIZE$_{it}$* is a firm's board size, calculated as the total number of directors on the board. We expect firms with large board size to suffer from less harmonisation, which may diminish the quality of the board's functions (Eliwa et al., 2023; Sauerwald &

[2]The final number of observations after matching is 3020 firm-year observations across the 11 years. However, in model (1), we address only the passage of the directive; thus, only 1458 firm-year observations cover 2010–2016.

[3]The final number of observations after matching is 3020 firm-year observations across the 10 years. However, in model (2), we address the mandate of the Director; thus, only 2417 firm-year observations cover 2014–2020.

Su, 2019) and then increase ESG decoupling. Prior studies provide evidence that female directors *are* less engaged in unethical corporate behaviour, such as corporate fraud, financial restatements and tax avoidance (Capezio & Mavisakalyan, 2016; Francis et al., 2014; Lanis et al., 2017; Lenard et al., 2017; Wahid, 2019). Therefore, we control for gender diversity. *B-GENDER* is a measure of gender diversity, calculated as the ratio of women on the board of directors. Moreover, we account for the potential role of auditing by controlling for assurance service; *AUDIT* is a measure of ESG assurance indicating one if ESG information is audited and zero otherwise. We expect *AUDIT* to have a negative coefficient implying that firms subject to audit assurance have less ESG decoupling. Our models include *SIZE*, defined as the logarithm of a firm's total assets. We expect larger firms to be more concerned about their reputation and perceptions of their stakeholder, and therefore, they are less likely to engage in ESG decoupling (Eliwa et al., 2023; Tashman et al., 2019). Furthermore, we include *PROFIT* and *CAPITAL* to account for the impact of profitability and investment on ESG decoupling. We expect firms with more investment and high profitability to have lower ESG decoupling (Eliwa et al., 2023; Tashman et al., 2019). Our model control for two country-level enforcement (*ENF-PUBLIC*, *ENF-AUDIT*). We expect both proxies of enforcement to mitigate ESG decoupling. We also control for year and industry effects by adding a year and industry-fixed effects. Appendix A provides a summary of variable measurement and data sources.

4 | EMPIRICAL RESULTS AND DISCUSSIONS

4.1 | Descriptive statistics

The descriptive analysis is reported in Tables 2 and 3. As per country, the average scores of ESG decoupling in the pre-Directive period is reported in column 1 of Table 2. While column 2 of Table 2 displays the mean values of ESG decoupling (*ESG-gap*) post-Directive. Table 2 shows that the full sample average decreased from 16.8 in pre-Directive to 16.7 in post-Directive. The table indicates that while Spain has the highest level of ESG decoupling in pre-Directive (24.5), Belgium has the highest level in post-Directive. We noticed small values of ESG decoupling for Hungary and Luxembourg, but this may be explained by the few number of observations from those countries.[4]

We provide the main statistics for the whole sample in Table 3. The average score of our primary dependent variable, ESG decoupling (*ESG-gap*), is 16.8. We observed a small variation between the US and EU samples in *ESG-gap*, regardless of the Directive. The mean value of *STRATEGY* is 34, with significant differences between the US and EU samples (45.6 in the EU vs. 22.4 in the USA). Likewise, *B-GENDER* has a mean value of 21.4, with a higher average in the EU sample than the US sample (25.4 in the EU vs. 17.4 in the USA). Moreover, the average value of firm size (*SIZE*) is 22.3. The mean value of gross profit (*PROFIT*) is 0.05. Moreover, while the average country-level public enforcement is 90.1, the average score of audit enforcement level is 25.6.

Table 4 presents the correlation matrix. In line with expectations, we show a significant negative association between *ESG-gap* and the Directive and enforcement. Moreover, there is a significant negative correlation between *ESG-gap*, *CAPITAL* and *PROFIT*. However, the associations between *ESG-gap* and *B-SIZE*, *STRATEGY*, *AUDIT*, *B-GENDER* and *SIZE* are positive. The highest correlation was found between *AUDIT* and *STRATEGY* (0.71), suggesting no concerns over multicollinearity.

TABLE 2 Mean values of ESG decoupling in the pre- and post-Directive.

Country	ESG-gap Pre-Directive	ESG-gap Post-Directive
Austria	17.4	16.8
Belgium	16.4	21.5
Czech Republic	14.5	2.71
Denmark	19.1	19.8
Finland	8.43	11.4
France	15.1	14.4
Germany	23.2	19.9
Greece	15.3	18.4
Hungary	7.35	10.7
Ireland	13.5	14.9
Italy	16.8	16.6
Luxembourg	0.219	11.2
Netherlands	19.4	17.3
Poland	14.8	19.5
Portugal	15.9	12.9
Spain	24.5	17.9
Sweden	16.4	16.4
United Kingdom	16.3	16.2
United States	16.5	16.6
Total	**16.8**	**16.7**

Notes: This table presents the mean values of ESG decoupling in the pre- and post-Directive. The sample consists of 3020 firm-year observations over the period 2010–2020 (eight industries). Appendix A outlines the variables definition and data sources for all variables.

4.2 | Baseline analysis

The main objective is to address the effects of the Directive on ESG decoupling and the role that country-level enforcement may play in this relationship. The main results are presented in Table 5.

[4]We run our analysis excluding observations from Hungary and Luxembourg, and the results remain the same supporting our main findings.

TABLE 3 Descriptive statistics ESG decoupling and control variables.

	US sample				EU sample				Full sample			
Variable	Mean	25th	75th	SD	Mean	25th	75th	SD	Mean	25th	75th	SD
ESG-gap	16.7	7.94	24.6	10.8	16.9	7.94	24.2	11.2	16.8	7.94	24.4	11
STRATEGY	22.4	0	45.7	33	45.6	22.7	70.9	28.5	34	0	63.1	32.9
B-SIZE	10.1	8	11	2.99	10.1	8	12	3.64	10.1	8	12	3.33
B-GENDER	17.4	10	25	11.3	25.4	15.4	33.3	13.5	21.4	11.1	30	13.1
AUDIT	0.116	0	0	0.321	0.453	0	1	0.498	0.285	0	1	0.451
SIZE	22.3	21.3	23.3	1.57	22.3	21.2	23.3	1.7	22.3	21.2	23.3	1.64
PROFIT	0.048	0.011	0.08	0.08	0.052	0.015	0.081	0.082	0.05	0.012	0.081	0.081
CAPITAL	0.04	0.01	0.056	0.044	0.036	0.01	0.05	0.038	0.038	0.0097	0.053	0.041
ENF-PUBLIC	90.7	89.9	91.3	0.866	89.5	89.2	93.8	9.29	90.1	89.9	92	6.63
ENF-AUDIT	24	24	24	0	27.1	23	32	4.65	25.6	24	27	3.63

Notes: This table presents descriptive statistics of all variables used in our main analysis. The sample consists of 3020 firm-year observations over the period 2010–2020. All continuous variables are winsorised at the 1st and 99th percentiles. Appendix A outlines the variables definition and data sources for all variables.

4.2.1 | The Directive and ESG decoupling

In this section, we begin with examining the relationship between the passage of the Directive and ESG decoupling (H1a). The results of the primary analysis of H1a are presented in column 1 of Table 5. The coefficient of *PASS*EU* is significantly negative at the 5% level ($\beta = -.0162$; $p < .05$). This implies that following the passage of the Directive, EU firms are less likely to engage in ESG decoupling behaviour, as reported in column 1. This finding indicates that following the passage of the Directive, normative isomorphic institutional pressure started to accumulate EU firms as a result of the opportunity to early adopt the Directive leading to reducing their ESG decoupling. Therefore, H1a is accepted.

Then, we examine the impact of the mandatory implementation of the Directive (H1b); the coefficient of *MANDATE*EU* is negative and significant at the 10% level ($\beta = -.0113^{*}$; $p < .10$). This means that the mandatory implementation of the Directive has an incremental impact on reducing ESG decoupling by EU firms, as reported in column 2. This finding indicates that, following the mandatory implementation of the Directive in 2017, the coercive isomorphic institutional pressure started to prevail over the normative isomorphic institutional pressure and, hence, its impact on ESG decoupling is more pronounced compared to the passage period. Therefore, H1b is accepted.

Taken together, our results are consistent with the substantive approach of legitimacy theory. Due to the Directive, firms might be motivated to disclose more relevant ESG information that reflects their real ESG performance aiming to gain, maintain or repair their legitimacy, which leads to a lower ESG decoupling. This finding is also consistent with institutional theory and suggest that the passage of the Directive in 2014 has generated normative isomorphic institutional pressure, resulting in firms engaging less in ESG decoupling. Following the mandatory implementation of the Directive, coercive isomorphic institutional pressure starts to accumulate, resulting in an incremental effect of the Directive on ESG decoupling. Consequently, ESG decoupling is less in the mandatory period compared with the voluntary period. This finding also supports the view that shifting from voluntary to mandatory ESG disclosure affects corporate legitimation strategies. After the Directive, firms seem to lean towards more substantive and verifiable disclosures that reflect their ESG performance.

Regarding firm and country-level control variables, the findings indicate a significant relationship between *ESG-gap* and *STRATEGY*, suggesting that firms with good ESG strategy tend to engage more in ESG decoupling. This is consistent with prior studies that find that firms with better CSR are more likely to increase the level of ESG disclosure, which may increase the gap between ESG performance and disclosure (Cuganesan et al., 2010; Helfaya & Moussa, 2017; Orazalin & Baydauletov, 2020). Likewise, we find that firms with more gender-diversified boards have higher levels of ESG decoupling. In contrast, we report that the level of ESG decoupling decreases for firms with ESG assurance. This complements prior studies that found external assurance contributes to higher-quality ESG reporting (Maroun, 2019; Zhou et al., 2022). Moreover, we report moderate evidence that firms located in a country where audit enforcement is high are engaged less in ESG decoupling. The coefficients *ENF-AUDIT* is negative and significant in columns 2 and 4. Although the coefficient of public enforcement (*ENF-PUBLIC*) has a negative sign, as expected, it is not significant.

4.2.2 | The impact of enforcement on the relationship between the Directive and ESG decoupling

In the previous section, we provide evidence that both passage and mandatory implementation of the Directive reduce ESG decoupling. We further investigate the impact of enforcement on the relationship

TABLE 4 Pearson correlation matrix.

	ESG-gap	PASS*EU	MANDATE*EU	STRATEGY	B-SIZE	B-GENDER	AUDIT	SIZE	PROFIT	CAPITAL	ENF-PUBLIC
*PASS*EU*	−0.235***	1									
*MANDATE*EU*	−0.189***	0	1								
STRATEGY	0.0958***	−0.185***	0.194***	1							
B-SIZE	0.146***	−0.494***	0.0103	0.424***	1						
B-GENDER	0.318***	−0.0884***	0.403***	0.0347*	0.0304*	1					
AUDIT	0.140***	−0.279***	0.248***	0.715***	0.436***	0.161***	1				
SIZE	0.221***	−0.562***	0.176***	0.395***	0.469***	0.222***	0.534***	1			
PROFIT	−0.0608***	0.0472**	−0.0506**	0.171***	0.0291*	−0.162***	−0.023	−0.152***	1		
CAPITAL	−0.0594***	0.145***	−0.124***	−0.0975***	−0.166***	0.017	−0.0885***	−0.267***	−0.0144	1	
ENF-PUBLIC	−0.0633***	0.00357	−0.0278	−0.0278*	−0.108***	0.111***	−0.229***	−0.166***	0.171***	0.00943	1
ENF-AUDIT	−0.370***	0.420***	0.0534**	0.246***	−0.0948***	−0.242***	0.0213	−0.254***	0.199***	−0.0745***	0.125***

Notes: This table presents the correlation coefficients of the variables used in our main analysis. The sample consists of 3020 firm-year observations over the period 2010 to 2020 (8 industries). Values with asterisks *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively. All continuous variables are winsorised at the 1st and 99th percentiles. Appendix A outlines the variables definition and data sources for all variables.

between the Directive and ESG decoupling (H2a and H2b). We present the effects of the enforcement on our baseline results. In model (2), two interaction terms ($PASS^*EU^*ENF\text{-}PUBLIC_{it}$ *and* $PASS^*EU^*ENF\text{-}AUDIT_{it}$) are added to capture the role of enforcement on the passage effect on ESG decoupling (H2a). The findings presented in column 3 of Table 5 indicate that the interaction terms ($PASS^*EU^*ENF\text{-}PUBLIC_{it}$ *and* $PASS^*EU^*ENF\text{-}AUDIT_{it}$) do not affect our baseline results, as expected. With regard to H2b, we expect the enforcement to strengthen the mitigating effects on ESG decoupling following the mandatory implementation of the Directive. However, the results suggest that the enforcement level has no apparent impact. This finding indicates that the strength of national enforcement systems has no impact on the relationship between the Directive and ESG decoupling, suggesting the necessity of tailored enforcement mechanisms of the Directive. We argue that the lack of clear guidance by the Directive on how its requirements should be enforced has weakened the role that enforcement should have on the effectiveness of the implementation of the Directive. This finding may justify the non-existence of any penalties imposed on EU-listed firms by national enforcement bodies in spite of having 30 and 45 cases in which the EU securities regulator has identified a violation of the requirements of the Directive in 2021 and 2022, respectively (ESMA, 2022, 2023).

5 | ADDITIONAL AND ROBUSTNESS TESTS

5.1 | The role of ESG audit in shaping the impact of the Directive on ESG decoupling

While the EU mandates the disclosure of ESG information according to the requirements of the Directive, it has left external audits of ESG information disclosed by EU-listed firms optional. Moreover, prior studies provide inconclusive evidence on the positive effects of CSR assurance (Ballou et al., 2018; García-Sánchez et al., 2022; Moroney et al., 2012; Sauerwald & Su, 2019). Testing the role of ESG assurance, our main findings show that ESG audit (*AUDIT*) mitigates the level of ESG decoupling, which suggests that ESG external assurance services could have a significant moderating role in the relationship between the Directive and ESG decoupling. Initially, this result supports the substantive use of assurance, as a monitoring mechanism, restraining ESG decoupling (García-Sánchez et al., 2022; Sauerwald & Su, 2019). Our result implies that ESG assurance is not only connected to a higher quality of ESG practices but also mitigates the unethical behaviour related to ESG practices. Therefore, this section aims to provide additional insights to policymakers and regulators in the EU into the need to embed ESG external audit in the requirements of future ESG Directives. In Table 6, we extend our analysis to examine whether the mitigating impact of the Directive on ESG decoupling varies with the presence of ESG audit. We introduce an interaction term between the passage and mandate of the Directive and ESG audit (*PASS*EU*AUDIT* and *MANDATE*EU*AUDIT*). The results indicate that the negative impact of the Directive is more pronounced when

TABLE 5 The relationship between ESG decoupling, the Directive and enforcement.

Variables	(1) ESG-gap	(2) ESG-gap	(3) ESG-gap	(4) ESG-gap
*PASS*EU*	−0.0162**		−0.0392	
	[−2.049]		*[−0.444]*	
*MANDATE*EU*		−0.0113*		0.00371
		[−1.756]		*[0.103]*
STRATEGY	0.000980***	0.00101***	0.000980***	0.00101***
	[7.882]	*[10.82]*	*[7.894]*	*[10.81]*
B-SIZE	0.00182**	−0.000522	0.00181**	−0.000503
	[2.133]	*[−0.640]*	*[2.122]*	*[−0.616]*
B-GENDER	−0.000000692	0.000644***	−0.000000326	0.000639***
	[−0.0250]	*[3.484]*	*[−0.0118]*	*[3.448]*
AUDIT	−0.0357***	−0.0357***	−0.0357***	−0.0361***
	[−4.066]	*[−5.236]*	*[−4.072]*	*[−5.176]*
SIZE	0.00196	0.00497***	0.00187	0.00499***
	[0.814]	*[2.916]*	*[0.776]*	*[2.925]*
PROFIT	−0.0083	−0.019	−0.00759	−0.0191
	[−0.241]	*[−0.763]*	*[−0.221]*	*[−0.769]*
CAPITAL	−0.045	−0.0735	−0.0456	−0.0739
	[−0.641]	*[−1.539]*	*[−0.649]*	*[−1.540]*
ENF-PUBLIC	−0.000122	−0.000418	−0.000393	−0.000353
	[−0.255]	*[−1.012]*	*[−0.585]*	*[−0.565]*
ENF-AUDIT	−0.000702	−0.00205***	−0.0000996	−0.00170*
	[−0.825]	*[−3.004]*	*[−0.0781]*	*[−1.691]*
*ENF-PUBLIC*PASS*EU*			−0.00118	
			[−0.720]	
ENF-AUDIT*PASS*EU			0.000586	
			[0.647]	
*ENF-PUBLIC*MANDATE*EU*				−0.00027
				[−0.0821]
ENF-AUDIT*MANDATE*EU				−0.000003
				[−0.111]
Constant	0.141*	0.142**	0.153	0.127*
	[1.784]	*[2.485]*	*[1.589]*	*[1.761]*
Observations	1458	2417	1458	2417
R-squared	0.117	0.111	0.117	0.111
Industry effect	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes

Notes: This table reports the results of testing the relationship between ESG decoupling and the Directive and the moderating role of enforcement. The analysis of the relationship between ESG decoupling (*ESG-gap*) and passage of the Directive is presented in column 1, and the mandatory effect of the Directive is presented in column 2. The interaction terms are added to the analysis in columns 3 and 4 to test hypothesis two. The sample contains 1458 firm-year observations over the period 2010–2014 and 2417 firm-year observations over the period 2014–2020. Values with asterisks *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively. *t*-statistics in brackets and italics. All continuous variables are winsorised at the 1st and 99th percentiles. Appendix A outlines the variables definition and data sources for all variables.

firms have their ESG unaudited. The coefficient of the interaction term between the mandate of the Directive and the ESG audit ($MANDATE*EU*AUDIT_{it}$) is positive and significant ($\beta = .0118$; $p < .10$). Likewise, the coefficient of the interaction term between the passage of the Directive and ESG audit ($PASS*EU*AUDIT_{it}$) is positive but not significant. These findings suggest a substitution effect between the

TABLE 6 The role of ESG audit in the relationship between ESG decoupling and the Directive.

Variables	ESG-gap	ESG-gap
*PASS*EU*	−0.0195**	
	[−2.153]	
*MANDATE*EU*		−0.0180**
		[−2.384]
STRATEGY	0.000998***	0.00105***
	[7.811]	*[11.01]*
B-SIZE	0.00179**	−0.00057
	[2.094]	*[−0.699]*
B-GENDER	−0.0000036	0.000649***
	[−0.0137]	*[3.515]*
AUDIT	−0.0406***	−0.0457***
	[−3.679]	*[−5.276]*
SIZE	0.00189	0.00498***
	[0.782]	*[2.918]*
PROFIT	−0.00855	−0.0193
	[−0.248]	*[−0.771]*
CAPITAL	−0.0451	−0.0758
	[−0.644]	*[−1.587]*
ENF-PUBLIC	−0.00015	−4.29E-04
	[−0.304]	*[−1.034]*
ENF-AUDIT	−0.00071	−0.00192***
	[−0.839]	*[−2.760]*
*PASS*EU*AUDIT*	0.0106	
	[0.800]	
*MANDATE*EU*AUDIT*		0.0118*
		[1.715]
Constant	0.146*	0.143**
	[1.843]	*[2.489]*
Observations	1458	2417
R-squared	0.117	0.112
Industry effect	Yes	Yes
Year effect	Yes	Yes

Notes: This table reports the results of testing the role of ESG audit in the relationship between ESG decoupling and the Directive. The analysis of the relationship between ESG decoupling (*ESG-gap*) and passage of the Directive is presented in column 1, and the mandatory effect of the Directive is presented in column 2. The sample contains 1458 firm-year observations over the period 2010–2014 and 2417 firm-year observations over the period 2014–2020. Values with asterisks *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively. *t*-statistics in brackets and italics. All continuous variables are winsorised at the 1st and 99th percentiles. Appendix A outlines the variables definition and data sources for all variables.

assurance of ESG and the mitigation role of the Directive. It supports the substantive view on the role of assurance in that the assurance of ESG reduces ESG decoupling for firms outside the scope of the directive (Moroney et al., 2012; Sauerwald & Su, 2019).

5.2 | The role of the Directive in controversial industries

Firms operating in controversial industries are less motivated to engage in ESG decoupling and are significantly less compared with other industries due to high exposure to reputation and legitimacy risks (Cai et al., 2012; Conte et al., 2022). Moreover, those firms are under pressure from stakeholders to improve their ESG practices and avoid opportunistic ESG that untruly generates inconsistency between ESG performance and disclosure. On the other hand, they are more likely to increase their ESG disclosure and thus have higher ESG decoupling to improve the firm reputation and corporate image. Therefore, it is not obvious whether these firms have a larger ESG decoupling compared to those operating in non-controversial industries (*CONTRA*). Our additional analysis shows that the coefficient of the CONTRA ($\beta = -.0200^{**}$; $p < .05$) is negative and significant, suggesting that the level of ESG decoupling is lower in controversial industries. This support that firms in controversial industries are risk-averse and are more concerned about their reputation and corporate image. We further tested the variation in the impact of the passage and mandate of the Directive between controversial firms and non-controversial firms. We introduced two interaction terms between the passage and mandate of the Directive and *CONTRA*. The results are presented in Table 7. We find the coefficient of the interaction term between the passage of the Directive and *CONTRA* (*PASS*EU*-$CONTRA_{it}$) is positive and significant ($\beta = .0445$; $p < .01$) at the 1% level. Likewise, the coefficient of the interaction term between the mandate of the Directive and *CONTRA* (*MANDATE*EU*CONTRA*$_{it}$) is positive and significant ($\beta = .0356$; $p < .05$). Those results suggest that the mitigating effects of the passage and mandate of the Directive on ESG decoupling are more pronounced for firms operating in non-controversial industries compared to firms operating in controversial industries.

5.3 | The role of ESG strategy in shaping the impact of the Directive on ESG decoupling

Prior studies suggest that firms with a more proactive and comprehensive ESG strategy have better ESG practices (Helfaya & Moussa, 2017; Shaukat et al., 2016). For instance, Helfaya and Moussa (2017) demonstrate that firms with effective ESG strategy disseminate more environmental information to stakeholders. Likewise, Amran et al. (2014) find that ESG strategic stance is an important driver of the quantity of ESG reporting. Extending this stream of research, our baseline results provide support for the positive relationship between ESG strategy (*STRATEGY*) and ESG decoupling, which suggests that ESG strategy improves ESG disclosure more than ESG performance. This finding is consistent with the legitimacy theory in that firms with high ESG strategy score puts pressure on management to respond to stakeholder concerns through providing more ESG disclosure (Amran et al., 2014; Helfaya & Moussa, 2017; Shaukat et al., 2016), which evidently increase the gap between ESG disclosure

TABLE 7 The relationship between ESG decoupling and the Directive in controversial industries.

Variables	ESG-gap	ESG-gap
*PASS*EU*	−0.0229***	
	[−2.768]	
*MANDATE*EU*		−0.0155***
		[−2.606]
STRATEGY	0.000986***	0.00103***
	[7.886]	*[11.02]*
B-SIZE	0.00175**	−0.00056
	[2.051]	*[−0.686]*
B-GENDER	−0.00000986	0.000600***
	[−0.0357]	*[3.246]*
AUDIT	−0.0355***	−0.0356***
	[−4.017]	*[−5.221]*
SIZE	0.00216	0.00469***
	[0.902]	*[2.740]*
PROFIT	−0.005	−0.0271
	[−0.146]	*[−1.118]*
CAPITAL	−0.046	−0.0689
	[−0.654]	*[−1.436]*
ENF-PUBLIC	−0.00014	−0.0004
	[−0.303]	*[−0.951]*
ENF-AUDIT	−0.00072	−0.00209***
	[−0.850]	*[−3.050]*
CONTRA	−0.0200**	−0.0256***
	[−2.000]	*[−3.937]*
*PASS*EU*CONTRA*	0.0445***	
	[2.722]	
*MANDATE*EU*CONTRA*		0.0356**
		[2.418]
Constant	0.142*	0.150***
	[1.809]	*[2.611]*
Observations	1458	2417
R-squared	0.121	0.115
Industry effect	Yes	Yes
Year effect	Yes	Yes

Notes: This table reports the results of testing the role of controversial industries in the relationship between ESG decoupling and the Directive. The analysis of the relationship between ESG decoupling (*ESG-gap*) and passage of the Directive is presented in column 1, and the mandatory effect of the Directive is presented in column 2. The sample contains 1458 firm-year observations over the period 2010–2014 and 2417 firm-year observations over the period 2014–2020. Values with asterisks *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively. *t*-statistics in brackets and italics. All continuous variables are winsorised at the 1st and 99th percentiles. Appendix A outlines the variables definition and data sources for all variables.

TABLE 8 The role of ESG strategy in the relationship between ESG decoupling and the Directive.

Variables	ESG-gap	ESG-gap
*PASS*EU*	−0.0181	
	[−1.639]	
*MANDATE*EU*		−0.0134
		[−1.448]
STRATEGY	0.000968***	0.00100***
	[7.183]	*[9.880]*
B-SIZE	0.00182**	−0.00053
	[2.130]	*[−0.645]*
B-GENDER	−0.00000566	0.000649***
	[−0.0112]	*[3.499]*
AUDIT	−0.0360***	−0.0359***
	[−4.076]	*[−5.260]*
SIZE	0.00199	0.00497***
	[0.825]	*[2.914]*
PROFIT	−0.00774	−0.0192
	[−0.224]	*[−0.770]*
CAPITAL	−0.0448	−0.0737
	[−0.637]	*[−1.543]*
ENF-PUBLIC	−0.00014	−0.00042
	[−0.286]	*[−1.010]*
ENF-AUDIT	−0.00072	−0.00206***
	[−0.845]	*[−3.009]*
*PASS*EU*STRATEGY*	0.000057	
	[0.262]	
*MANDATE*EU*STRATEGY*		0.00514
		[0.319]
Constant	0.143*	0.143**
	[1.805]	*[2.498]*
Observations	1458	2417
R-squared	0.117	0.111
Industry effect	Yes	Yes
Year effect	Yes	Yes

Notes: This table reports the results of testing the role of ESG strategy in the relationship between ESG decoupling and the Directive. The analysis of the relationship between ESG decoupling (*ESG-gap*) and passage of the Directive is presented in column 1, and the mandatory effect of the Directive is presented in column 2. The sample contains 1458 firm-year observations over the period 2010–2014 and 2417 firm-year observations over the period 2014–2020. Values with asterisks *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively. *t*-statistics in brackets and italics. All continuous variables are winsorised at the 1st and 99th percentiles. Appendix A outlines the variables definition and data sources for all variables.

and performance. To provide further insight into the mitigation role of the Directive, we extend our analysis to examine whether the mitigating impact of the Directive on ESG decoupling varies with the level of ESG strategy. We introduce an interaction term between the passage and mandate of the Directive and ESG strategy. The results are presented in Table 8. The results suggest that the

mitigation effects of the Directive remain the same regardless of the level of the ESG strategy score.

6 | CONCLUSION

Enhancing disclosure quality is the primary objective of ESG reporting regulations (Christensen et al., 2021). As evidenced by prior studies, ESG disclosures have historically been largely skewed towards good news and more symbolic in nature rather than being substantive (e.g. Hackston & Milne, 1996; Lyon & Montgomery, 2015). According to their findings, firms use ESG disclosure as a means of legitimating their actions (Cho et al., 2012; Deegan, 2010; Michelon et al., 2015). These findings, though, are based on studies conducted in a voluntary setting. Therefore, a logical question follows: Does mandating ESG reporting enhance ESG disclosure quality to reflect real ESG performance? Therefore, our paper aims to examine the impact of the EU's Directive 2014/95 that mandates the disclosure of ESG information on ESG decoupling and whether the strength of the national enforcement system plays a moderating role in this relationship. Using a difference-in-differences design and employing a totally matched sample of 3020 firm-year observations from the EU and the United States, we find that both the passage of the Directive in 2014 and its implementation in 2017 have a mitigating effect on ESG decoupling. We also find that the strength of national enforcement systems has no impact on ESG decoupling. These findings indicate that firms in the EU were subject to two potent institutional isomorphism pressures, normative and coercive, which result in reducing the extent to which these firms engage in ESG decoupling.

We contribute to the ESG literature by providing evidence on the impact of the Directive on ESG decoupling. We show that this impact started from the year 2014 onwards (the year in which the EU passed the Directive). The timeframe of our study provides additional insights to regulators and policymakers into the impact of the Directive on ESG decoupling. Our sample covers 4 years before the passage of the Directive, 3 years after the passage of the Directive and before the Directive becomes mandatory and 4 years after the mandatory implementation of the Directive. Moreover, we examine the moderating role of national enforcement systems' strength in the relationship between the Directive and ESG decoupling. The Directive indicates that member states should put national laws, regulations and administrative provisions in place and clarify enforcement institutions and their activities that should be involved in enforcing the Directive. Therefore, our study provides insights to regulators and policymakers into their approach to harmonisation of the Directive enforcement.

Our findings are of potential interest to policymakers and regulators. It informs them of the potential effects of introducing a widespread ESG reporting mandate. In general, the main aim of the ESG reporting regulations is to enhance disclosure quality (Christensen et al., 2021) and to decrease the gap between the actual ESG performance and its related disclosure. Our findings support this objective and shed light on the regulators on the role of Directive in decreasing ESG decoupling. It also sheds light on the need to mandate for independent assurance on the ESG disclosure, as the current draft of the EU-Directive does not mandate an audit or assurance of the disclosures.

Despite the aforementioned contributions, it is important to acknowledge the following limitation that represents an avenue for future research. Directive 2014/95/EU imposes an obligation on EU-listed firms with more than 500 employees and meeting specific financial thresholds to disclose non-financial and diversity information. However, the Directive does not address the requirements for unregulated firms. The limited scope of the Directive, which applies only to a particular segment of the market, creates a disparity between regulated and unregulated firms. This raises the question of whether the Directive has spillover effects beyond the regulated firms that meet the specified thresholds for employees, total assets and sales. The unique nature of the Directive, which exclusively mandates ESG reporting for firms listed in the EU subject to the Directive, provides an opportunity for future research to examine the impact of the Directive on the quality of ESG reporting, the level of ESG activities and the occurrence of ESG decoupling among firms not subject to the requirements of the Directive. This should provide timely insights to regulators and policymakers into the overall effects of future ESG reporting mandates.

AUTHOR CONTRIBUTIONS

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Yasser Eliwa, Ahmed Aboud and Ahmed Saleh. The first draft of the manuscript was written by them. All authors read and approved the final manuscript.

CONFLICT OF INTEREST STATEMENT

The authors have no relevant financial or non-financial interests to disclose.

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APPENDIX A: VARIABLES DEFINITION

Variable	Definition
ESG decoupling (dependent variable)	
ESG-gap	A measure of ESG performance–disclosure gap, calculated as the absolute difference between the ESG performance score and ESG disclosure score. Data of ESG performance score are obtained from the Refinitiv database, while ESG disclosure score are obtained from Bloomberg
Main variables	
*PASS*EU*	The treatment effects of the passage of Directive on ESG Decoupling. *PASS* is an indicator variable equal to one for years between 2014 and 2016 and zero for years 2010–2013. *EU* is an indicator variable equal to one for EU-treated firms and zero for matched US firms
*MANDATE*EU*	The treatment effects of the mandate of Directive on ESG Decoupling. *MANDATE* is an indicator variable equal to one for years between 2017 and 2020 and zero for years 2014–2016. *EU* is an indicator variable equal to one for EU-treated firms and zero for matched US firms
ENF-PUBLIC	Rule of law on country level. It includes the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence. Source [World Bank Database]
ENF-AUDIT	The strength and oversight of audit on country level. It includes indicators such as litigation risk, quality assurance programme, the oversight body sanction, extensive licence requirements and level of audit fees. Source [Bowen & Khan, 2014]
Control variables	
STRATEGY	The ESG strategy clarity is a score that reflects a company's practices to communicate that it integrates economic (financial), social and environmental dimensions into its day-to-day decision-making processes. Data are obtained from the Refinitiv database
B-SIZE	A firm's board size is calculated as the number of members included in the board of directors. Data are obtained from the Refinitiv database
B-GENDER	A firm's board gender diversity is calculated as the percentage of female on the board of directors
AUDIT	ESG assurance indicates one if ESG information is audited and zero otherwise
SIZE	Firm size is calculated as the natural logarithm of total assets. Data are obtained from the Refinitiv database
PROFIT	Firm profitability is calculated as a firm's profit margin deflated by its total assets. Data are obtained from the Refinitiv database
CAPITAL	Capital expenditure is calculated as the ratio of capital expenditure to total assets.
CONTRA	A dummy variable equals to 1 if a firm operates in a controversial industry sector and 0 if a firm is operating in a non-controversial industry sector. Based on the Industry Classification Benchmark (ICB) subsector codes, firms in subsector codes 45101010 and 45101015 are alcohol firms. Firms in subsector code 45103010 are tobacco firms. Firms in subsector code 40501020 are gambling firms. Firms in subsector code 50201020 are weapon firms. Firms in subsector code 50101030 are cement firms. Firms in subsector code 45103010 are biotech firms. Firms in subsector codes 55102000, 60101000, 60101010, 60101015, 60101020, 60101030, 60101035 and 60101040 are oil, gas and coal firms