



**UNICA**

UNIVERSITÀ  
DEGLI STUDI  
DI CAGLIARI

**Ph.D. DEGREE IN**

**Economics and Business**

Cycle XXXVII

**TITLE OF THE Ph.D. THESIS**

Corporate social responsibility disclosure: International evidence

Scientific Disciplinary Sector

ECON-06/A

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Final exam. Academic Year 2023/2024

Thesis defense session: February 2025

## INTRODUCTION

Corporate Social Responsibility was defined by Bowen (1953) as “ to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society” (p. 6). Carroll (1999) traced the evolution of formal literature on CSR. Between the 1960s and 1970s, the definition of CSR was expanded. Carroll (1979) expanded the definition further to argue that businesses should serve society's economic, legal, ethical, and discretionary expectations, eventually formulating his Pyramid Model of CSR in 1991.

CSR reporting is a way to enhance the accountability of businesses by providing an accountable image through which they communicate with their stakeholders (Ajayi & Mmutle, 2021). CSR reporting allows firms to battle legitimacy-related issues and agency problems by releasing pertinent information for stakeholder dialogue (Magnan & Michelon, 2024). This reduces information asymmetry, keeps stakeholders aware of what their firm is doing socially and environmentally, and enhances trust and credibility when it comes to commitment to social responsibilities by the organization (Tsang et al., 2023).

Research indicates that firms enhance their CSR disclosure in response to a legitimacy crisis (Cho, 2009) or poor environmental and social performances (Cho & Patten, 2007). Magnan and Michelon (2024) argue that firms report on CSR to show that they care for stakeholders and try to influence how stakeholders perceive the firm. According to legitimacy theory, a business' continued existence depends on society's endorsement. CSR reporting may help create or restore legitimacy by providing information reconciling corporate behavior and societal norms (Magnan & Michelon, 2024). In this way, a firm can deploy CSR reporting as part of its strategic repertoire to respond to contemporary perceptions by confirming its position to societal expectations (Tsang et al., 2023).

The reporting on CSR has significantly increased since the late 1980s when firms in industries such as oil and gas, mining, and chemicals voluntarily disclosed their CSR activities due to their environmental impact (Magnan & Michelon, 2024). Different frameworks have been introduced to formalize corporate sustainability efforts and offer flexible guidance to entities on reporting practices (Krueger et al., 2021). For example, the Global Reporting Initiative (GRI), Additionally, the Sustainability Accounting Standards Board (SASB), the Task Force on Climate-Related Financial Disclosures (TCFD), and the Carbon Disclosure Project (CDP).

These frameworks are characterized by flexibility, adaptability, and voluntary nature, enabling firms to choose reporting methods that align with their stakeholder requirements.

However, in response to requests from various financial stakeholders (financial analysts, large institutional investors) (Magnan & Michelon, 2024), regulators have recently taken steps to formalize CSR reporting, placing significant importance on environmental sustainability and climate change. As an illustration, in Europe, the Non-Financial Reporting Directive 2014/95 mandates all publicly listed firms to disclose information on environmental protection, social and employee-related issues, human rights respect, and anti-corruption and bribery matters starting in 2018. In 2021, the EU Commission introduced a legislative proposal for a revised directive (the Corporate Sustainability Reporting Directive) that obliges firms to report in alignment with 'European sustainability reporting standards' established by the Commission as delegate acts. In this process, the European Financial Advisory Group (EFRAG) has been designated as the technical advisor for formulating the EU Sustainability Reporting Standards (ESRS). The initial exposure drafts were published for public feedback in April 2022. The IFRS Foundation has also established the International Sustainability Standards Board (ISSB), which has already issued two exposure drafts for new standards. Concurrently, the Securities and Exchange Commission has recently stipulated requirements for firms to disclose and analyze their exposure to climate change risks and how these risks could impact their business operations.

Firms face significant challenges when determining the extent and breadth of their CSR disclosure. Implementing a comprehensive and forward-looking CSR strategy involves various organizational departments or units, especially if CSR goals are integrated into the firm's strategic plan and priorities (Fatima & Elbanna, 2023). While many firms may have executives specializing in CSR or sustainability, their primary role usually is measuring and reporting CSR performance. Specific elements of CSR are typically delegated to operational executives. For example, the executive is incentivized to achieve CSR-related goals (e.g., improving working conditions). According to Magnan and Michelon 2024, for CSR to be considered strategic, the primary accountability should lie with the Chief Executive Officer (CEO) or the Chief Operating Officer (COO), who are entrusted with developing and executing the firm's strategy. Placing CSR accountability at the top management guarantees its significance and conveys a clear message to all stakeholders about its crucial role within the organization.

One way in which firms can integrate CSR into their daily operations is to include environmental and social-related performance metrics in the incentive contracts of senior executives (e.g., reduction of greenhouse gas emissions, customer satisfaction), a practice commonly known as "CSR contracting" (e.g., Flammer et al., 2019; Aresu et al., 2023), as it represents social and environmental performance compensation, reflecting the firm's impact on climate change, environmental issues, employee welfare, and societal well-being. This has significant new implications regarding reporting on executive pay and CSR disclosures since executive pay has faced scrutiny for its significant involvement in the most prominent major corporate scandals and financial crises (e.g., Bebchuk & Fried, 2006).

At the same time, the debate surrounding CSR disclosure gets even more complex when looking at controversial industries such as cannabis, tobacco, and alcohol. In particular, cannabis firms in Canada, where legalization takes place. Those firms are often criticized for their harmful core activities, which creates a paradox when they attempt to present themselves as socially responsible. CSR reporting becomes a tool for these businesses to manage their reputation and influence key stakeholders (Ben Youssef & Arroyo Pardo, 2024). The Canadian cannabis industry is still young, and research is lacking on the CSR disclosure of firms in this sector.

This dissertation explores two different but linked settings: Corporate social responsibility (CSR) disclosure in executive compensation design among European countries in European firms and the CSR disclosure in the controversial industry of Canadian cannabis firms.

In Europe, this dissertation examines how and to what extent firms disclose the integration of environmental and social criteria into executive compensation design, focusing on disclosure practices during the first time adoption of this form of compensation and the factors influencing their disclosure choices. This study develops a multi-theoretical framework that considers economic incentives and institutional factors to explain the extent of disclosure on integrating environmental and social criteria into executive compensation contracts. This study contributes to the literature on the disclosure of directors' compensation contracts (e.g., Byrd, Johnson, & Porter, 1998; Laksmama, 2008; Ben-Amar et al., 2011; Robinson et al., 2011; Laksmama et al., 2012 Schiehl et al., 2013; Ben-Amar et al., 2014; Melis et al., 2015; Yang, Z.2019; Hartikainen et al., 2021). The empirical analysis is conducted on a novel, unique, hand-collected dataset of 540 non-financial listed firms headquartered in 17 European countries from 2010 to 2022. This sample choice allows me to exploit the diverse characteristics of the European

institutional environment, specifically the important variation in country-level financial development and related-party transaction disclosure regulations, and better understand a real-world, under-researched phenomenon. The findings reveal significant variation in disclosure practices driven by country-level factors, such as financial development, related-party transaction disclosure regulations, and firm-level factors. Specifically, firms in more financially developed countries and those with more stringent disclosure regulations tend to provide greater disclosure. Additionally, firms with more dispersed ownership and those with a more independent remuneration committee exhibit a higher level of disclosure.

Meanwhile, in Canada, this dissertation explores how firms in controversial industries, such as the cannabis sector, use CSR disclosure to gain legitimacy and societal acceptance. This study explores whether such practices serve as mechanisms for corporate self-legitimation. By adopting conventional and summative content analysis of the CEO's letter and annual reports on those Canadian cannabis firms that expanded a part of their activity from pharmaceutical use to recreational adult use in the year of legalization in Canada and juxtaposing them against the analysis of the actual behavior reported on Canadian media coverage news. This study contributes to CSR research on Canadian cannabis industries (Ju et al., 2021; Ben Youssef & Arroyo Pardo, 2024). It also contributes to the literature on CSR disclosures in industries with dual reputations, as in the case of pharmaceuticals cannabis, where such firms face the challenge of protecting their reputation from damage versus promoting the benefits resulting from their activities, highlighting their socially responsible activities (Ben Youssef & Arroyo Pardo, 2024). It also contributes to the literature on CEO letters communication about CSR, how it shapes the CSR discourse when social norms, values, and societal expectations are present (Arvidsson, 2022), and how it influences legitimacy and stakeholder approval. The findings reveal that cannabis firms exploit CSR initiatives as marketing tools that serve to entice consumers and stakeholders, foster consumption, open new markets, and legitimize their harmful products by focusing on the benefit of pharmaceutical use. This approach of putting cannabis on a path through pharmaceuticalization may help in the normalization and commercialization of cannabis as a wellness or medical treatment.

This dissertation will provide helpful information on the extent of CSR criteria being disclosed in executive compensation design structures in Europe within European firms and controversial industries in Canadian cannabis firms.

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# **Study 1: Corporate Social Responsibility Contracting Disclosure: International Evidence**

## **Abstract**

This study examined how and to what extent firms disclose the integration of environmental and social criteria into executive compensation design (CSR contracting), focusing on the disclosure practices during the first-time adoption of this form of compensation and the factors influencing their disclosure choices, using hand-collected data to construct a disclosure compensation index to capture major European firms' disclosure level of CSR contracting, it comprising 540 non-financial companies in 17 European countries from 2010 to 2022. The results reveal significant variation in disclosure practices driven by country and firm-level determinants. Specifically, it documents that the level of disclosure is higher in firms headquartered in financially developed countries, and those with more stringent disclosure regulations tend to provide greater disclosure. Finally, I document that the level of disclosure is associated with firms in dispersed ownership and with a high percentage of independent directors on the compensation committee.

**Keywords:** CSR contracting, CEO, Executive director, Disclosure, Neo-Institutional theory, Agency theory

## Introduction

Executive compensation has historically drawn the interest of academics, policymakers, and public perception (e.g., Baker, Jensen, Murphy, 1988; Jensen & Murphy, 1990; Bebchuk et al., 2002; Jensen et al., 2004; EU Commission, 2004; 2009; Murphy, 2013; The Guardian, 2014; Financial Times, 2023). Executive directors' compensation has faced scrutiny for its significant involvement in the most prominent major corporate scandals and financial crises (e.g., Bebchuk & Fried, 2006). The controversy surrounding how executives are incentivized (and how much are paid) stems from the perception that executive compensation has been excessively weakly related to a firm's performance and that the absence of adequate and timely disclosure has contributed to heightened information asymmetry and rent extraction (e.g., Bebchuk et al., 2002; Jensen et al., 2004; Bebchuk & Tallarita, 2022). Corporate social responsibility (CSR) has drawn increasing attention from shareholders, customers, regulators, and other firms' stakeholders worldwide. Firms are under growing external social and environmental regulatory demands to be accountable and focus on all stakeholders' long-term interests rather than just short-term shareholder value (Aresu et al., 2023). Due to stakeholder pressure, firms voluntarily incorporate social and environmental issues into their strategic planning (Deng et al., 2013). One way in which firms can integrate CSR into their daily operations is to include environmental and social-related performance metrics in the incentive contracts of executives directors (e.g., reduction of greenhouse gas emissions, customer satisfaction), a practice commonly known as "CSR contracting" (e.g., Flammer et al., 2019; Aresu et al., 2023), as it represents social and environmental performance compensation, reflecting the firm's effect on climate change, environmental issues, employee welfare, and societal well-being.

Although CSR contracting is becoming increasingly prevalent, indicating the implementation of both financial, environmental, and social metrics in most companies (e.g., Aresu et al., 2023). Recent research by Cohen et al. (2023) indicates a rising trend in firms integrating environmental and social-related performance metrics into the compensation agreements of their executive. However, this globally growing compensation practice may serve different purposes, depending on its design (e.g., the nature of indicators and weight of the chosen performance indicators, the level of targets to pursue, the verifiability of the results achieved, etc.). Existing literature also points out that CSR contracting implementation is primarily determined to fulfill the expectations of shareholders rather than those of other stakeholders, and such a design may lack substance and might be merely symbolic (Hofer et al., 2024). The design of the CSR contracting is either formulaic or non-formulaic (e.g., Ikram et al., 2023). In

the case of a formulaic compensation plan, the exact weight of the CSR-related performance indicators is specified—alternatively, a non-formulaic compensation plan when the weight of each CSR-related performance indicator is not defined (Ikram et al., 2023).

Prior studies provided mixed results on the determinants and consequences of CSR contracting (e.g., Melis et al., 2024). A recent literature review by Velte. P (2024) examines the determinants of CSR contracting, such as governance, financial and sustainability drivers, and consequences on financial and non-financial performance.

Regarding the governance determinant of CSR contracting, previous studies found that ownership has no direct correlation with CSR contracting outcomes (Abdelmotaal & Abdel-Kader, 2016); however, block ownership (Hong et al., 2016), the moderating effect of block holder ownership (Aresu et al., 2023) and the presence of sustainable, long-term institutional investors (Focke, 2022) have been found to enhance it. The board composition plays a significant role in adopting CSR contracting; gender diversity on boards (Liu et al., 2024) and CSR committees on the board (Al-Shaer & Zaman, 2019; Yang, 2023) positively correlate with the implementation of CSR contracting. Additionally, independent directors on the board enhance the likelihood of including CSR contracting (Aresu et al., 2023; Cohen et al., 2023; Hong et al., 2016; Ikram et al., 2023). This is also linked to independent compensation committees (Abdelmotaal & Abdel-Kader, 2016) and directors who already benefit from CSR contracting in other firms (Li & Yang, 2023). As per Ikram et al. (2023), a larger board size enhances the adoption of CSR contracting. Previous literature review on the financial determinants of CSR contracting found that firm size (Abdelmotaal & Abdel-Kader, 2016; Cohen et al., 2023) and firms operating in sensitive and dirty industries (e.g., oil, mining) are more likely to adopt CSR contracting (Mass 2018; Aresu et al., 2022). Finally, regarding the sustainability determinants of adopting CSR contracting, previous studies found a positive impact of CSR performance, carbon performance, and resource efficiency policy (Cohen et al., 2023) to enhance the adoption of such compensation plans. The Voluntary CSR assurance increased the adoption of CSR contracting (Al-Shaer & Zaman, 2019).

Regarding the consequence of the adoption of CSR contracting, previous studies found that the inclusion of CSR contracting has a positive effect on sustainability performance (Hong et al., 2016; Khenissi et al., 2022), especially by the use of the ‘hard targets’ (Maas, 2016). Moreover, Ikram et al. (2023) found that when firms provide formulaic or non-formulaic CSR contracting, the effects on performance differ, with formulaic CSR contracting leading firms to higher social performance. Cohen et al. 2023 found a positive relationship between carbon

performance and the adoption of CSR contracting; the results of Haque (2017) show that CSR contracting promotes carbon performance initiatives but does not significantly reduce emissions. However, there is a mixed consequence on the financial performance; for example, Abdelmotaal & Abdel-Kader (2016) and Flammer et al. (2019) found a positive relationship between CSR contracting and firm performance. Other studies, such as Liu et al. (2024) and Khenissi. et al, (2022), found a negative impact.

Most extant studies have focused on how CSR contracting may be designed by providing empirical evidence into what determines CSR contracting practices or finding some consequences. There has been little attention to the CSR disclosure (Hartikainen et al., 2021), and no study on the whole disclosure design of CSR contracting practices, especially regarding specific item and component levels (e.g., the rationale for including specific KPIs related to environmental and /or social performance).

Executive compensation design is, *de facto*, a related-party transaction (Bebchuk et al, 2002). Therefore, This compensation practice could provide executives a mechanism to increase their financial reward without creating substantial value for stakeholders while potentially diluting executives' incentives to create value for shareholders (Bebchuk & Tallarita, 2022; Keddie & Magnan, 2023). Greater transparency in the details of this compensation practice could mitigate concerns about its adoption by reducing information asymmetry between corporate insiders and investors (Bebchuk et al., 2002; Laksmana, 2008; Bebchuk & Tallarita, 2022).

Regulators are concerned about the need for directors to be accountable to stakeholders by disclosing their compensation policies and the design (e.g., Shareholder Rights Directive II, 2017). Therefore, disclosure of directors' compensation related to environmental and social metrics is a subject of interest to both scholars and policymakers. Bebchuk and Tallarita (2022) argue that firms should disclose detailed information that allows investors to better evaluate the effectiveness of such practices. To address this lacuna, this paper examines how firms disclose the integration of sustainability criteria into executive compensation design and whether country-level and company-level economic demand for information and firm-level supply of information are associated with the level of disclosure provided by companies.

This study contributes to the accounting and CSR literature in several ways, including the rapidly emerging and highly topical research stream in accounting on measuring and reporting executive compensation related to CSR. While recent studies provide new insights on the determinants and consequences of adopting CSR contracting (Velte. P, 2024), research on the

disclosures of CSR contracting is scant. This study contributes to the literature on the determinants of top executive compensation disclosure and CSR contracting disclosure (e.g., Byrd, Johnson, & Porter, 1998; Laksmana, 2008; Ben-Amar et al., 2011; Robinson et al., 2011; Laksmana et al., 2012; Schiehl et al., 2013; Ben-Amar et al., 2014; Melis et al., 2015; Yang, Z. 2019; Hartikainen et al., 2021). I created an extensive disclosure index focused on CSR contracting. This covers all the relevant executive directors' compensation components related to CSR contracting, as confirmed by active institutional investors. In contrast, earlier research primarily focused on the overall packaging of executive compensation without differentiation between financial and nonfinancial metrics on the design of top executive compensation (Laksmana, 2008; Liu & Taylor, 2008; Melis et al., 2015; Yang, Z. 2019).

The CSR contracting disclosure setting is ideal for investigating the complementarity between external determinants at the country level and internal determinants of corporate governance. Therefore, provides a setting where we can examine firms' choices of integrating environmental and social-related performance metrics into executive compensation by analyzing how firms reveal their CSR contract structure and content on the first-time adoption in the context of European countries and within European firms. This analysis contributes to the ongoing discussion on how the disclosure of the initial adoption of CSR contracting is influenced by country-level characteristics and/or firm-specific factors (e.g., Doidge et al., 2007; Melis et al., 2015). It provides new evidence indicating that institutional and firm-specific factors drive CSR contracting disclosure. My findings indicate that firms headquartered in more financially developed countries and those in countries with a more stringent disclosure regulatory environment tend to disclose to a greater extent. Finally, Corporate governance mechanisms are found to be determinants of disclosure, such as the dispersed ownership structure and the presence of independent directors on the compensation committee.

The remainder of the paper is structured as follows. Section 1 outlines the literature review and the development of the hypothesis. Section 2 describes the sample collection and model development. Section 3 analyses the results. Finally, in Section 4, conclusions are drawn, and the implications and limitations of the study are discussed.

## **Section 1: Literature review and hypothesis development**

### **1.1 Literature review**

Integrating sustainability criteria into executive compensation contracts is a growing global corporate practice expected to affect the broad society (Cavaco et al., 2020; Aresu et al., 2023; Cohen et al., 2023). Despite this, research into this form of compensation is relatively scarce and mainly focused either on the determinants or the consequences of the adoption of this compensation practice (e.g., Flammer et al., 2019; Cavaco et al., 2020; Derchi et al., 2021; Bose et al., 2023; Qin & Yang, 2022; Aresu et al., 2023; Cohen et al., 2023).

Despite the potentially important role of accounting research in addressing the question: “How can sustainability metrics be incorporated into incentive compensation?” (Dechow, 2023: 492). Accounting scholars have paid little attention to how firms disclose their integration into executive compensation practices and the determinants of these disclosure decisions. This is even though the choice to disclose executive compensation design publicly may reflect a potential conflict of interest between executives and outside shareholders (e.g., Bebchuk et al., 2002). Hence, it is particularly relevant to investors and other corporate stakeholders.

In the literature, two major kinds of studies on executive compensation disclosure are recognized: quality of disclosure (e.g., Clarkson et al., 2006) and level of disclosure (e.g., Yang, Z. 2019). For instance, research on the quality of executive compensation disclosure suggests that country-level factors, including solid investor protection mechanisms (measured as outside investor rights in the anti-director rights index in La Porta et al. (1998)), are likely to increase clarity and the use of incentive-based pay (Muslu, 2010). At the corporate level, disclosure practice is contingent on several factors, including firm size, corporate governance mechanisms, auditor quality, cross-listing status, and public scrutiny (Clarkson, 2006). As further considered, the board's independence is positively associated with disclosure transparency about executive compensation (Ben-Amar et al., 2011). This finding supports the result of Laksmana (2008), an analysis of the 1992 SEC compensation disclosure regulation reveals that specific board attributes, including board independence and diligence, are correlated with higher quality compensation disclosure. Laksmana et al. (2012) examined the readability of the CD&A section published by S&P500 firms in the initial two years following the 2006 regulatory changes. Their study revealed that the CEO is excessively compensated, making the CD&A section hard to read. Yang. Z (2019) finds that compensation disclosure transparency is negatively related to managerial power and proprietary costs (measured with five components: firm-level R&D intensity (RD), firm age, high technology industry, industry-

wide price-cost margin, and industry-level R&D intensity), indicating that firms with powerful managers or higher proprietary costs would disclose less transparently. On the other hand, transparency is positively linked to external monitoring (Yang, Z, 2019). Ben-Amar et al. (2014) explore the relationship between corporate social responsibility (CSR) and the quality of executive compensation disclosure, finding that socially responsible firms disclose more transparent details about their executive compensation packaging; these firms often use detailed compensation disclosures as a signaling mechanism to demonstrate their commitment to social engagement and stakeholder care. Also, it points out a positive association between firm size and the quality of disclosure, and the concentration of ownership structure found a negative association with the quality of disclosure (Ben-Amar. et al., 2014). Moreover, Clarkson (2006) argues that high-quality disclosures are best achieved through detailed, rule-based requirements rather than principle-based legislation allowing interpretative discretion.

Regarding the extent of executive compensation disclosure, a previous study found that the firm's size not only influenced executive compensation disclosure quality (Ben Amar et al; 2014) but also the extent of disclosure: It has been empirically observed that the larger the firm, the greater the propensity for disclosing its own executives' compensation (Chizema, 2008). Board size, a compensation committee, and auditing by a Big Four firm are significantly related to the degree of voluntary executive stock option plan disclosure (Schiehll et al., 2013). The ownership structure also plays a critical role; Chizema (2008) found that institutional ownership, dispersed ownership, state ownership, and prior adoption of shareholder value-oriented practices positively affect individual compensation disclosure. On the other hand, Schiehll et al. (2013) outline that family-controlled firms in Brazil are associated with low voluntary executive stock option plan disclosure. However, Melis et al. 2015 found that the level of transparency varies by institutional context; it was found that the determinants are firm-specific, such as demand for information from investors and imperative of legitimacy, and vary across two countries (in this regard, the UK and Italy) due to differences in institutional drivers.

## **1.2 Theories and hypothesis development**

Firms aim to appear accountable and build trust by disclosing information that portrays them positively while withholding details that might harm their reputation (Dye, 2001). Firms face the challenge of addressing the diverse interests of stakeholders, such as investors, customers, employees, and regulators (Eccles et al., 2014). The neo-institutional theory is a multi-dimensional theory that covers coercive and consensual tactics to drive change within an organizational domain (DiMaggio & Powell, 1983). It is well-suited to understand why

companies maintain or alter their practices (Greenwood and Hinings, 1996). According to Boxenbaum and Jonsson, 2020 organizations adapt in response to technical demands and societal expectations. The framework of neo-institutional theory is the recognition that organizational behavior is shaped by coercive, mimetic, and normative institutional pressures that drive firms toward enhanced disclosure. Another characteristic of the institutional environment likely to influence a firm's disclosure decision is the level of attention given to disclosing related-party transactions in a given country, specifically how well outside shareholders are protected against self-dealing through such disclosures (e.g., Houqe & Monem, 2016). Executive compensation and its design represent a natural conflict of interest between executives (the beneficiaries of the compensation) and shareholders (who bear the cost of this compensation). The extent of disclosure regarding this controversial issue is likely to reflect the outcome of this conflict, with outside shareholders (and other corporate stakeholders) preferring more detailed disclosure about the design of executive compensation. In contrast, executives may prefer to maintain confidentiality and avoid public disclosure (e.g., Bebchuk et al., 2002).

Corporate executives are also accountable to the broader society, and firms may disclose information to meet societal expectations. Specifically, an institutional environment where the overall disclosure requirements on related-party transactions are stricter and better enforced tends to reduce the incentives for firms to conceal their actions and performance (Degeorge, Ding, Jeanjean, & Stolowy, 2013). At the same time, the supply of information about related-party transactions through corporate reports is likely to be more extensive, as it reduces information asymmetry, which serves as a tool against self-dealing in related-party transactions. As executive compensation design can be considered a *de facto* related-party transaction, where the board of directors decides how (and how much) to reward some of its members (i.e., the executive directors), I expect a high level of disclosure on CSR contracting to demonstrate their adherence to the high standards expected by their institutional environment.

**H1: Firms headquartered in countries where related-party transaction disclosure is more stringent are more likely to provide a higher level of disclosure of CSR contracting.**

A firm's disclosure practices reflect the underlying institutional environmental influences that affect firms in different countries (e.g., Doidge et al., 2007). Highly financially developed countries are often distinguished by a significant equity market (La Porta et al., 1999) and a greater emphasis on capital market orientation (Pagano et al. 1998). This includes aspects

related to regulatory quality, market depth, and financial services, over which much more could be discussed. Regulatory bodies set stringent disclosure requirements for firms headquartered in financially developed countries to ensure market integrity and investor trust. Free capital markets have strengthened external incentives for firms to comply with regulations to avoid costly legal or stigma penalties. La Porta et al. (2000) showed that a country with stronger investor protection will have more developed financial markets and better levels of corporate disclosure. Local firms in these countries face coercive pressures to release some information. These institutional characteristics could influence firms' choice about the extent of disclosure on executive compensation design (Melis et al., 2015). Therefore, the supply of such information through corporate published reports is also likely to be more extensive, as these reports are typically the main source of information for those shareholders not involved in management (e.g., Nobes, 1998; Melis & Aresu, 2022). Consequently, I argue that firms in financially developed countries are more likely to disclose more to align with the institutional norms and meet the expectations of investors and other stakeholders, thereby enhancing their legitimacy and social acceptance. The desire to gain legitimacy in such environments can drive firms to provide more comprehensive disclosures. To do so, I expect a high level of disclosure on CSR contracting to demonstrate their adherence to the high standards expected by their institutional environment.

**H2: Firms headquartered in more financially developed countries are more likely to provide a higher level of disclosure of CSR contracting.**

According to Agency Theory, the dispersed ownership structure, especially in firms with high free float, amplifies the principal-agent problem due to increased information asymmetry and the diluted influence of individual shareholders (Jensen & Meckling, 1976; Fama & Jensen, 1983). If ownership is widespread, it creates more of a need for the firm to disclose fair information regarding executive compensation to the shareholders. Moreover, empirical studies have shown that firms with higher levels of free float are under greater scrutiny from a broader range of investors, necessitating more rigorous disclosure practices to maintain credibility and trust (Bushee & Noe, 2000). In such firms, the need for transparency and accountability becomes paramount to ensure that the interests of management align with those of a widely dispersed shareholder.

Public disclosure is a potentially important means for executives to communicate the company's performance and governance (e.g., Yang, Z. 2021) and to reduce information asymmetry with dispersed shareholders, including potential investors (Healy & Palepu, 2001).

This transparency is crucial for firms with high free float to establish and preserve investor trust (Lang & Lundholm, 1993). By providing detailed disclosures, this transparency can lead to a higher level of investor confidence (Healy & Palepu, 2001). The extent of CSR contracting disclosure can signal the market, indicating the firm's commitment to good governance and long-term value creation.

Concentrated ownership decreases the need for formal public disclosures about a firm's activities. In contrast to small, outside shareholders, large block holders are, *de facto*, corporate insiders (Melis, 2000). Therefore, information about the firm's activities is primarily transferred from senior management to large block holders through informal channels rather than published corporate reports (Berglöf & Pajuste, 2005). Specifically, large block holders are likely to have direct access to information regarding executive compensation design, either because they sit on the board of directors or appoint directors who are closely accountable to them. In contrast, diffused ownership heightens the necessity for formal public disclosures (e.g., annual reports, compensation reports), particularly regarding executive compensation design (Melis et al., 2015), to mitigate information asymmetry between corporate insiders and a large, dispersed group of shareholders. Executive compensation design is a complex matter that may give rise to potential conflicts of interest between corporate insiders and outside shareholders. Its disclosure helps outside shareholders better evaluate the appropriateness of incentive schemes (Yang, Z. 2021), i.e., whether, for example, integrating sustainability criteria into the incentive arrangement potentially dilutes executives' incentives to pursue shareholder value. Therefore, I expect that:

**H3: Firms with high free float are more likely to provide a higher level of disclosure of CSR contracting.**

Agency theory provides a lens to examine the relationship between principals (shareholders) and agents (executives) (Jensen & Meckling, 1976). This theory posits that executives may not always act in the best interests of shareholders due to diverging goals. Effective monitoring mechanisms, such as independent directors and dispersed ownership structures, can mitigate these agency problems.

Agency theory predicts that the board of directors is more effective in monitoring management when it consists primarily of independent directors. Independent directors, who operate within the directors' labor market, have strong incentives to build and maintain a reputation as professional experts who effectively oversee management and protect shareholders' interests

(Fama & Jensen, 1983). Fama and Jensen (1983) have highlighted the importance of outside independent directors in effectively overseeing and advising corporate boards. This oversight function can have several consequences, including improving corporate transparency and accountability through reporting methods like management forecasts, press releases, or additional disclosures in annual reports. Both national corporate governance codes and the agency theory upon which they are based recommend that boards of directors comprise an adequate number of independent directors (Cuomo, Mallin, & Zattoni, 2016; Zattoni & Cuomo, 2008).

By integrating independent directors into compensation committees, firms can significantly enhance their governance standards and transparency practices, ultimately fostering greater accountability and long-term value creation. Previous research has examined the link between board independence and the level of disclosure in annual reports. Ben Amar et al. (2011) argue that board independence from management is positively related to the transparency of executive compensation-related information, highlighting the critical role of independent directors in ensuring transparency and accountability; thus, higher board independence leads to more transparent executive compensation practices. I hypothesize that independent directors on the compensation committee make firms more likely to disclose more detailed information about how executive compensation is linked to environmental and social performance metrics.

**H4: Firms with a high percentage of Independent directors on the compensation committee are more likely to provide a higher level of disclosure of CSR contracting.**

## **Section 2: Sample collection and model development**

### **2.1 Sample and data collection**

My study focuses on how European listed firms initially disclosed practices associated with the first-time adoption of environment and social-related criteria in executive compensation. This approach allows me to capture the early challenges and strategies firms employ as they start aligning executive incentives with broader social and environmental goals. The initial sample for this study consists of 969 non-financial European listed firms in 25 countries between 2002 and 2022 that include an extra-financial performance-oriented compensation policy; the compensation policy includes compensation for the CEO, executive directors, non-board executives, and other management bodies based on environment, social and governance

or sustainability factors<sup>1</sup>. Financial firms were eliminated because they have different accounting practices than non-financial firms, which can introduce inconsistencies and complications in empirical analysis (Fama & French,1992).

I chose 2010 as the starting year for my research because of the significant increase in adopting environmental and social-related criteria on executive pay (Melis et al., 2024). The sample for this study extends up to the financial year 2022. This cutoff was chosen because, at the time of sample selection, the most recent available data was up to 2022. The sample selection process with 821 non-financial European listed firms in 25 countries after the exclusion of 160 firms that had extra-financial criteria before 2010. This involved two steps:

1. Examine if the CEO or top executives on the board are beneficiaries of extra financial pay. This step required reviewing corporate reports to identify if the CEO / top executives designed non-financial pay.
2. Determining when the non-financial pay policy was linked to environmental and social metrics allows me to track its implementation and identify the year of adoption.

I carefully reviewed each corporate annual report, corporate governance report, and, when publicly available, directors' compensation reports and regulatory filings. First, to ensure that the CEO or top executive benefits from non-financial pay, incentives linked to the environment and society were identified. Finding executive pay with performance metrics associated with social and environmental performance was part of this process. A thorough analysis of corporate reports shows that a firm with a policy on environment and socially related criteria in executive pay does not automatically provide environmental and social incentives, despite the claims made by most large databases to the contrary (Lenihan & Brennan, 2023). Although a sustainable compensation strategy gives a compensation committee the latitude to include environment and social performance in incentive compensation plans, it does not guarantee such integration<sup>2</sup>

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<sup>1</sup> Eikon database: variable definition and code (Policy Executive Compensation ESG Performance CGCPDP0013), Does the company have an extra-financial performance oriented compensation policy? the compensation policy includes remuneration for the CEO, executive directors, non-board executives, and other management bodies based on ESG or sustainability factors.

<sup>2</sup> For example: GESTAMP AUTOMOTION Spanish firm and one of the leading firms in the European automotive industry. "At the date of drafting this report, it is expected that the Board of Directors will propose to the General Shareholders Meeting of the Company the approval of a new Remuneration Policy with effect from 1 January 2024, given that the term of the current Remuneration Policy ends on 31

If firms offered environment and social-related incentives to their CEOs or the highest-paid executive, that fiscal year was designated the year that environment and social-related metrics were first implemented for top executives' pay. Thanks to this method, I could ascertain whether the policy of environment and social targets was applied because large databases cannot easily provide such detailed information (Lenihan & Brennan, 2023).

In selecting the final sample, I excluded firms headquartered in 8 countries with less than five firms (19 firms). In addition, 250 firms have adopted a policy or/and non-financial metrics not linked to the environment and social activities. The final sample consists of 540 firms in 17 European countries.

Table 1 presents the sample selection, and Table 2 summarizes the sample composition by country, year, and industry. The most represented countries in the sample are the UK (25.93%), Germany (15.37%), and France (14.81%). Over the analysed years, the adoption rate of environmental and social criteria in executive compensation ranged between 0.37% and 24.81%, with peak rates observed in 2019 (10.74%), 2020 (17.78%), and 2021 (24.81%).

**Table 1: Sample selection on the first-time adoption of CSR contracting**

Sample: source Refinitiv (CGCPDP0013, ESG Metrics in Eikon, RDP & Data Stream)	Number of Firms
Non-financial European listed firms (2002-2022)	969
Excluded Firms with non-financial criteria before 2010	160
Excluded countries with less than five firms	19
Excluded firms with no design for environment and socially related criteria in executive pay	250
Total firms adopting environment and socially related criteria in executive pay (2010-2022)	540

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December 2023. Additionally, at its meeting of 19 December 2022, the Nomination and Compensation Committee approved the proposal to include ESG goals in the annual variable remuneration structure of the Executive Chairman, within the framework established in the Remuneration Policy. Furthermore, as mentioned above, the Company is working on a new long-term incentive Scheme, which is expected to be approved during the 2023 financial year and which will be reported on in the Annual Remuneration Report for the aforementioned financial year” Annual report 2022

**Table 2: Breakdown of the sample composition by country, year, and industry**

Panel A: Across Country			Panel B: Across the year		
Countries	Number	Percent	Year of First-time Adoption	Number	Percent
UK	140	25.93			
Germany	83	15.37	2010	17	3.15
France	80	14.81	2011	15	2.78
Italy	45	8.33	2012	15	2.78
Sweden	24	4.44	2013	11	2.04
Switzerland	23	4.26	2014	21	3.89
Netherlands	22	4.07	2015	23	4.26
Spain	21	3.89	2016	28	5.19
Denmark	20	3.7	2017	27	5
Norway	15	2.78	2018	45	8.33
Finland	14	2.59	2019	58	10.74
Belgium	12	2.22	2020	96	17.78
Ireland	11	2.04	2021	134	24.81
Austria	10	1.85	2022	50	9.26
Russia	9	1.67	Total	540	100
Turkey	6	1.11			
Poland	5	0.93			
Total	540	100			

  

Panel C: Across the industry			
ICB Industry	Number	Percent	
Industrials	158	29.26	
Consumer Discretionary	115	21.3	
Technology	52	9.63	
Basic Materials	50	9.26	
Consumer Staples	43	7.96	
Health Care	43	7.96	
Energy	39	7.22	
Utilities	26	4.81	
Telecommunications	14	2.59	
Total	540	100	

## **2.2 Measuring Disclosure Index**

Disclosure indices are used to quantify the level of disclosure in corporate reports. A disclosure index is typically determined by counting the number of relevant items in an annual report (e.g., Botosan, 1997). Self-constructed indices are necessary due to the absence of official guidelines for the specific design of executives' compensation and the need for universally agreed guidance on linking environmental and social-related performance metrics to executive compensation (PRI, 2012,2014).

The level of disclosure has been evaluated quantitatively through the use of disclosure indices. Disclosure, an abstract concept, cannot be directly measured (Marston & Shrives, 1991); self-constructed indices provide a practical method for indirectly assessing disclosure levels. This method remains effective despite the subjectivity in determining the items to be included in the index. Using a systematic approach, these indices offer valuable insights into the extent of corporate disclosure on executive compensation.

Earlier research by Cooke (1989) highlights that self-constructed indices effectively capture the extent of voluntary disclosure, providing a reliable measure when official indices are unavailable or incomplete. Specific analyses were conducted to assess the disclosure index's validity, as Botosan (1997) described. This thorough evaluation allows me to confidently utilize the disclosure index despite its inherent subjectivity. Additionally, prior studies on disclosure determinants (Ahmed & Courtis, 1999) have shown that these indices produce consistent and reliable results. These indices enable the evaluation and comparison of disclosure practices across firms, thereby enhancing the comprehensiveness and accuracy of disclosure-related studies.

In prior studies, compensation disclosure has been measured using disclosure indices, primarily focusing on executive compensation disclosure design without separating the financial and non-financial metrics (e.g., Melis et al., 2015; Yang, Z. 2019). However, to my knowledge, no study has been published on environmental and social-related compensation disclosure design or specifically utilized a disclosure index to measure environmental and social-related executive compensation disclosures, despite the increasing importance of environmental and social factors in corporate governance and investor decision-making.

To develop the disclosure index for executive compensation, I selected the key items based on established international standards and guidelines to ensure comprehensive and transparent

reporting. These items are derived from authoritative sources such as the Global Reporting Initiative (GRI, 2021) and the International Financial Reporting Standards (IFRS 2) for Share-based Payment (2004). Additionally, the Principles for Responsible Investment (PRI) Reporting Framework (2012 and 2014) further guided the selection of items to ensure adherence to contemporary regulatory requirements. To do so, I hand-collected and constructed relevant measures on the disclosure of environment and social-related performance metrics criteria in executive compensation to construct the disclosure index (DI) for comparing environment and socially-related criteria in executive compensation disclosure levels across different institutional contexts. This approach ensures that the index meets the transparency expectations set by these international frameworks.

As a consequence, the Total disclosure index  $DI_{Total}$  consists of 10 items to capture potential variations in executive environment and socially related criteria in executive pay disclosure levels in 17 European countries: the environment and/or social criteria adopted ( $DI_{Criteria}$ ), The rationale of the criteria adopted ( $DI_{Rational}$ ), The performance measure ( $DI_{KPI}$ ), Relative or absolute performance measure ( $DI_{Measure}$ ), the performance weight ( $DI_{Weight}$ ), the performance target ( $DI_{Target}$ ), the Time horizon ( $DI_{Time}$ ), external compensation consultant ( $DI_{Remco}$ ), Sustainability assurance ( $DI_{Assurance}$ ), Disclosure Document ( $DI_{Document}$ ).

A coding system was established during the initial data collection stage to capture environmental and social criteria for executive pay disclosures. The index's guidelines detailed each item's classification and identification requirements. Before the analysis started, I prepared and discussed the disclosure guidelines with the second coder. These included explanations of the content of each category item and examples of different cases and phrases that were to be classified (Appendix A) (Bozzolan et al., 2003).

Every corporate report is reviewed, including the annual report, corporate governance statement, compensation report, sustainability report, assurance statement, and financial statement footnote, which contain information about environmental and socially related executive compensation in domestic (French, Italian, Spanish) and English language. I measure the compensation disclosure Index ( $DI_{Total}$ ) based on the initial year of environmental and socially related executive compensation adoption. The  $DI_{total}$  ranges from 0.15 to 1, with 1 indicating the most comprehensive disclosure and 0 for no disclosure. The first item cannot have a value of 0 as it specifies the adopted environmental and social criteria. However, scores

are 0.5 for vague terms like CSR or sustainability criteria and 1 for precise criteria like social and environmental. For instance, if a firm reported adopting only environmental criteria, the item was coded as 1 for the environmental metric.

The DI<sub>total</sub> focuses on the level of disclosure rather than the quality; for example, suppose a firm discloses that it does not have external assurance or involves external sustainability assurance for the KPI level in the compensation process. In that case, it is still coded as one because it has made the disclosure. Similarly, if a firm discloses the targets, whether well-defined hard or soft, it is coded as one as long as the disclosure is made.

To further validate my index, two of the world's leading institutional investors, “Credit Suisse” and “Impax Asset Management Group”, were consulted regarding the relevance of the selected elements. This consultation ensured that the index elements were relevant and aligned with investor expectations. The approach is supported by the claim that information deemed relevant by institutional investors is generally valuable to a broader range of stakeholders (IFRS Foundation, 2018, page 16).

Additionally, I sought to establish the index's validity by examining its correlation with an independent external measure. Specifically, I assessed the relationship between the disclosure index and financial analysts' coverage, defined by the number of analysts who published at least one report on the firm during the previous fiscal year before the corporate report was published. Previous studies have demonstrated an association between analysts' coverage and a firm's disclosure levels (Brennan & Subrahmanyam, 1995; Lang & Lundholm, 1996; Melis et al., 2015). The correlation analysis revealed a significant relationship (0.21,  $p < 0.001$ ), supporting my disclosure index's relevance.

To ensure the coding is reliable (Cooke & Wallace, 1989; Marston & Shrives, 1991), I conducted a preliminary test to ensure inter-coder reliability and consistency in classification criteria. Initially, I reviewed five firms, and then an independent coder reviewed the same five firms to align our coding rules and explain the study and the procedure to follow. Following this, we classified ten additional firms (annual reports, CSR reports, sustainability assurance reports) and then another 21 firms, leading up to thirty-one. A third researcher then compared our classifications and identified the misalignments. We discussed again the disclosure index and reanalyzed these discrepancies (e.g., Lee, 1999), resulting in the development of a final set of coding rules.

To further assess the reliability of the coding procedure, I matched the data sets coded using the percentage of agreement index (e.g., Markkarian et al., 2007) and Cohen's kappa agreement index (Cohen, 1960). The percentage of agreement was 96.17%, and Cohen's kappa also indicated a high level of agreement at 0.9381. This rigorous process ensured uniformity and reliability in my index creation.

Kappa	Std. err.	Z	Prob>Z
0.9381	0.0226	41.59	0.000

I computed a Disclosure Index (DI\_total) for each firm, calculated as the sum of the 10-item score.

### 2.3 Research design and model

Following prior literature to provide further insight into how country-specific factors and firm-level determinants influence corporate disclosure practices (Doidge et al., 2007; Melis et al., 2015; Yang, Z. 2019), I employed an ordinary least squares (OLS) regression model, as my dependent variable is continuous, using the following variables:

$$\begin{aligned}
 DI_{Total}_i = & \alpha_0 \\
 & + \beta_1 \mathbf{Related\_Party\_Transaction\_Disclosure}_i \\
 & + \beta_2 \mathbf{Financial\_Development}_i + \beta_3 \mathbf{Ownership\_diffusion}_i \\
 & + \beta_4 \mathbf{REMCO\_Independence}_i + \gamma \mathbf{Control\_Variables}_i \\
 & + \delta \mathbf{Industry}_i + \eta \mathbf{Year}_i + \epsilon_i
 \end{aligned}$$

Where  $DI_{Total}_i$  is the disclosure index of the firm  $i$ .

#### Variable definition

##### Dependent variable:

The dependent variable is the self-structured disclosure index: total disclosure index  $DI_{total}$ , where  $DI_{total}$  is the disclosure index of the firm  $i$ .

##### Independent variables:

To test my hypothesis, I use the following independent variables of interest at the country- and firm level:

The first independent variable on the country level is the related party transaction disclosure measured by the extent of the disclosure index provided by the World Bank, which captures how well minority shareholders are protected through disclosure against self-dealing in

related-party transactions (e.g., Houque & Monem, 2016). This index does not cover executive compensation disclosure. Instead, it captures the attention to disclose related-party transactions in a given country. It comprises five components: “(i) whether it is the managing director alone, the board of directors, or the general meeting of shareholders, the corporate body who can provide legally sufficient approval for the transaction (points are assigned depending on whether interested directors are permitted to vote or not); (ii) whether an external body (an independent auditor, for example) must review the transaction before it takes place; (iii) whether disclosure by Mr. James to the board of directors or the supervisory board is required; (iv) whether immediate disclosure of the transaction to the public, the regulator or the shareholders is required; and (v) whether disclosure in periodic filings (for example, annual reports) is required. The index value ranges from 0 to 10, with 0 being the lowest score and 10 the highest”.

The second independent variable at the country level is the financial development index. According to Doidge et al. 2007, financial development is an essential country-level characteristic that affects firms' corporate governance and transparency, representing a relative ranking of countries on the depth, access, and efficiency of their financial institutions and financial markets. It is an aggregate of the Financial Institutions Index and the Financial Markets Index. “The Financial Institutions Index (FI) is an aggregate of the Financial Institutions Depth Index (FID); this compiles data on bank credit to the private sector as a percentage of GDP, pension fund assets to GDP, mutual fund assets to GDP, and insurance premiums (both life and non-life) to GDP. The Financial Institutions Access Index (FIA) compiles data on bank branches per 100,000 adults and ATMs per 100,000 adults. The Financial Institutions Efficiency Index (FIE) compiles data on the banking sector net interest margin, lending-deposit spread, non-interest income to total income, overhead costs to total assets, return on assets, and return on equity”. The index value ranges from 0 to 100, with 0 being the lowest score and 100 the highest (IMF).

The first independent variable at the firm level is the percentage of ownership diffusion, which is calculated as a percentage of the firm stock that is freely traded. Free Float Percent is calculated with the percent of float by current shares outstanding. Firms with broad dispersion ownership would prefer to disclose information to reduce information asymmetry between management and shareholders.

The other independent variable at the firm level is the percentage of independent directors on the compensation committee who play a crucial role in enhancing voluntary disclosure,

particularly regarding executive compensation, promoting greater corporate transparency. A previous study found that higher board independence leads to more transparent executive compensation practices (Ben-Amar et al., 2011). Independent directors are measured as a percentage of the total size of the firm's compensation committee. Independence is defined according to the firm's criteria.

### **Control variables:**

The control variable, Voice and accountability, captures perceptions of the extent to which a country's citizens can participate in selecting their government, as well as freedom of expression, association, and free media. Estimate gives the country's score on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.: Therefore, firms headquartered in countries with high scores of voice and accountability are more likely to monitor and report their behaviors (e.g., Nikolaeva & Bicho, 2011; Hartmann & Uhlenbruck, 2015; Aresu et al., 2023) and thus disclose the adoption of environmental and social metrics on executive compensation, intends to meet public needs and maintain their legitimacy and reputation.

The control variable Say-pay is an indicator variable that equals one for the period following the staggered implementation of Say-Pay (SOP) laws and zero otherwise. This variable captures the potential effect of SOP regulations on executive compensation practices. Previous studies found that say-on-pay incentivizes directors to act in the shareholders' interests (e.g., Alissa, 2015; Correa & Lel, 2016), and there would be less need for firms to disclose information to outside stakeholders. In addition, firms could strategically manage their disclosures to win favorable votes (Mangen et al., 2012), potentially legitimizing suboptimal pay practices rather than correcting them. However, shareholders might use their “voice” to encourage firms to integrate environmental and social metrics into executive pay.

The accounting literature (e.g., Meek et al., 1995; Ahmed & Courtis, 1999) suggests that firm-level financial attributes impact a firm's disclosure levels. I control for corporate disclosure level determinants in the multivariate analysis to consider these factors. In particular, I include a variable for the natural logarithm of total assets to control for firm size. Previous studies have found a positive relationship between a firm's level of disclosure comprehensiveness and its size (e.g., Yang, Z 2021). I control for leverage; firms with high leverage usually experience increased agency expenses. Consequently, a positive correlation between disclosure and leverage is anticipated (Clarkson et al., 2006). Profitability is measured as the firm's return on

assets at the end of the previous financial year; prior studies have found mixed evidence about the relationship between firm performance and the disclosure level (Lang & Lundholm, 1993; Ahmed & Courtis, 1999). The board of directors has been highlighted in earlier research as having a crucial impact on firm disclosures (Prado-Lorenzo & García-Sánchez, 2010) and the design of top executives' contracts (Core & Guay, 1999). To do so, I control the board size. The external audit by one of the Big Four was also found to have a significant effect on the level of voluntary disclosure; by engaging a major auditing firm like a Big Four, the firm indicates to the market its willingness to meet the auditor's requirements for enhanced disclosure quality (Schiehll et al., 2013).

The control variable, Sensitive Industry, notes that businesses operating in environmentally and socially responsible industries (e.g., pharmaceutical resource extraction; Brammer & Millington, 2005) are more likely to be socially- and environmentally conscious than firms of other industries. I include year and industry-fixed effects to control for possible systematic differences in first-time adoption across years and sectors.

In this study, I use a comprehensive set of variables to explore what drives CSR contracting disclosure. The variables are selected and defined conscientiously to represent the theoretical constructs and research hypothesis under examination. I present each variable's definition and source in Table 3.

**Table 3: Variable definition**

Dependent variable	Definition	Source
Disclosure Index (DI-Total)	A comprehensive compensation index to capture the level of disclosure of CSR contracting.	Corporate reports*

Variables of interest		Definition	Source
Country level	Related Party Transaction Disclosure	<p>“The extent of the disclosure index measures the approval and disclosure requirements of related-party transactions. It has five components: (i) whether it is the managing director alone, the board of directors, or the general meeting of shareholders the corporate body who can provide legally sufficient approval for the transaction (points are assigned depending on whether interested directors are permitted to vote or not); (ii) whether an external body (an independent auditor, for example) must review the transaction before it takes place; (iii) whether disclosure by Mr. James to the board of directors or the supervisory board is required; (iv) whether immediate disclosure of the transaction to the public, the regulator or the shareholders is required; and (v) whether disclosure in periodic filings (for example, annual reports) is required”.</p> <p>The index value ranges from 0 to 10, with 0 being the lowest score and 10 the highest. Measured at the end of the previous year</p>	World Bank
	Financial development index	<p>Relative ranking of countries on the depth, access, and efficiency of their financial institutions and financial markets. It is an aggregate of the Financial Institutions Index and the Financial Markets Index.</p> <p>The Financial Institutions Index (FI) is an aggregate of:</p> <ul style="list-style-type: none"> <li>• “Financial Institutions Depth Index (FID): This compiles data on bank credit to the private sector as a percentage of GDP, pension fund assets to GDP, mutual fund assets to GDP, and insurance premiums (both life and non-life) to GDP”.</li> <li>• “Financial Institutions Access Index (FIA): This compiles data on bank branches per 100,000 adults and ATMs per 100,000 adults”.</li> <li>• “Financial Institutions Efficiency Index (FIE): This compiles data on banking sector net interest margin, lending-deposit spread, non-interest income to total income, overhead costs to total assets, return on assets, and return on equity”.</li> </ul> <p>The index value ranges from 0 to 100, with 0 being the lowest score and 100 the highest. Measured at the end of the previous year</p>	International Monetary Fund
Firm-level	Ownership diffusion % at the actual year of the first-time adoption	Percent of the firm stock that is freely traded. Measured at the previous year Free Float Percent is calculated with the following formula: (Float / Current Shares Outstanding)*100	Bloomberg <sup>3</sup> database and firm's annual reports
	Percentage of independent directors on the compensation committee	Number of independent directors as a percentage of the total size of the firm's compensation committee. Independence is defined according to the firm's criteria. Measured at the end of the previous year	Bloomberg database and firm's annual reports

<sup>3</sup> I used the firm’s annual reports as a secondary source when the database did not provide information about the firms in the sample

Control variables		Definition	Source
Country level	Voice and accountability index score	“Voice and accountability” index score (i.e., perceived freedom and ability of citizens’ participation in the government). Voice and Accountability capture perceptions of the extent to which a country's citizens can participate in selecting their government, as well as freedom of expression, freedom of association, and free media. Estimate gives the country's score on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5”. Measured the year of the first time adoption.	World Bank
	Say on pay	Say on Pay is an indicator variable that equals one for the period following the staggered implementation of Say on Pay (SOP) laws and zero otherwise. This variable captures the effect of SOP regulations on executive compensation practices. Measured at the end of the previous year	Correa and Lel (2016), Factiva search and media News
Industry-level	Sensitive Industry	A dummy variable that equals one if the firm belongs to a sensitive industry (e.g., alcoholic beverage, chemical, defense and pharmaceutical, resource extraction, tobacco, and utility sectors), and 0 otherwise	Brammer and Millington (2005)
	ICB Industry	Datastream database Industry classification.	Datastream
Firm-level	Year of the first time adoption of CSR contracting	The year in which a firm adopts environmental and/or social-related criteria on executive pay for the first time.	Corporate reports*
	Board Size	Number of directors on the board overseeing the firm's activities and management. Companies with a Supervisory Board and a Management Board looks at directors on the Supervisory Board. Measured at the actual year of first-time adoption	Bloomberg database and firm's annual reports
	Firm size	Natural logarithm of a firm’s total assets (USD). Measured at the end of the previous year	Datastream
	Return on Assets	A firm’s return on assets at the end of the previous year	Datastream
	Leverage	A firm’s total debt to total assets ratio at the end of the previous year.	Datastream
	Big 4 auditor	A dummy variable equals one if the companies had one of the big 4 Financial External auditors at the end of the previous year.	Datastream and firm's annual reports

Corporate report: Annual report, sustainability report, compensation report, integrated annual report, consolidated financial statements, corporate governance report, sustainability assurance statements.

### Section 3: Result analysis

#### 3.1 Descriptive statistics of the dependent variable and the independent variable

The disclosure index DI\_Total is given in three tables, where the average scoring for each item and the overall index totals across countries are shown.

Table 4 shows the disclosure index score for individual items; if there was no disclosure, the score is 0; a partial disclosure has a value of 0.5, and full =1. The stated scoring method helps to quantify the level of transparency across each aspect included in the index for the total sample. In addition, the percentage figures in this table give an overview of how frequently the firm fully discloses each disclosure item.

The disclosure index of environmental and social metrics in executive compensation design reveals mixed transparency and comprehensiveness. Regarding the disclosure of adopting CSR contracting criteria, only 65% of firms specify their environment and social criteria, and 35% do so vaguely.

The rationale behind adopting environmental and social criteria in the design of executive compensation packages is even less transparent, with 59.26% of firms not explaining the aim of the design of such criteria and only 20% disclosing relevant details. This shows a significant gap in explaining the choice and alignment of environmental and social criteria between the executive compensation incentive and the firm sustainability strategy.

Disclosure of KPIs is substantial, with 87.04% of firms disclosing the specific KPIs measurements, 2.96 % partially disclosing, and only 10% not disclosing them, indicating the importance of the measurements of environment and social performance. Similarly, 79.07% of firms prominently disclose performance targets. The time horizon of the target achievements is highly transparent, with 91.48% of firms providing clear timelines on the KPI adopted and designed on the executive compensation package. However, the weight assigned to environmental and social criteria designed on the executive compensation design is inconsistently disclosed, with only 25.37% of firms disclosing this information. The disclosure of the use of external consultants on the compensation committee is low, with only 40.74% of firms providing this information, indicating room for improvement in governance processes. Sustainability assurance audit is another area that needs improvement, with nearly half (49.44%) of firms lacking disclosure about external verification, which undermines the credibility of environmental and social disclosures. Documentation practices also show a partial disclosure level, with 49.81% of firms scoring 0.5 for consolidating all relevant items in a single document. While firms perform well in disclosing criteria, setting targets, and measuring outcomes for the environment and social metrics in executive pay, the level of disclosure concerning the rationale behind adopting such practice is low.

Table 5 provides a cross-country analysis of the disclosure index, including country total scores and item level by country. Column 1 refers to the DI\_total score for each country. I also present descriptive statistics, including the mean and standard deviation for each item by country, to allow a more in-depth comparison. An overview of item-specific averages per country again highlights the areas where success and gaps exist, indicating for each element whether levels of disclosure are generally excellent or further work is needed. In addition to providing insight into the broader disclosure, this analysis will point us toward key themes and reforms needed within low-scoring countries.

The additional data provides a detailed country-level analysis of environmental and social criteria disclosure in executive compensation, revealing significant variability in disclosure practices. Firms headquartered in countries like Russia, the Netherlands, the UK, and Austria demonstrate high consistency and transparency in disclosing environmental and social criteria, with mean scores close to or at 1. In contrast, firms headquartered in countries such as Denmark and Sweden show more variability, indicating less consistency in their Environmental and social criteria disclosures. Regarding the rationale for integrating environmental and social metrics, disclosure is generally lower across all countries. Firms headquartered in countries like Ireland and the UK perform better in this area. However, many firms headquartered in countries including Turkey, Poland, and Finland show low mean values, highlighting a significant gap in providing detailed explanations for Environmental and social integration.

Most firms disclosed the KPIs related to environmental and social factors, with perfect or near-perfect scores in firms headquartered in Russia, the Netherlands, and Denmark. However, Firms headquartered in countries like Italy and Norway indicate room for improvement with lower scores. The disclosure of the weight assignment to environmental and social criteria varies considerably, with firms headquartered in Austria and Switzerland showing moderate scores and firms headquartered in countries like Turkey and Poland scoring lower, indicating inconsistent approaches in valuing environmental and social performance.

Environmental and social performance targets are generally well-disclosed, with high scores for firms headquartered in Russia, Poland, and Denmark. However, firms headquartered in countries such as firms Italy and Norway show lower scores, suggesting a need for a more precise target setting. Timing horizons are vital in most firms, with firms headquartered in Denmark and Spain performing exceptionally well, while firms headquartered in Turkey and Russia provide a lower disclosure. Absolute measurement values related to environmental and

social factors are also well-disclosed, with several firms in different countries achieving perfect scores. However, variability is noted in countries like Sweden and Italy.

Disclosure related to the involvement of consulting in the compensation committees shows considerable variability, with firms headquartered in the UK and Ireland disclosing well. Conversely, firms headquartered in Turkey and Poland scored shallow, indicating weak disclosure in this area. The sustainability Assurance disclosures are inconsistent, with high variability of firms headquartered in countries like France and Turkey performing well. In contrast, firms headquartered in Germany and Spain show lower scores, indicating room for improvement in third-party verification practices. The disclosure of the overall design in the same section of the report also varies widely. Firms headquartered in the UK and Switzerland have moderate scores, while firms headquartered in countries like Italy and Denmark show lower scores, reflecting a need for more comprehensive documentation.

Overall, the country-level analysis highlights considerable variability in the disclosure of Environmental and social criteria in executive pay. While in some countries, firms demonstrate a high level of disclosure across various metrics; others show considerable gaps, particularly in rationale, presence of consulting in the compensation committee disclosure, and sustainability assurance practices. This underscores the need for a more standardized approach to environmental and social disclosure in executive pay, aligning with the broader trends in corporate governance and transparency discussed by Bebchuk and Tallarita (2022). Improved transparency and consistency in these disclosures can enhance stakeholder trust and ensure that executive pay aligns with sustainable business practices.

**Table 4: Frequency and percentage distribution of disclosure items based on the scoring criteria**

<b>Disclosure item</b>	<b>Score</b>	<b>Frequency of a total of 540</b>	<b>percentage</b>
<b>DI_Criteria</b>	0.5	189	35.00
	1	351	65.00
<b>DI_Rational</b>	0	320	59.26
	0.5	107	19.81
	1	113	20.93
<b>DI_KPI</b>	0	54	10.00
	0.5	16	2.96
	1	470	87.04
<b>DI_Weight</b>	0	245	45.37
	0.5	158	29.26
	1	137	25.37
<b>DI_Target</b>	0	92	17.04
	0.5	21	3.89
	1	427	79.07
<b>DI_Time</b>	0	14	2.59
	0.5	32	5.93
	1	494	91.48
<b>DI_Measure</b>	0	51	9.44
	0.5	12	2.22
	1	477	88.33
<b>DI_Remco</b>	0	237	43.89
	0.5	83	15.37
	1	220	40.74
<b>DI_Assurance</b>	0	267	49.44
	0.5	117	21.67
	1	156	28.89
<b>DI_Doc</b>	0	167	30.93
	0.5	269	49.81
	1	104	19.26

**Table 5: Descriptive statistics on the dependent variable**

Country	N	DI_Total		DI_Criteria		DI_Rational		DI_KPI		DI_Weight		DI_Target		DI_Time		DI_Measure		DI_Remco		DI_Assurance		DI_Doc	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Austria	10	0.64	0.11	0.9	0.21	0.35	0.41	0.95	0.15	0.55	0.36	0.65	0.33	0.65	0.33	0.95	0.15	0.35	0.47	0.45	0.28	0.25	0.35
Belgium	12	0.57	0.16	0.79	0.25	0.08	0.28	0.83	0.32	0.5	0.42	0.87	0.31	0.91	0.28	0.83	0.32	0.04	0.14	0.41	0.51	0.5	0.36
Denmark	20	0.39	0.10	0.72	0.25	0.27	0.38	0.95	0.22	0.42	0.37	0.95	0.15	0.97	0.11	1	0	0.12	0.31	0.37	0.45	0.1	0.26
Finland	14	0.57	0.09	0.89	0.21	0.03	0.13	0.92	0.26	0.25	0.42	0.65	0.36	0.96	0.13	0.92	0.36	0	0	0.6	0.44	0.25	0.32
France	80	0.69	0.12	0.77	0.25	0.3	0.44	0.97	0.15	0.41	0.38	0.82	0.37	0.99	0.05	0.96	0.19	0.35	0.39	0.88	0.3	0.5	0.13
Germany	83	0.55	0.14	0.78	0.24	0.28	0.35	0.83	0.36	0.37	0.34	0.74	0.41	0.92	0.22	0.84	0.34	0.2	0.31	0.29	0.31	0.289	0.36
Ireland	11	0.74	0.14	0.86	0.23	0.54	0.47	0.90	0.3	0.5	0.44	0.86	0.32	1	0	0.9	0.3	0.9	0.20	0.45	0.52	0.455	0.35
Italy	45	0.38	0.15	0.75	0.25	0.36	0.45	0.77	0.39	0.35	0.4	0.62	0.46	0.9	0.22	0.82	0.37	0.68	0.41	0.4	0.22	0.136	0.35
Netherlands	22	0.68	0.07	0.90	0.19	0.2	0.39	1	0	0.32	0.44	0.95	0.21	0.95	0.14	1	0	0.36	0.41	0.47	0.47	0.5	0.26
Norway	15	0.31	0.16	0.8	0.25	0.23	0.32	0.76	0.41	0.33	0.40	0.73	0.45	0.9	0.28	0.76	0.41	0.06	0.25	0.2	0.41	0.33	0.40
Poland	5	0.59	0.06	0.6	0.27	0.1	0.22	1	0	0.1	0.22	1	0	1	0	1	0	0	0	0.5	0.5	0.4	0.22
Russia	9	0.6	0.1	1	0	0.11	0.33	1	0	0	0	1	0	0.88	0.33	1	0	0.11	0.33	0.44	0.52	0.44	0.16
Spain	21	0.6	0.18	0.83	0.24	0.31	0.40	0.81	0.4	0.38	0.38	0.81	0.40	0.97	0.10	0.81	0.4	0.92	0.23	0.23	0.37	0.5	0.5
Sweden	24	0.37	0.15	0.72	0.25	0.29	0.41	0.91	0.28	0.25	0.41	0.87	0.33	0.91	0.19	0.87	0.33	0.08	0.24	0.41	0.35	0.39	0.25
Switzerland	23	0.64	0.15	0.76	0.25	0.45	0.40	0.73	0.44	0.47	0.41	0.78	0.42	0.97	0.10	0.78	0.42	0.71	0.36	0.28	0.44	0.45	0.39
Turkey	6	0.33	0.08	0.75	0.27	0	0	1	0	0	0	1	0	0.25	0.41	1	0	0	0	0.91	0.20	0.41	0.20
UK	140	0.70	0.152	0.90	0.19	0.37	0.41	0.89	0.29	0.46	0.44	0.81	0.38	0.97	0.14	0.9	0.38	0.86	0.32	0.17	0.36	0.66	0.27

Table 6 shows descriptive statistics of the dependent and independent variables. These basic statistics include the range, mean, median, minimum, maximum, and standard deviation of this dataset used to provide initial views. Descriptive statistics on the extent of executive compensation disclosures (DI\_Total) in the sample, with a mean of 0.63, suggests that, on average, firms disclose around 63% of the index constituents. The median of 0.65 is higher than the mean. The lowest and highest means, at 0.15 and 1, highlight a significant variation among firms, ranging from minimal to full disclosure.

Regarding the related-party transaction disclosure index, the firms headquartered in the assessed countries have relatively high approval and disclosure requirements regarding related-party transactions. A score of 7.24 out of 10 indicates a substantial effort to ensure transparency and proper governance in disclosing transactions involving related parties. More than half of the sample has a score higher than 8, which implies that those firms operate in countries that likely have well-defined policies and procedures to manage and disclose related-party transactions, which benefits stakeholders. The financial development index ranges from 0.43 % to 0.98 %, and more than half of the sample is headquartered in countries with advanced financial development rates; for instance, the UK has 84.93 %, and France has 80.27%.

Regarding ownership diffusion, the sample is characterized by a highly diluted ownership structure as the mean has a value of 67.36, which indicates a low level of concentrated ownership structure. The average value of compensation committee independence is 69.71%, suggesting independent directors represent the majority of the compensation committee members, and the large shareholder has a stake of 67.36 % of a firm's shares.

Regarding the control variables, most of the countries of the sample adopt the say on pay provision with a mean of 0.86 and an average Voice value of 1.24, which implies that firms tend to be headquartered in countries in which perceived freedom is high. These firms are considerably large, with average total assets amounting to approximately \$1.18 billion. The average Return on Assets (ROA) of 4% suggests a moderate level of profitability. The fact that most of these firms are audited by one of the Big Four accounting firms underscores the high standards of financial scrutiny and reliability in their financial reporting. The average debt-to-assets ratio (leverage) is 36.71, with a minimum of 0 and a maximum of 50.38. Additionally, the average board size of 9 members points to a relatively large governance structure.

Industrials, Consumer Discretionary, and Technology are the most represented industries, with 33.33% of firms operating in environmentally and socially sensitive sectors such as mining, mineral, oil, petroleum, and utilities.

**Table 6: Descriptive statistics of the dependent variable and independent variables**

<b>Variables</b>	<b>Mean</b>	<b>Median</b>	<b>Min</b>	<b>Max</b>	<b>Stand. dev</b>
<b>The compensation disclosure index: DI_Total</b>	.63	.65	.15	1	.15
<b>Related party transaction disclosure</b>	7.24	8	0	10	2.42
<b>Financial development</b>	0.76	0.78	0.43	0.98	0.09
<b>Ownership diffusion %</b>	67.36	69.60	0	100	25.75
<b>Percentage of independent directors on the compensation committee</b>	69.71	75	0	100	35.45
<b>Voice and accountability index</b>	1.24	1.29	-1.11	1.73	.41
<b>Say on pay</b>	.86	1	0	1	.34
<b>Sensitive industry</b>	.33	0	0	1	.47
<b>Board size</b>	9.61	9	3	23	3.49
<b>Firm size*</b>	1.18	2.56	0.041	2.69	3.03
<b>Return on Assets</b>	.04	.03	-.49	.67	.08
<b>Leverage</b>	.36	.25	0	50.38	2.16
<b>Big 4 auditor</b>	.90	1	0	1	.29

\*Firm size is the total assets in billion US dollars in the previous year, an absolute measure without the natural log.

### **3.2 Correlation matrix between the disclosure index DI\_Total and the independent and control variables**

Table 7 shows some significant correlations that are key to understanding what is occurring in this study. In the first row is the overall level of corporate disclosure: DI\_Total, which correlates positively with financial development, suggesting a positive association; firms operating in countries with more significant financial development seem more likely to disclose more.

In addition, the related party transaction disclosure index measuring country-level disclosure is positively correlated with DI\_Total. This suggests that firms are more likely to disclose firm-specific information in countries with well-developed regulatory frameworks and market practices, which puts a high attention on transparency. This positive association highlights the relationship between country-level determinants and firm-level disclosure, which aligns with the neo-institutional theory that emphasizes macro external forces shaping corporate characteristics. The correlation between DI\_Total and Voice is of lower magnitude but still positive. However, the broader financial and regulatory conditions captured by financial development and the extent of the disclosure index are more relevant.

Some other notable correlations, for example, are found in the relationship between firm size proxy and DI\_Total, where more prominent firms tend to disclose more. This is consistent with the fact that larger firms are more visible to investors and regulators, which induces higher degrees of transparency.

The correlation between the percentage of independent directors on the compensation committee and ownership diffusion does not imply multicollinearity since the VIF is under the value 5 (Baum, 2006; Gujarati, 2003). The same goes for the correlation between the Say on Pay variable and the variable voice and accountability and between the Say on Pay variable and the financial development variable.

**Table 7: Correlation matrix**

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
(1) DI_Total	1												
(2) Related Party Transaction disclosure	<b>0.2</b>	1											
(3) Financial development	<b>0.22</b>	<b>0.16</b>	1										
(4) Ownership diffusion	<b>0.19</b>	<b>0.16</b>	<b>0.28</b>	1									
(5) Remuneration committee independence	<b>0.24</b>	<b>0.23</b>	<b>0.29</b>	<b>0.32</b>	1								
(6) Voice and accountability index	0	-0.13	0.37	0.29	0.03	1							
(7) Say On Pay	<b>0.08</b>	0.06	<b>0.48</b>	<b>0.13</b>	0.05	<b>0.38</b>	1						
(8) Sensitive industry	<b>-0.08</b>	-0.02	<b>-0.09</b>	-0.06	0.03	<b>-0.14</b>	<b>-0.12</b>	1					
(9) Board size	<b>0.14</b>	-0.04	-0.04	<b>-0.14</b>	<b>-0.14</b>	<b>-0.1</b>	<b>-0.14</b>	0.06	1				
(10) Firm size	<b>0.18</b>	<b>-0.18</b>	<b>-0.14</b>	-0.04	<b>-0.07</b>	<b>-0.1</b>	<b>-0.21</b>	<b>0.12</b>	<b>0.63</b>	1			
(11) Return on Assets	0.06	0.03	0	-0.01	0	-0.03	-0.02	-0.05	<b>-0.07</b>	-0.04	1		
(12) Leverage	0	0	<b>-0.14</b>	-0.01	<b>-0.08</b>	-0.06	<b>-0.1</b>	-0.02	-0.04	0	-0.04	1	
(13) BIG 4 auditor	0.06	<b>-0.12</b>	<b>-0.07</b>	-0.01	0.06	0.06	-0.05	0.02	<b>0.1</b>	<b>0.19</b>	0.01	0.01	1

\*\*\* p&lt;.01, \*\* p&lt;.05, \* p&lt;.1

### 3.3 Regression analysis

Table 8 reports the results of the regression analyses performed to test the hypothesis. The finding of a positive association between corporate disclosure levels and the related party transaction disclosure index is significant (0.012;  $p < 0.01$ ) as transparency could be essential in guarding investors' interests, predominantly minority shareholders. Hence, H1 is supported; firms headquartered in a country with well-protected minority investors are positively associated with the level of disclosure of CSR contracting. This result indicates that firms are improving the extent of investor protection through higher disclosure of ownership and financial information and making related-party transactions more knowledgeable by fostering investor confidence in reducing the information asymmetry between insiders and market participants. The result highlights the importance of good disclosure practices in a broader investor protection framework. This result aligns with the neo-institutional theory that suggests normative institutional pressures drive firms toward enhanced disclosure (DiMaggio & Powell, 1983).

I found that country-level institutional characteristics have a significant influence in explaining the level of disclosure. Results show a positive association between financial development at a country level and the level of disclosure on CSR contracting (0,37 ;  $p < 0.01$ ). Hence, hypothesis 2 is supported: Firms headquartered in financially developed countries are positively associated with the level of disclosure of CSR contracting. This result highlights the importance of financial development in corporate disclosure and suggests that improved transparency will likely emerge alongside more financially advanced markets. As a result, firms headquartered in more financially developed contexts might choose broader disclosure practices to satisfy the demands of their investors, stakeholders, and regulators. This result aligns with the neo-institutional theory that suggests organizations evolve in response to technical pressure and perceived societal expectations (DiMaggio & Powell, 1983).

After controlling for country-level institutional characteristics, I found a positive and significant relationship between the percentage of independent directors on the compensation committees and the level of disclosure on CSR contracting (0.01;  $p < 0.05$ ) within the European context. So hypothesis H3 is supported: Firms with a high percentage of Independent directors on the compensation committee are positively associated with the level of disclosure of CSR contracting. These findings suggest that companies with more enhanced governance practices when they incorporate environmental and social criteria in executive pay for the first time, tend to provide more detailed information on their compensation design regarding

environmental and social metrics into executive pay. These results validate that a higher presence of independent directors on the compensation committee leads to increased disclosure of compensation practices to external stakeholders. Additionally, I find a positive relationship between firm size and the level of compensation disclosure. I found that firm-specific factors drive disclosure decisions. I found a positive association between the percentage of ownership diffusion and the level of disclosure (0.01;  $p < 0.05$ ). So the hypothesis H4 is supported. Firms with high free float are positively associated with the level of disclosure of CSR contracting. Firms with dispersed ownership are more likely to disclose information to mitigate information asymmetry between the management and shareholders. The Higher the concentration of ownership, the lower the need to disclose. This is because at a much cheaper cost than with a diffuse set of outside investors, large shareholders or controlling owners can monitor the firm in light of their more significant access to more information about the project being involved in by the firm. The controlling shareholders are also likely less willing and able to provide salient information about themselves, putting them under market pressure or diminishing their control of the firm. These findings indicate that ownership structure influences whether and what firms disclose. This result is in line with the agency theory, which predicts that the dispersed ownership structure, especially in firms with high free float, amplifies the principal-agent problem due to increased information asymmetry and the diluted influence of individual shareholders (Jensen & Meckling, 1976; Fama & Jensen, 1983). If ownership is widespread, it creates more of a need for the firm to disclose fair information regarding executive expenses to the shareholders.

The results reveal a positive association between the extent of disclosure and the Big Four; one potential explanation for the positive relationship between Big Four auditors and overall disclosure is that firms audited by one of these large audit firms tend to disclose more. The positive association between board size and total disclosure is the same. Larger boards can have a better overview or supervisory role in providing complete disclosure.

**Table 8: Regression results on disclosure index**

Variables	Hypothesis and Expected Signs	Coefficient
Related Party Transaction Disclosure	H1 +	0.012***
Financial development	H2 +	0.37***
Ownership diffusion	H3 +	0.001**
REMCO independence	H4 +	0.001**
Voice and accountability		-0.026
Say On Pay		0.001
Sensitive industry		-0.031**
Board size		0.005**
Size		0.023***
ROA		0.138**
Leverage		0.003
BIG 4		0.041**
Constant		-0.1
Industry	Yes	
Year of the first adoption	Yes	
Mean VIF	1.89	
Max VIF	4.11	
Adj (R2)	0.2384	
F	6.27***	

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\*\*\* p<.01, \*\* p<.05, \* p<.1

### 3.4 Additional analysis

To ensure the reliability of my findings, I conducted supplementary analyses. Given that my dependent variable is censored and has a score ranging from 0 to 1, I employed the TOBIT regression model instead of the OLS model (Appendix B.1). The results align with those previously documented. Additional analyses were conducted to ensure that the results were robust. The natural logarithm of the dependent variable was applied to correct for potential

skewness in distribution and more normal residuals from the regression model (Appendix B. 2). Other alternative country-level determinants include replacing the financial development variable with the market capitalization as a percentage of GDP (Appendix B. 3); the sample consists of 501 observations due to the missing data in 2009 and 2010. Replacing the variable related party transaction disclosure index by the variable protecting minority investors: Extent of director liability index (0-10) (Appendix B. 4), and also by the variable strength of minority protecting index using both methodologies (Appendix B. 5), which all provide similar measurements of the country-level determinants. Ownership diffusion, winsorizing as its 1st and 99th. This procedure adjusts for outliers by deviating the results from being dominated by extreme values (Appendix B. 6). Crucially, however, the robustness of my results was preserved across all these sensitivity analyses, which only strengthened my confidence in them. The endurance of the relationships, regardless of specification or adjustment made, highlights the robust nature of my results.

#### **Section 4: Discussion and conclusions**

The novel contribution of this study is to evaluate firm disclosure on CSR contracting when a firm adopts it for the first time. This study focuses on the step-by-step breakdown of specific disclosure items related to CSR and executive compensation, as it reveals how companies from different European countries deal with transparency in their CSR contracting practices, particularly when they adopt these for the first time. The present study addresses the gap in prior research and aims to contribute to this evolving literature in different ways. It is the first study on CSR disclosure to investigate the relationship between the country and firm-level determinants and the extent of executive compensation disclosure in 17 European countries.

This study contributes to the academic literature by examining a disclosure decision highlighting a potential conflict of interest between directors and external shareholders. It expands the existing research on directors' compensation disclosure by investigating how European firms disclose their adoption of environmental and social metrics into executive pay practices related to the first-time adoption and disclosure. It also explores the potential associations between country-level institutional characteristics, firm-specific incentives, governance structure, and the extent of disclosure. This research emphasizes the importance of country-level institutional characteristics on the disclosure decision, firm-specific incentives, such as the compensation committees maintaining independence from management as a governance mechanism, and how it influences the firm's disclosure policy and dispersed

ownership structure. These insights contribute to the current literature on factors impacting compensation disclosure level (Coulton et al., 2001; Muslu, 2010) and build upon previous studies (Ben-Amar et al., 2011; Melis et al., 2015; Yang, Z, 2019) examining the relationship between governance characteristics and the level of disclosure.

In line with previous literature (e.g., Doidge et al., 2007), I find that the extent of disclosure on directors' compensation is associated with country-level institutional characteristics: the results show a positive association between financial development at a country level and the level of disclosure. This is consistent with the results of Doidge et al., 2007, who emphasize the importance of country-level determinants (financial development being one of them) in influencing corporate governance practices and disclosure behaviors. Notably, the extent of disclosure of related-party transactions' approval and disclosure requirements is essential in shaping the disclosure level.

In contrast to Muslu (2010), my research found a positive and significant relationship between the independence of compensation committees and the transparency of executive compensation disclosures within the European context. Moreover, my findings aligned with Ben-Amar et al.'s work in 2011. The higher presence of independent directors on the compensation committee leads to increased disclosure of compensation practices to external stakeholders. Additionally, I found a positive relationship between firm size and the level of executive compensation disclosure. These findings align with earlier research (Lang & Lundholm, 1993; Ahmed & Courtis, 1999) and suggest that larger firms possess more significant resources and expertise, enabling them to furnish more transparent information regarding their compensation strategies. Consistent with Lang & Lundholm (1993), I document a positive relationship between firm performance and the extent of disclosure.

Understanding how Country and firm-specific incentives drive the decision to disclose CSR contracting on first-time adoption has implications for corporate governance theory and practice. By integrating agency theory and neo-institutional theory, I contribute to the literature on executive compensation disclosure across different institutional contexts (Melis et al., 2015). Also, this study has practical implications by revealing the determinants of CSR contracting disclosure; it helps to explain and justify to shareholders and stakeholders what firms disclose when they design CSR contracting for the first time. Another practical implication that could help firms improve their disclosure on CSR contracting is, while collecting the information here, I noticed that it may not always be present in one part or

document. This is particularly relevant in KPI measurements and third-party sustainability assurance. To fix this, I recommend lumping CSR metrics together with compensation design.

I recognize the limitations in this study, which consequently point toward potential avenues for future research. Firstly, this study examines the limitations of a disclosure index that has been developed without considering national laws on voluntary and mandatory disclosure. Transparent disclosure practices in executive compensation are vital for stakeholders, including investors, regulators, and the general public. They contribute to informed decision-making and corporate accountability. Second, our analysis delves into the disclosure of directors' compensation in European countries. While I benefit from the ability to enhance the generalizability of my findings due to the distinct institutional characteristics of these countries, a more comprehensive understanding could be achieved by including additional countries from different regions of the world in the study. Third, my sample focuses on disclosure within a single year of the first time adoption. Such an approach would help readers in having a look at the design as a whole rather than missing. Due to being distributed over different sections/documents, some critical CSR-related details, such as sustainability assurance KPIs, must be disclosed in the same section of the compensation design. Lastly, my study focuses on the extent of disclosure provided by firms without delving into how firms may manage compensation disclosures through techniques like impression management. Further comparative research could address this gap in understanding.

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## Appendix A: Disclosure Index guideline

I used the following list of firms as an example for the guideline:

- BREMBO GROUP, page 8, Annual remuneration report 2018
- Coats Group plc, Annual Report and Accounts 2020
- Fila, Remuneration Report 2022
- Group Casino, Registration Document 2016
- MONEYSUPERMARKET COM GP, Annual report and account 2022
- NETCARE, Annual Integrated Report 2013
- Renewi, plc, Annual Report and Accounts 2022
- RHI MAGNESITA, Annual Report 2020
- Salvatore Ferragamo, Remuneration Report 2021
- Valeo, Universal Registration Document 2018
- WIENERBERGER, Remuneration Report 2021

<b>Box 1: DI_Criteria: Does an entity disclose which ESG-related performance criteria are adopted?</b> This item assesses the level of disclosure regarding whether the company identifies specific environmental and social performance criteria.	
<b>Score</b>	<b>Example</b>
<b>0.5</b>	<b>Group casino</b> , Registration Document 2016 page 196: “a non-financial quantitative CSR objective, accounting for 10% of the target amount, which was first introduced in 2016 in line with the trend observed by specialised firms, this objective aims to have Casino, Guichard-Perrachon represented on at least one of the three following major non-financial indices including the highest-performing companies with respect to ESG (Environmental, Social and Governance) criteria: FTSE4GOOD Index, Euronext Vigeo Indices and DJSI.”
<b>1</b>	<b>WIENERBERGER</b> , Remuneration Report 2021 page 10: “70% EBITDA growth in accordance with the Strategy 2023 30% ESG targets: (10%) environment (climate protection) 15% reduction in CO2 emissions compared to 2020 (10%) social (diversity) more than 15% women in senior management positions and more than 30% women in white-collar positions in the Wienerberger Group (10%) social (initial and further training) 10% more training hours per employee compared to 2020.”

<b>BOX 2: DI_Rationale: Does an entity disclose the rationale of the criteria where relevant?</b> This item evaluates the level of disclosure on the rationale behind the chosen ESG metrics, ensuring alignment with business strategy and shareholder value	
<b>Score</b>	<b>Example</b>
<b>0</b>	<b>MONEYSUPERMARKET COM GP</b> , Annual report and account 2022 page 36: “Remuneration The Board has considered the inclusion of climate-related targets when setting executive management remuneration. In FY22, ESG-related measures were introduced into the annual bonus scheme for Executive Directors and Group Leadership Team. For FY23, one of these ESG bonus measures will be climate-related, requiring both: (a) delivery against a quantified target for the reduction of Scope 1 and 2 emissions; and (b) the implementation of processes for the measurement of indirect emissions, to allow a quantified Scope 3 emissions target to be set in FY24.”
<b>0.5</b>	<b>Group casino</b> , Registration Document 2016 page 196: “a non-financial quantitative CSR objective, accounting for 10% of the target amount, which was first introduced in 2016 in line with the trend observed by specialised firms, this objective aims to have Casino, Guichard-Perrachon represented on at least one of the three following major non-financial indices including the highest-performing companies with respect to ESG (Environmental, Social and Governance) criteria: FTSE4GOOD Index, Euronext Vigeo Indices and DJSI.”
<b>1</b>	<b>Renewi</b> , plc Annual Report and Accounts 2022, page 73: “Our commitment to achieve our climate-related targets is also reflected in the way we evaluate performance. To motivate senior executives and managers to increase climate-related performance, we have an annual bonus plan and long-term incentive plan (LTIP) in place. The measures used in both the annual bonus and LTIP are selected annually to reflect the Group’s main business and strategic priorities for the year and capture both financial and non-financial objectives. Within the non-financial objectives, we use a climate-related ESG metric of the Group’s recycling rate in our LTIP awards. Together with the financial metrics, these measures are transparent, visible and motivational to participants, balance growth and returns, and provide good line-of-sight for executives and alignment with shareholders.”

**BOX 3: DI\_KPI: Does an entity disclose the performance measure(s) adopted?**  
 This item measures the disclosure level of specific metrics used for evaluating executive performance, detailing how success is quantified.

Score	Example
0	<b>Fila</b> , Remuneration report 2022, Page 26: “the companies integrate sustainability criteria in the CEO remuneration, “the sustainability plan,” without indicating the measurement of each criterion. (see sustainability plan Fila).”
0.5	The company disclose the measurement of at least one indicator but not all.
1	<b>WIENERBERGER</b> , Remuneration Report 2021 page 10: “70% EBITDA growth in accordance with the Strategy 2023 30% ESG targets: (10%) environment (climate protection) 15% reduction in CO2 emissions compared to 2020 (10%) social (diversity) more than 15% women in senior management positions and more than 30% women in white-collar positions in the Wienerberger Group (10%) social (initial and further training) 10% more training hours per employee compared to 2020.”

<p><b>BOX 4: DI_Measure: Does an entity disclose whether the performance measure is relative or absolute?</b> This item assesses the level of disclosure on whether the ESG metrics are relative (compared to peers) or absolute (specific targets), providing context for performance comparisons.</p>	
<b>Score</b>	<b>Example</b>
<b>0</b>	<p><b>Fila</b>, Remuneration report 2022, Page 26: “the companies integrate sustainability criteria in the CEO remuneration, “the sustainability plan,” without indicating the measurement of each criterion. (see sustainability plan Fila).”</p>
<b>0.5</b>	<p><b>WIENERBERGER</b>, Remuneration Report 2021 page 10:  “70% EBITDA growth in accordance with the Strategy 2023  30% ESG targets:  (10%) environment (climate protection)  15% reduction in CO2 emissions compared to 2020  (10%) social (diversity)  more than 15% women in senior management positions and more than 30% women in white-collar positions in the Wienerberger Group  (10%) social (initial and further training)  10% more training hours per employee compared to 2020.”</p>
<b>1</b>	<p><b>RHI MAGNESITA</b> Annual Report (2020). Page 105: “Bonus &amp; LTIP Non-financial criteria • Use of secondary raw materials – measures the rate at which secondary raw material is used in our production network compared to virgin raw materials. Despite this not being a wholly financial target, this will nonetheless be independently verified by an external provider. • Reduction of CO2 emissions intensity – to reduce the tonnes of CO2 emitted per tonne of production by 15% by 2025 compared to 2018 baseline, including Scope 1 emissions, Scope 2 emissions and Scope 3 emissions from raw materials.”</p>

**BOX 5: DI\_Weight: Does an entity disclose the weight of each performance measure adopted?**

This item evaluates the level of disclosure regarding the weight assigned to each performance criterion in the remuneration plan, showing its relative importance

<b>Score</b>	<b>Example</b>
<b>0</b>	<b>Salvatore Ferragamo</b> , Remuneration Report 2021, page 9: “The variable remuneration of Executive Directors and Key Managers is related to financial and non-financial parameters linked to company strategies and strategic pillars approved by the Board of Directors, which may also include ESG (Environment, Social, Governance) objectives.” In this case, Without indicating the weight.
<b>0.5</b>	<b>Group casino</b> , Registration Document 2016 page 196: “a non-financial quantitative CSR objective, accounting for 10% of the target amount, which was first introduced in 2016 in line with the trend observed by specialised firms, this objective aims to have Casino, Guichard-Perrachon represented on at least one of the three following major non-financial indices including the highest-performing companies with respect to ESG (Environmental, Social and Governance) criteria: FTSE4GOOD Index, Euronext Vigeo Indices and DJSI.”
<b>1</b>	<b>WIENERBERGER</b> , Remuneration Report 2021 page 10: “70% EBITDA growth in accordance with the Strategy 2023 30% ESG targets: (10%) environment (climate protection) 15% reduction in CO2 emissions compared to 2020 (10%) social (diversity) more than 15% women in senior management positions and more than 30% women in white-collar positions in the Wienerberger Group (10%) social (initial and further training) 10% more training hours per employee compared to 2020.”

**BOX 6: DI\_Target: Does an entity disclose the performance target of each performance measure?**

This item measures the level of disclosure on specific performance targets for each metric.

Score	Example
0	<p><b>Fila</b>, Remuneration report 2022, Page 26: “the companies integrate sustainability criteria in the CEO remuneration, “the sustainability plan,” without indicating the measurement of each criterion. (see sustainability plan Fila).”</p>
0.5	<p><b>Valeo</b>, Universal registration document 2018, in the chapter on sustainability development, defined the target for social indicators except those for the KPI “AGE” however, the environmental indicators are all defined, So the score is 0,5 for social and 1 for the environment and a total of 0.5 for the ESG disclosure score, because missing one target.</p>
1	<p><b>Coats Group plc</b> Annual Report and Accounts 2020 Page 86,: “As disclosed in last year’s report Sustainability goals are included in the performance measures for the first time. The specific targets are:</p> <p><b>Water:</b> by 2022 to achieve a 40% reduction, from a 2018 baseline, of water usage per kilogram of thread production.</p> <p><b>Energy:</b> by 2022 to achieve a 7% reduction, from a 2018 baseline, of kWh per kilogram of product made.</p> <p><b>Effluent and emissions:</b> by 2022 to achieve compliance with Zero Discharge of Hazardous Chemicals effluent standards.</p> <p><b>Social:</b> to achieve Great Place to Work accreditation for locations that cover 80% of employees worldwide and to enable all employees to contribute to community support activities.</p> <p><b>Sustainability:</b> reduce waste by 25%, from a 2018 baseline, and progress towards achieving the 2024 goal that all premium polyester thread will be from 100% recycled material.”</p>

**BOX 7: DI\_Time: Does an entity disclose the time horizon of targets?**

This item assesses the disclosure level of the period over which performance is assessed, indicating the timeline for achieving targets.

Score	Example
0	Without any information about the time horizon
0.5	Short-term, medium long term, without disclosing the specific period
1	<p><b>Coats Group plc</b> Annual Report and Accounts 2020 Page 86,: “As disclosed in last year’s report Sustainability goals are included in the performance measures for the first time. The specific targets are:</p> <p><b>Water:</b> by 2022 to achieve a 40% reduction, from a 2018 baseline, of water usage per kilogram of thread production.</p> <p><b>Energy:</b> by 2022 to achieve a 7% reduction, from a 2018 baseline, of KWH per kilogram of product made.</p> <p><b>Effluent and emissions:</b> by 2022 to achieve compliance with Zero Discharge of Hazardous Chemicals effluent standards.</p> <p><b>Social:</b> to achieve Great Place to Work accreditation for locations that cover 80% of employees worldwide and to enable all employees to contribute to community support activities.</p> <p><b>Sustainability:</b> reduce waste by 25%, from a 2018 baseline, and progress towards achieving the 2024 goal that all premium polyester thread will be from 100% recycled material.”</p>

**BOX 8: DI\_Remco: Does an entity disclose whether remuneration consultants are involved in determining executive remuneration?**

This item evaluates the disclosure level on remuneration consultants' involvement in setting executive pay, ensuring transparency in the decision-making process.

<b>Score</b>	<b>Example</b>
<b>0</b>	<b>NETCARE</b> , Annual Integrated Report 2013, Page 94: “The Committee may appoint external consultants to obtain salary survey information and assist in the conduct of any review. The Committee may also consult with the Company’s attorneys and its auditors where necessary. In addition, The committee is empowered to obtain the assistance of the Group Human Resources Director in obtaining relevant information”
<b>0.5</b>	<b>Valeo</b> , Universal registration document 2018, Page 152: “ <b>two reputed consulting firms</b> were instructed to conduct a detailed study of the Chairman and Chief Executive Officer’s compensation and to make recommendations, in this case, it is clear that there is an external consulting but the name was not disclosed.”
<b>1</b>	<b>BREMBO GROUP</b> , Annual remuneration report 2018 page 8: “Brembo also establishes its policies and verifies its remuneration structure based on the analyses conducted with the support of consultants on market benchmarks consisting of a group of comparable (in terms of size) peers operating in the same industry. In addition, Brembo monitors trends and best practices on the Italian market. Mercer and Willis Towers Watson advised Brembo by providing methodological support and market benchmarks on compensation and executive compensation.”

**BOX 9: DI\_Assurance: Does an entity disclose whether an external body validates measuring the performance criteria adopted?**

This item measures the level of disclosure regarding third-party validation of the performance measures, ensuring the accuracy and credibility of the disclosed metrics.

Score	Example
<b>0</b>	When the firm does not disclose any information.
<b>0.5</b>	<p><b>FILA</b>, Sustainability Report Consolidated Non-Financial Statement, page 162: “Our responsibility is to express a conclusion, based on the procedures performed, about the compliance of the NFS with the requirements of the decree and the GRI Standards. We carried out our work in accordance with the criteria established by “International Standard on Assurance Engagements 3000 (revised) - Assurance Engagements other than Audits or Reviews of Historical Financial Information” (“ISAE 3000 revised”), issued by the International Auditing and Assurance Standards Board applicable to limited assurance engagements. This standard requires that we plan and perform the engagement to obtain limited assurance about whether the NFS is free from material misstatement. A limited assurance engagement is less in scope than a reasonable assurance engagement carried out in accordance with ISAE 3000 revised, and consequently does not enable us to obtain assurance that we would become aware of all significant.”</p> <p>In this case, is not clear which KPI assured.</p>
<b>1</b>	<p><b>Valeo</b>, Universal registration document 2018, Page 250: “Ernst &amp; Young, an independent audit firm, performed an engagement to verify the environmental data, which resulted in a report including a statement of completeness and an opinion as to the accuracy of the information contained therein”. Page 252, “Controls and external verification. All social indicators in the report have been audited by Ernst &amp; Young in the form of a statement of completeness and a limited assurance report and are also subject to external verification by the Statutory Auditors.”</p>

**BOX 10: DI\_Doc: Are all the relevant items of remuneration disclosed in one single section/document?**

This item assesses the level of disclosure regarding the consolidation of all relevant remuneration information into a single section or document, enhancing transparency and ease of access.

<b>Score</b>	<b>Example</b>
<b>0</b>	<b>Fila</b> , remuneration report 2022 is missing information about the KPI and the sustainability assurance, without any links in order to find them.
<b>0.5</b>	<b>HENSOLDT</b> , Non-financial report 2021 page 66: “HENSOLDT is aware of the special responsibility and knows the impact of the activities on society and the environment. HENSOLDT is committed to conducting its business sustainably and responsibly at all times. The LongTerm Incentive bonus components for the Management Board members are among other criteria based on the achievement of the ESG targets “Diversity” and “Climate Impact”. Further information on the topic of sustainability (ESG) can be found in chapter “V Non-financial Group Statement” and on the website of HENSOLDT at <a href="https://investors.hensoldt.net">https://investors.hensoldt.net</a> in the “Sustainability” section.”
<b>1</b>	When all the items are disclosed in the same section/chapter.

## Appendix B.1: Tobit results on disclosure index

Variables	Hypothesis and expected signs	Coefficient
Related Party Transaction Disclosure	H1 +	0.011***
Financial development	H2 +	0.37***
Ownership diffusion	H3 +	0.001**
REMCO independence	H4 +	0.001**
Voice and accountability		-0.026
Say On Pay		0.001
Sensitive industry		-0.031*
Board size		0.005**
Size		0.023***
ROA		0.138**
Leverage		0.003
BIG 4		0.041**
Constant		-0.1
Industry	Yes	
Year of the first_time adoption	Yes	
LR chi2	180.15***	
Pseudo R2	0.3686	

\*\*\* p<.01, \*\* p<.05, \* p<.1

## Appendix B. 2: Regression results on disclosure index

Variables	Hypothesis and Expected Signs	Coefficient
Related Party Transaction Disclosure	H1 +	0.011***
Financial development	H2 +	0.37***
Ownership diffusion	H3 +	0.001**
REMCO independence	H4 +	0.001**
Voice and accountability		-0.026
Say On Pay		0.001
Sensitive industry		-0.031*
Board size		0.005**
Size		0.023***
ROA		0.138**
Leverage		0.003
BIG 4		0.041**
Constant		-0.1
Industry	Yes	
Year of the first adoption	Yes	
Mean VIF	1.89	
Max VIF	4.11	
Adj (R2)	0.2384	
F	6.27***	

\*\*\* p<.01, \*\* p<.05, \* p<.1

### Appendix B.3 Regression results on disclosure index

Variables	Hypothesis and Expected Signs	Coefficient
Related Party Transaction Disclosure	H1 +	0.012***
Market capitalisation on % of GDP	H2 +	0.001***
Ownership diffusion	H3 +	0.001***
REMCO independence	H4 +	0.001***
Voice and accountability		-0.03*
Say On Pay		0.03
Sensitive industry		-0.03**
Board size		0.008***
Size		0.02***
ROA		0.12*
Leverage		0.001
BIG 4		0.033
Constant		0.084
Industry	Yes	
Year of the first_time adoption	Yes	
Mean VIF	1.9	
Max VIF	4.2	
Adj (R2)	0.2163	
F	5.60***	

\*\*\* p<.01, \*\* p<.05, \* p<.1

## Appendix B.4 Regression results on disclosure index

Variables	Hypothesis and expected signs		Coefficient
Minority protection	H1	+	0.002***
Financial development	H2	+	0.35***
Ownership diffusion	H3	+	0.001**
REMCO independence	H4	+	0.001**
Voice and accountability			-0.03**
Say On Pay			-0.001
Sensitive industry			-0.03*
Board size			0.005**
Size			0.024***
ROA			0.13*
Leverage			0.002
BIG 4			0.038*
Constant			0.21
Industry		Yes	
Year of the first adoption		Yes	
Mean VIF		1.9	
Max VIF		4.11	
Adj (R2)		0.2408	
F		6.34***	

\*\*\* p<.01, \*\* p<.05, \* p<.1

## Appendix B.5 Regression results on disclosure index

Variables	Hypothesis and Expected Signs		Coefficient
Strength of disclosure	H1	+	0.002***
Financial development	H2	+	0.35***
Ownership diffusion	H3	+	0.001**
REMCO independence	H4	+	0.001**
Voice and accountability			-0.03**
Say On Pay			0.001
Sensitive industry			-0.03*
Board size			0.005**
Size			0.024***
ROA			0.13**
Leverage			0.002
BIG 4			0.038*
Constant			0.045
Industry		Yes	
Year of the first_time adoption		Yes	
Mean VIF		1.89	
Max VIF		4.11	
Adj (R2)		0.2321	
F		6.09***	

\*\*\* p<.01, \*\* p<.05, \* p<.1

## Appendix B.6 Regression results on disclosure index

Variables	Hypothesis and Expected Signs	Coefficient
Related Party Transaction Disclosure	H1 +	0.011***
Financial development	H2 +	0.37***
Ownership_Winsorized	H3 +	0.001**
REMCO independence	H4 +	0.001**
Voice and accountability		-0.02
Say On Pay		0.01
Sensitive industry		-0.031*
Board size		0.005**
Size		0.023***
ROA		0.13**
Leverage		0.002
BIG 4		0.041**
Constant		0.1
Industry	Yes	
Year of the first_time adoption	Yes	
Mean VIF	1.89	
Max VIF	4.11	
Adj (R2)	0.2384	
F	6.27***	

\*\*\* p<.01, \*\* p<.05, \* p<.1

## **Study 2: CSR disclosure and Legitimacy on Controversial industries: Canadian cannabis firms**

### **Abstract**

This study analyzes how Canadian cannabis firms entering controversial industries communicate their CSR initiative and whether CSR messages help gain and maintain legitimacy to secure societal approval or serve as mechanisms for corporate self-legitimation. By adopting a content analysis of the CEO's letter and annual reports on six Canadian cannabis firms that expanded a part of their activity from pharmaceutical use to recreational adult use in the year of legalization in Canada and juxtaposing them against the analysis of the actual behavior reported on Canadian media coverage news. The results of this study show that Canadian cannabis firms gain legitimacy by focusing on Regulator, Pragmatic, Moral, and Cognitive/Culture legitimacy.

**Keywords:** Controversial industry, Cannabis, Canada, Legitimacy theory, CEO letter, Disclosure

## Introduction

This study focuses on the CSR messages in corporate reporting of firms entering controversial industries and how they influence corporate legitimacy. Legitimacy theory offers an appropriate theoretical framework for understanding the dynamic of CSR within controversial industries (Dhandhanian & O'Higgins, 2022). Legitimacy is defined by Suchman (1995) as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.” (p. 574). CSR disclosure on corporate reporting is an increasing trend (KPMG, 2020). It is posited as an effective method for reporting and being accountable to stakeholders about how the firms manage sustainably (Mori Junior et al., 2014) and to show how the management team is aware of the importance of disclosure to provide transparency and receive the social license to operate (Demuijnck & Fasterling, 2016). Granting legitimacy from stakeholders is important for the firm's survival (Suchman, 1995). Many businesses in controversial sectors adopt CSR practices, and disclosing such practices has gained significant stakeholder attention (Jansen et al., 2024). According to Lindgreen et al., 2012, Controversial industries have no universal definition; these sectors produce harmful goods associated with social, environmental, and ethical concerns. However, the definition varies and depends on the context of the culture where they operate. Vocabulary changes and shifts, such as stigmatized vs. contested (Jansen et al., 2024). These controversial firms may involve activities such as tobacco (e.g., Campbell et al., 2003; Cai et al., 2012), alcohol (e.g., Campbell et al., 2003; Lindgreen et al., 2012), And gambling that can cause harm to human beings (e.g., Hong & Kacperczyk, 2009; Lindgreen et al., 2012).

The societal consequences of these industries can be significant because their products are controversial and range from consumer goods to services associated with addiction, which can often be related to health and addiction issues or, indeed, much broader social harm (Jansen et al., 2024). The controversial ethical and social implications of these industries have made them some of the most regulated and scrutinized, often being positioned as industries that operate on the fringes of societal norms and expectations (Hong & Kacperczyk, 2009; Cai et al., 2011; Jo & Park, 2020). In addition, various other controversial industry sectors beyond the traditional "sin" industries carry a stigma for environmental, social, and ethical reasons, such as cement, weapons (e.g., Cai et al., 2012), palm oil (e.g., Kasim et al., 2021), nuclear energy (e.g., Lindgreen et al., 2012), metallurgy/mining (e.g. Carson et al., 2015), oil and gas (e.g., Du & Vieira, 2012), and paper production (e.g. Toppinen et al., 2015).

Among the controversial industries such as alcohol, tobacco, and gambling, there exists another industry known as Cannabis (marijuana). Canada is the home of the largest firms, such as Aurora Cannabis, that have long applied their pharma knowledge to the recreational sector. Before 2018, firms needed a license for medical cannabis to be considered legitimate; after its legalization, the distribution networks for the recreational product were offered by private retailers, online through government-operated stores, and online operations managed by provincial authorities. Canadians now have safe access to cannabis with over 3,000 retail licenses across all provinces, nearly as many as alcohol retailers (Ernst & Young, 2023); the Canadian cannabis market is highly competitive and consists of more than 4,000 cannabis licenses (Ernst & Young, 2023).

Firms entering industries with questionable reputations face specific challenges when establishing their credibility to ensure their ongoing operations (Dhandhanian & O'Higgins, 2022). They often utilize CSR initiatives to show their positive impact on society (Dhandhanian & O'Higgins, 2022) and to gain a social license to operate (De-Miguel-Molina et al., 2019). Essentially, CSR may serve as a means for these firms to justify their continued existence (Dhandhanian & O'Higgins, 2022). However, there is a paradox for those firms when they portray themselves as socially responsible while engaging in activities typically perceived as harmful (Dhandhanian & O'Higgins, 2022). Research on the CSR disclosure by Cannabis firms is limited; only two papers, particularly, examined CSR reporting by cannabis firms but limited their scope to social media platforms (Ju et al., 2021; Ben Youssef & Arroyo Pardo, 2024). Such studies have not examined whether the CEO's letter in the annual report shapes the CSR discourse when social norms, values, and societal expectations are present (Arvidsson, 2022). CEO letter is argued as the most powerful and read part of the annual reports (Na et al., 2020), not only a way to communicate with stakeholders but also rich in information that presents the firm voice and addresses the ongoing issues and has the power to influence business society (Arvidsson, 2022). CEO letters are not audited, which allows the free expression to communicate what they want to show to stakeholders ( e.g., De-Miguel-Molina et al., 2019; Yan et al., 2019) by detailing firm actions to improve the relationship with the broader society (De-Miguel-Molina et al., 2019).

Therefore, this study analyses the CSR discourse on the annual reports. This is one of the few studies that have examined CSR disclosure by Canadian cannabis firms extensively (Ju et al., 2021; Ben Youssef & Arroyo Pardo, 2024). This study is the first that has explored how firms that operate in pharmaceutical cannabis industries extend a part of their activity to the

recreational cannabis industry and disclose their CSR initiative in the first year of extend to maintain their legitimacy and prove their credential in order to gain stakeholder approval.

Through more formal communication, such as annual reports and CEO letters, my study contributes to a greater understanding of how the CEO frames and shapes the CSR discourse communicated to media, governments, and investors on behalf of Canadian cannabis firms through the CEO message and annual reports. These industries are often dual; they can serve both beneficial and potentially harmful uses, such as pharmaceutical and recreational use for adult purposes. This study aims to examine the use of CSR messages disclosed by Canadian cannabis pharmaceutical firms extend to cannabis recreational adult used to gain and/or retain their social legitimacy. Therefore, this study answers the following two research questions:

**RQ 1: How do Canadian cannabis firms that are pharmaceutical and extending to the recreational use entering the controversial industries communicate their CSR initiative?**

**RQ 2: Do CSR messages help gain and maintain legitimacy to secure societal approval or serve as mechanisms for corporate self-legitimation?**

This study has three main contributions to the growing literature on cannabis firms. It contributes to extant CSR research on the controversial Canadian cannabis industries (Ju et al., 2021; Ben Youssef & Arroyo Pardo, 2024) ), as the former literature primarily focuses on social media. It also contributes to the literature on CSR disclosures in industries with dual reputations, as in the case of pharmaceuticals cannabis, where such firms face the challenge of protecting their reputation from damage versus promoting the benefits resulting from their activities, highlighting their socially responsible activities. At the same time, there are potential benefits to be gained, like chronic pain alleviation. There is also a risk associated with other areas, such as memory loss or addiction (Acuti et al. 2024). This study contributes to the literature on CEO letter communication and corporate reporting about CSR and how it influences legitimacy and stakeholder approval.

To the best of my knowledge, this study is one of the first to explore how cannabis firms disclose CSR initiatives to gain and retain social license support from stakeholders through the analysis of the CEO letter, which presents the voice of the firm and the CSR communication presented in the annual report. Hence, this study adds to the growing body of knowledge on CEO letter communication, CSR disclosure and legitimacy theory by exploring what messages Canadian cannabis firms disclose to manage their image and maintain legitimacy while lowering the level of stigma.

The remainder of this study is structured as follows. Section 1 outlines the Canadian cannabis industry. Section 2 describes the Literature review. Section 3 presents the legitimacy theory. Section 4 describes the sample selection and methodology. Section 5 analyses the results. Finally, in Section 6, conclusions are drawn, and the implications and limitations of the study are discussed.

## **Section 1: Canadian cannabis industry**

The expansion of Canada's cannabis industry from pharmaceutical to recreational is natural and driven by regulatory updates and the success of medical cannabis. In 2001, medical cannabis was first legalized for those with chronic pain, epilepsy, and anxiety. Years later, as cannabis became more accepted for medical treatment, there was a more favorable environment for regulatory changes, allowing for the comprehensive legalization that occurred on October 17th, 2018, under the Cannabis Act (Cannabis Act 2018). Canada became the initial G20 nation to federally legalize cannabis for adult consumption, establishing a regulatory model for the global community and enabling firms that produce medical cannabis to enter the adult-use market (Ernst & Young, 2023). Health Canada authorizes companies to be Licensed Producers (LPs) for large-scale cults. According to the statistics (Cannabis Act 2018), Cannabis consumers tend to favor products such as dried leaves or flowers and edible cannabis. They often prefer legal cannabis sources because of product safety (The Canadian Press, 2023).

## **Section 2: Literature review on CSR within controversial industries**

Previous studies have addressed many important aspects of CSR in controversial industries (Jansen et al., 2024), ranging from political, economic, and social determinants to the implementation process to the effect on various stakeholders and whether and how CSR in controversial industries should be communicated.

Regarding the determinants of CSR activities in controversial industries, political factors, specifically national legislation, drive most CSR initiatives within controversial sectors such as gambling industries (e.g., Leung & Gray, 2016). Economic factors emerged as the second most crucial influence driving CSR initiatives (Jansen et al., 2024). Existing literature indicates that controversial industries only integrate CSR practices if they enhance profitability or do not compromise financial gains (Fiedler et al., 2020). For instance, the tobacco sector prioritizes brand loyalty among young customers through extensive advertising efforts, often prioritizing profits over health concerns (Palazzo & Richter, 2005). Similarly, Fiedler et al., 2020; argue that the observed ineffective implementation of voluntary CSR measures is due to the solid

financial incentives, which reduces the effectiveness of CSR. Social motivators like the pursuit of legitimacy (Du & Vieira, 2012), pressure from stakeholders (Coombs, 2017), maintaining a public image, or fulfilling moral responsibilities (Richter & Arndt, 2018) ranked as the third most significant factor driving CSR initiatives (Jansen et al., 2024). Regarding the process previous study by Fooks et al. (2013) investigated how the firm “BAT” implements CSR in its organizational strategy, identifying key decision-makers that influence the firm's operations, such as shareholders, regulators, employees, customers, and consumers.

According to Grougiou et al., 2016, firms entering controversial industries tend to disclose more about their CSR activities through voluntary reports than non-controversial ones. Conte et al., 2023 found that firms entering controversial industries are significantly more focused on developing CSR policies and transparency tools because they expect visible and distinctive approval from their stakeholders. Firms entering controversial industries use controlled channels to reveal their CSR initiatives, such as social media platforms like Facebook (Ju et al., 2021) or Twitter (Ben Youssef & Arroyo Pardo, 2024). Acuti et al. (2024) also found that out of 136 firms, only 49 published sustainability or integrated reports in 2021. The absence of a consistent standard and the fact that CSR disclosure is still voluntary across most countries has led to criticism from scholars due to the reports' limited comparability and transparency (Byrd et al., 2017). Ju et al. (2021) examined Facebook posts related to CSR from seven Canadian public cannabis firms, revealing that these companies primarily adopted an instrumentalist approach, lacked transparency, and utilized practical multimedia elements in their communications. In the cannabis sector, Ben Youssef and Arroyo Pardo (2024) studied firms during the recreational cannabis legalization phase, analyzing 7,437 tweets from 18 companies listed on the Canadian Marijuana Index (CMI). They found that cannabis companies prioritize CSR activities related to consumer and community development, awareness raising, and product information dissemination. The research suggests that these companies primarily shape their identity around the medicinal benefits of their products in order to establish a cohesive identity to counteract social stigma.

The CSR disclosure of controversial firms has numerous impacts, such as affecting firm value (Cai et al., 2012), risk mitigation (Jo & NA, 2012), combating bad publicity (Dhandhaniah & O'Higgins, 2022), and building identity (Ben Youssef & Arroyo Pardo, 2024). It is currently unclear how CSR initiatives impact the reputation of socially stigmatized industries (Kim & Choi, 2022). A study (Bennett, 2018) indicated that cannabis companies develop their CSR disclosure strategies independently without being influenced by social or environmental

groups. As noted by Paul (2015), CSR within the cannabis sector is utilized to convey the medicinal benefits of the product for specific diseases.

### **Section 3: Legitimacy theory**

The demand for corporate transparency has increased in recent decades in terms of financial performance and social and environmental performance (Tsang et al., 2023). Firms in all industries, including the “controversial industry “ of which cannabis firms are a part, may recognize the importance of CSR reporting in their corporate strategy. CSR reporting is even more at the forefront in controversial industries or firms such as the alcohol, tobacco, or marijuana sectors (e.g., Byrd et al., 2017). The social and environmental impact issues are expected to be important in the cannabis industry, which could drive those firms to address new concerns, increase awareness of being socially responsible, and improve their CSR positions.

To analyze firms' CSR behavior, previous studies ( e.g., Dhandhanian and O'Higgins, 2021; Du and Vieira, 2012; Kaupke & Knyphausen, 2023; Palazzo & Richter, 2005) found that applying legitimacy theory is essential and crucial to understanding this phenomenon. Academics have thoroughly examined the conceptual range of legitimacy; according to Deephouse and Suchman (2008), legitimacy is a dichotomy concept; an organization is either legitimate or illegitimate. Deephouse et al. 2017, reviewed and reframed the definition of legitimacy into a more nuanced, quasi-continuous framework and argued that “ Organizational legitimacy is the perceived appropriateness of an organization to a social system in terms of rules, values, norms, and definitions.”( page 9). Deephouse et al. 2017, argue that an organization is categorized into four fundamental states of organization legitimacy that reflect the degree to which stakeholders view the organization as accepted, proper, debated, and illegitimate.

The “Accepted” have not been criticized or evaluated; their legitimacy is assumed and unquestioned. The “Proper” has been evaluated and has successfully satisfied the criteria; however, it is not as profoundly accepted. The “Debated” legitimacy refers to a conflict among stakeholders and disputes about its legitimacy. The “illegitimate” organization is deemed inappropriate by stakeholders and needs radical reform or cease to exist. Consequently, legitimacy matters for organizations, particularly in social and economic exchange, as it affects survival (Deephouse et al., 2017). Since legitimacy is conferred by sources using routines, internal and external stakeholders who observe organizations and evaluate the organization's legitimacy will engage only with legitimate organizations and refuse to engage with illegitimate and debate organizations. The acceptance or withholding of the organization by its

stakeholders also affects the organization's financial performance, not only survival and market access (Deephouse et al., 2017).

Previous studies have debated how legitimacy is judged (Reast et al., 2012; Suddaby et al., 2017; Dhandhanian & O'Higgins, 2022). Four key groups control this decision: the public, the media, the financial community, and the state. Although formal entities, like state regulators, are significant in confirming legitimacy, informal entities, such as public opinion and media, the financial community, are gaining broader recognition in determining organization legitimacy by accepting or refusing (Tilling & Tilt, 2010; Dhandhanian & O'Higgins, 2022).

Deephouse et al., 2017 propose four essential outcomes to assess legitimacy: regulatory, pragmatic, moral, and cultural cognitive that are not entirely distinct and separate. The gain of regulator legitimacy is when the organization applies and meets standards, maintains this legitimacy by satisfying routine monitoring, and complies with the regulation. Organizations gain pragmatic legitimacy when they demonstrate adequate measurable performance that meets stakeholder expectations and maintain it when they avoid poor measurable performance. The organization gains moral legitimacy when the show fits with social values and can maintain it when it does not violate social values. Cultural and cognitive legitimacy is when organizations conform to meaning systems and maintain them when they do not violate the meaning system. Moreover, the concept of legitimacy changes over time, and this evaluation continues; organizations may posit different situations, including gaining, maintaining, or defending legitimacy. According to Suchman, M. C. (1995), legitimacy is not universally agreed; instead, it is dynamic. The organization may posit a situation of contested legitimacy, particularly in an industry with a dual reputation, as the organization faces conflicting expectations from various stakeholders to maintain or restore legitimacy (Deephouse et al., 2017).

## **Section 4: Sample selection and methodology**

### **Sample selection :**

Cannabis firms were retrieved from this website: <http://www.cannabismarketcap.io/>. On March 2023. The initial sample consisted of 168 cannabis companies listed in Canada and the US, which were either Cannabis firms with pharmaceutical use, Recreational for adult use, or Pharmaceutical and recreational use. This study focuses on the Canadian context since legalization has been implemented nationwide. More specifically, it explores the CSR reporting on Canadian cannabis firms with a dual reputation in the first year of the extension to

recreational after the legalization. To do so, I excluded 99 firms that are from the United States (US) since, in the US, the use of recreational cannabis for adult use is still not legalized in the whole country, but in some regions. Of the remaining 76 firms in Canada, consisting of 61 Canadian cannabis firms entering in pharmaceutical use or recreational adult use, only 15 firms have dual reputations because they extend part of their production from pharmaceutical to recreational. This study explores how pharmaceutical firms extended recreational reports of their CSR activities by reading their CEO letters and annual reports (including the annual information form) to find the exact extension date (Year of Extend). After excluding 9 firms with missing annual reports, the final sample comprised 6 Canadian cannabis firms that included the CEO letter in their annual report. Since firms do not provide CSR reports, the analysis was based on all sentences related to CSR topics and organized into the developed nodes by Dhandhanian and O'Higgins, 2022. I selected the statement from the CEO for analysis since, as a public personality of the firms, they may provide claims about CSR activities and legitimize the company's sustainability initiative.

**Table 1: Sample selection**

<b>Sample</b>	<b>Number of firms</b>
Cannabis firms	168
Excluding U.S. firms	92
Excluding Canadian firms that are either pharmaceutical or recreational	61
Exclude firms that extend from pharmaceutical to recreational with missing annual reports during the year of the extension.	9
Firms that extend from pharmaceutical to recreational and have published an annual report in the year of expansion	6

## **Methodology:**

In order to address the first research question, how do Canadian cannabis firms entering controversial industries communicate their CSR initiative? This study is based on content analysis developed by (Dhandhanian & O'Higgins, 2022), "a technique for gathering data that consists of codifying qualitative information in anecdotal and literary form into categories to derive quantitative scales of varying levels of complexity" (Abbot & Monsen, 1979, p. 504). This method provides valuable insight into understanding social and environmental disclosures, as it helps to evaluate CSR disclosures using content analysis textual data that emphasizes systematic coding through developed nodes (Dhandhanian & O'Higgins, 2022). The coding consists of manually reading the firm reports word by word, which helps to concertize qualitative information into measurable detection units by surfacing codes/themes. An analytical process, such as a coding framework, strengthens the study's validity (Dhandhanian & O'Higgins, 2022).

Two types of content analysis were used to reply to the first research question: conventional and summative:

The first type of content analysis is the Conventional content analysis, which is inductive, based on the provided text, and the categories themselves are not driven by any preconceived theory but are based directly on the text, emerging spontaneously as analysis proceeds (Konracki & Wellman, 2002). Previous studies examined the CSR communication in the CEO letter and found that CEOs highlight environmental capital as a significant factor in firm value creation (Albertini et al., 2021); the CSR message on social dimensions provided in the CEO letter has impact on on firm investment decision (De Miguel-Molina et al., 2019), whereas Barkemeyer et al. (2014) found that CEO message on CSR lacks accountability for CSR performance, making the CEO letter primarily a tool for legitimization. Therefore, the conventional content analysis begins by reading the CEO's letter; according to Moreno & Casasola, 2016 The CEO's letter is on the first pages of the annual reports outlining the firm's strategies, values, and key accomplishments from the previous financial year. Then, read the annual report to identify the CSR section and the presence of the different thematic (nodes) developed and created by a previous study by Dhandhanian and O'Higgins, 2022; the template followed the Global Reporting Initiative (GRI) standards for reporting in different impact areas, economic, environmental, and social. The nodes represent leading entities usually found in CSR reports (e.g., consumer interests, employee concerns, and stakeholder orientation...) and address

issues such as regulatory obstacles, CSR initiatives, failures, and sustainability goals for the future.

The firm's content analysis of the CSR section mentioned in the CEO's letter and annual report is based on identifying the presence of the 15 nodes developed by Dhandhanian et al., 2021. The following list of nodes

- (1) "Actions and Steps Taken" are the CSR initiatives or activities undertaken by the firm.
- (2) "Attitude towards CSR" is the positive attitude toward CSR ideas and practices undertaken by the firm.
- (3) "Attitude to Technology" is a firm effort toward adopting advanced and eco-friendly technology in CSR initiatives or activities.
- (4) "Awards and Accreditation", are the awards, credits, and recognition the firm has received for its CSR activities.
- (5) "Background Information", is the general background information about the firm provided in the report.
- (6) "Challenges Faced", are the challenges the firm has faced or is facing, including economic, environmental, operational, and socio-cultural challenges.
- (7) "Consumer Orientation" is the importance and constructive attitude of the firm towards its consumers"
- (8) "CSR Strategy" is the firm's CSR program.
- (9) "Employee Orientation" is the progress and development of employee well-being as important firm stakeholders.
- (10) "Failures and Self-criticism" is the firm's acknowledgment of its flaws and failures as a CSR actor.
- (11) "Governmental and Other Organisational References" in compliance with policies and initiatives from the Government and independent organizations, such as NGOs.
- (12) "Past Achievements" are the previous achievements of CSR goals and sustainable actions.
- (13) "Set Standards and Values" are the statements of standards, beliefs, values, and rules the firm aims to abide by in all its programs and strategies.

(14) “Stakeholder Orientation” is the attitude and orientation of a firm goals toward its stakeholders as important interest-holders.

(15) “Sustainability Goals” are the firm CSR goals.

The second type of content analysis is summative, which usually quantifies the texts identified and counted words using direct and objective comparison to categorize and interpret complex contexts (Holsti, 1969). More than just word frequency, summative content analysis usually helps understand how specific terms are used (Holsti, 1969). A word frequency analysis using NVivo 12 software was utilized for the summative content analysis. Similarly, I have analyzed the words in the CEO letter, annual reports, and the most frequently used terms since the CEO letter presents the image firms want to create and is rich in information that presents the firm voice addresses ongoing issues and has the power to influence business society (Arvidsson, 2022). Furthermore, the frequency of these words offered an overview of which issues were deemed most important by the firm. These analyses together provide a view of CSR practices and actions by each firm, helping to understand what firms do to gain and maintain their legitimacy.

After understanding how Canadian cannabis firms entering the controversial industries communicate their CSR initiative, I used the media-generated news on CSR about those firms as the context to understand whether CSR reporting helps gain and maintain legitimacy to secure societal approval or serves as a mechanism for corporate self-legitimate. Then, I compare the CSR message provided in the CEO letter and annual report with what the media reported about those firms in the context of CSR, which presents the actual context of behavior to answer the second research question. This comparison was needed as it is suspected that firms adjust their reporting to appear more legitimate in the eyes of the public. Moreover, the media can be an adequate mirror of the predominant contemporary public conversation (Suddaby et al., 2017), and this was a second aspect of the study; by gathering all the available news data from the Factiva database, related to CSR as defined by the Factiva database as “socially responsible business practices, wherein companies strive for commercial success in ways that respect human rights, ethical values and communities through product and operations design, social and charitable work, donations or ethical investing. This includes socially irresponsible business practices and corporate negative social impact.” by manually reading word by word all the available media news with a total of 175 news articles. I distinguish between the media-generated news and firms-generated news issued by the corporation as press

releases; I take off the 120 press releases issued by the firms keeping only the media-generated news on the national and international levels, which present the measure of the actual behaviors on CSR of those firms, I end up with 55 media-generated news.

## **Section 5: Results analysis**

### **Conventional content analysis result:**

Table 2 presents the findings of the result of the Conventional content analysis by identifying the presence of 15 nodes related to CSR messaging within the CEO's letters across the six firms: Aleafia Health Inc., Aphria Inc, Aurora Cannabis Inc., CannTrust Holdings Inc., HEXO Corp, and Neptune Wellness. The CEO is the firm's voice, and his (all CEOs were men) letter is a message about what firms are doing to rightly position themselves as socially responsible firms (Dhandhanian & O'Higgins, 2022).

The first node about the CSR actions and steps undertaken by the firm was presented in all six firms' CEO's letters, where they claimed their commitment. Aphria Inc. and Aleafia Health Inc, CEO's letters frequently discuss tangible steps taken towards sustainability; for example, Aphria Inc.'s CEO letter highlights community, corporate-created actions focused on responsibility and best behavior, which are considered critical behaviors in the Aphria corporate heart. The main initiative is the launch of a new community platform called "**Plant Positivity**," designed to promote awareness of the benefits of plants for well-being and access to more green spaces in communities. This shows in the CEO letter how Aphria is dedicated to building social and environmental impact. Moreover, Aphria has partnered with the national not-for-profit Evergreen states to build six new garden spaces for Evergreen Brick Works in Toronto as part of their ongoing collaborative initiative to show their efforts in supporting and providing for community environment prominence agenda. It also cooperates with organizations such as Drug-Free Kids Canada to maintain its commitment to responsible use and community safety through education. The CEO letter was rich in information about the actions and steps undertaken to appear more transparent about the firm's CSR activities.

The second node of "Attitude towards CSR" represents the degree of commitment and belief firms adopt in their CSR practices; this node presents 5 CEOs' letters. One letter among the six CEOs letters has no message of "Attitude toward CSR," all the other CEOs expressed positive attitudes toward CSR in their letter. The finding indicates that CEOs as management teams are becoming more conscious of the importance of CSR initiatives. For example,

Aurora's CEO letter emphasizes the importance of CSR and sustainability integrated into their activity and strategy, "***Aurora's dedication to corporate social responsibility and sustainability lies within everything we do, and our mission expands beyond cannabis production.***" It highlights the need for consideration of CSR as a part of their philosophy around business. It implies CEOs' commitment to CSR and the awareness of broader society.

The third node about an attitude toward technology was present in all CEO's letters, where they claim that adopting advanced and eco-friendly technology is portrayed as necessary in a firm's efforts toward CSR. For example, Neptune's CEO letter claims, "***At Neptune Wellness Solutions, we are on a mission to change consumption behavior through environmentally friendly and innovative products that positively impact the world so you can live longer and feel better.***". The CEO discloses the use of technology and science to create sustainable solutions that promote a planet-based healthy living lifestyle. The CEO highlights the firm's use of technology in this way, highlighting it as a tool to fulfill the CSR mission.

Regarding the fourth node awards and accreditation, which show the awards, credits, and recognition the firm has received for its CSR activities, there were only in four CEOs' letters where they disclosed their achievements. For example, Aleafia CEO's letter states, "***The facility has been purpose-built to meet EU-GMP certification requirements.***". The CEO emphasized using the European Union Good Manufacturing Practice certificate and how it is essential for firms that intend to export or implement medical and pharmaceutical products in the European markets. This enhances the firm's credibility and expands its access to an open market, increasing its global competitiveness.

The fifth node about how firms share information on their background in analyzing the strategic context revealed in CEO letters was present only in 5 firms. Information of this kind helps the stakeholders understand the foundation and background of a business. For example, in HEXO's CEO letter, the CEO provides historical context by stating, "***We have been cultivating cannabis for four years under the ACMPR regulatory regime, growing and producing high-quality cannabis with consistent yields.***".

Node number 6, Challenges Faced, signals disclosures in which firms describe the challenges faced, mainly regarding their CSR activities, which were present in all 6 firms. This node elaborates and classifies economic, environmental, operational, and social/cultural related issues. All six CEOs' letters disclosed the difficulties associated with this, so there is a shared acknowledgment of the faced challenge. Aphria Inc.'s CEO reveals something about its

environmental challenge, ‘*We are committed to ensuring that our actions will have a positive impact on the environment.*’ Aurora CEO, for example, discloses the social culture challenge faced by stating, ‘*We are learning more about how different cannabinoids interact in our bodies and how we can optimize the benefits that they can provide.*’ it shows how the CEO is accountable and commitment to share their failure to their stakeholders.

Node number 7 about Consumer Orientation indicates the policies and attitudes of firms about how valuable they believe their consumers are. This node shows how firms shape what they do and how to implement practice strategies in alignment with consumer needs while building relationships. In this analysis, the CEO’s letters from all the firms studied included disclosures about consumer orientation. For example, Neptune Wellness CEO's message claims, ‘*Our vision is to provide better-for-you and better-for-the-planet products to consumers.*’ The same HEXO CEO's letter discloses that ‘*HEXO offers 15 dried marijuana products priced between \$3 and \$15 a gram. Each product is carefully selected to treat symptoms universally reported by patients and meet the needs of adult consumers.*’ Also disclose, ‘*Our strategy focuses on creating products that meet the full range of customer preferences using data-driven knowledge of customer preferences.*’ This disclosure by the CEO of consumer policies constitutes an essential component of the firm management communication strategy, underlining the degree of importance associated with customer relationships with the firm and thus appearing to be more committed to providing higher satisfaction and service.

Node 8 about CSR Strategy refers to disclosures on firms' CSR programs, plans, goals, and methodologies to integrate CSR. The six CEOs' emphasize their commitments in the CEO’s letter. For example, Aphria CEO communicates its commitment to accountability and transparency in CSR reporting about the firm CSR initiative through the statement: ‘*We are committed to being accountable for our actions and will report on the Company’s social, environmental, and governance initiatives at the end of this fiscal year.*’ This strategy shows Aphria's management team's initiative for continuous improvement, stakeholder engagement, and public communication of its CSR initiatives. Aurora’s CEO letter discloses several messages that reflect their CSR strategy: ‘*Aurora’s dedication to corporate social responsibility and sustainability lies within everything we do, and our mission expands beyond cannabis production.*’ This means their CSR strategy is integrated into daily business functions. Also disclosed, ‘*Aurora is setting the standard for social responsibility by driving positive social impact across the world.*’ This indicates a strategic of positioning and willingness to be an example and influence broader industry practices. The CEO emphasizes

the global impact by disclosing, ***“As our company grows globally and this newly regulated industry evolves, Aurora is setting the standard for social responsibility by driving positive social impact across the world,”*** highlighting its initiative to enhance CSR efforts.

Node 9, Employee Orientation, highlights how firms prioritize and communicate their employees' well-being, development, and safety as essential stakeholders. This node captures references in CEO's letters that emphasize the importance of employees and the policy that supports their well-being and engagement. To do so, only five CEOs disclose their interest in employee orientation in their letter. For example, Aphria highlights the importance of employee safety and well-being: ***“Protecting the safety of our employees, our patients, our consumers, and our society is of utmost importance.”*** This disclosure reflects a commitment to Aphria's responsibility for protecting and considering their employee's safety. Aurora's CEO similarly emphasizes the value of its employees as critical stakeholders through the statement: ***“Everyone at Aurora works towards this goal every day. Nothing less will do for our customers, our patients, our employees, and our shareholders.”*** This statement highlights that employee contributions are crucial to achieving the firm's CSR objectives.

Node number 10, Failures and Self-criticism, refers to the firm acknowledging its challenges or areas for improvement in CSR. Only four CEOs disclose; here is an example from Aphria Inc., where they admit some things that have gone wrong. Aphria's statement, ***“The challenges faced by all is not lost on us. We listened, we heard, and we took immediate action”***. It creates a picture of a responsible firm, which is perceived well by stakeholders who support transparency and efforts to improve CSR practices continually.

Node 11, Governmental and Other Organisational References refers to the firm alignment with government regulations, policy compliance, or partnerships with independent organizations such as NGOs. For example, Aurora's CEO states, ***“Aurora's hard-earned reputation for best-in-class quality, product consistency, and regulatory compliance has allowed us to build trusted relationships with governments around the world.”*** This means the firm complies with the regulation. Aurora has built several relationships with governments globally, which the firm points to reinforcing its relationships within international regulations and guidelines. Similarly, the HEXO CEO's letter notes, ***“Our commitment to quality and safety is supported by our compliance with Health Canada's stringent quality control requirements.”*** This statement values the firm's management team's commitment to comply with high national standards regarding quality and safety.

Node 12, Past Achievements, highlights any previous achievements in CSR initiatives or sustainable actions that firms achieved and disclosed to highlight their commitment and success in implementing CSR. These achievements help to reinforce a firm's credibility and progress in its CSR journey. For example, Aphria CEO states, ***“We were granted the maximum number of lots within the German tender process, a total of five, and are the only licensed producer in Germany with the permission to grow all three strains of medical cannabis approved by the German Authority.”*** Another example of Neptune Wellness CEO message disclosed, ***“Despite the COVID-19 pandemic, we still delivered significant top-line growth by developing new products and acquiring a controlling interest in Sprout Foods, which allowed us to enter new product categories and geographic markets.”*** This statement highlights Neptune's resilience and strategic initiatives during a challenging period. Neptune demonstrates adaptability and innovation by maintaining growth and expanding into new product categories and markets. These actions align with CSR's commitment to diverse stakeholders.

Node number 13, Set Standards and Values, captures statements in which firms outline their core beliefs, values, and rules that inform their strategies and overall approach to business. This type of disclosure reflects a firm's ethical framework and cultural foundation, emphasizing the standards it builds to maintain its identity. For example, Aleafia Health CEO states, ***“We have the vision, which has been very clear from day one, to be the leader in cannabis health and wellness. That remains true today.”*** The announcement reflects the firm's management team's continued focus on being at the core of health and wellness within cannabis.

Node number 14, "Stakeholder Orientation," highlights a firm's commitment and strategy to meet the needs and expectations of its stakeholders. For example, Aurora CEO disclosed its dedication to stakeholder orientation with the statement: ***“Everyone at Aurora works towards this goal every day. Nothing less will do for our customers, our patients, our employees, and our shareholders.”*** This reflects Aurora's approach to stakeholder engagement, emphasizing that the firm's goals are designed to consider all key stakeholders as integral to the firm's mission and daily operations.

Node number 15, "Sustainability Goals," highlights statements where the firm outlines its aims and strategic vision for sustainability. This node reflects firms' goals to integrate environmentally and socially responsible practices into their activities, ensuring long-term positive impacts for the company and its broader stakeholders. For example, Aphria CEO

message disclosed, “*With a vision of social impact for communities and individuals, we launched Plant Positivity,*” which clearly emphasizes its sustainability goal, community focus, and social impact. The launch of *Plant Positivity* indicates how Aphria’s management teams are aware of the CSR approach to increasing environmental awareness and enhancing access to green spaces.

**Table 2: Coding reference of CEO's letter**

Nodes: CEO's Letter	Aleafia Health Inc	Aphria Inc	Aurora Cannabis Inc	CannTrust Holdings Inc	HEXO Corp	Neptune Wellness
Actions or steps taken	4	5	3	3	2	1
Attitude towards CSR	2	3	3	2	2	0
Attitude towards technology	2	2	3	2	1	2
Awards and accreditation	2	0	1	1	1	0
Background information	2	3	1	2	3	0
Challenges faced	2	4	3	2	2	1
Consumer orientation	1	2	3	2	3	1
CSR Strategy	1	2	3	2	1	1
Employee orientation	1	2	1	1	2	0
Failures and self-criticism	1	1	0	1	1	0
Governmental and other organizational	1	2	2	2	2	0
Past achievements	2	2	2	1	2	1
Set standards and values	1	2	3	2	2	0
Stakeholder orientation	1	2	2	2	2	1
Sustainability goals	2	2	1	1	3	3

Table 3 presents the analysis of the annual reports which confirms that the findings are consistent with those observed in the CEO letters, highlighting a common approach in how firms communicate their commitment to CSR. The annual reports strongly emphasize the presence of four key nodes: Sustainability Goals, CSR Strategy, Steps Taken, and Attitude toward Technology. This emphasizes that these areas are deeply integrated into the firms' operations and strategic frameworks to be accountable and gain social operation license and stakeholders' trust.

The six firms provide their CSR commitment and initiatives. By looking at the presence of the 15 nodes analyzed in the CEO letters and the annual report, each node explains how these firms share their values, goals, challenges, and successes with stakeholders. These nodes collectively signal that the firms analyzed understand CSR and sustainability should be integrated at the core of a corporate strategy.

**Table 3: Coding reference of an annual report**

Nodes: Annual report	Aleafia Health Inc	Aphria	Aurora Cannabis Inc	CannTrust Holdings Inc	HEXO Corp	Neptune Wellness
Actions or steps taken	3	5	2	6	5	6
Attitude towards CSR	2	2	1	3	2	2
Attitude towards technology	1	3	2	5	4	3
Awards and accreditation	1	2	2	0	2	2
Background information	2	2	1	3	3	2
Challenges faced	0	2	5	0	2	1
Consumer orientation	3	2	1	2	3	3
CSR Strategy	1	2	1	4	3	3
Employee orientation	0	2	1	0	2	1
Failures and self-criticism	0	0	1	0	1	1
Governmental and other organizational	2	2	1	0	2	2
Past achievements	1	2	0	1	3	1
Set standards and values	2	3	1	3	2	2
Stakeholder orientation	1	2	1	3	2	1
Sustainability goals	1	3	3	4	3	5

## Summative content analysis result:

Table 4 shows the results of the word frequency count in the CEO letter and annual report for the Canadian cannabis firms. The ten most frequent words are presented in the Table. The count denotes the frequency of the word and the weighted percentage calculated for the word concerning the other words in the text, expressing the importance of that particular word in the entire report.

The second step of the analysis is the word frequency, which shows the top 10 words used by the firm to influence the reader through the repetition of these words. The words ‘‘company’’ and ‘‘cannabis’’ are used mainly by the six firms, reinforcing their identity and operations within the cannabis sector. Aleafia Health positions itself differently within the industry by using the words ‘‘Wellness’’ and ‘‘Health.’’ to attract attention to the health-related initiative and give the impression of a committed CSR program. In contrast, Aphria and Cannttrust focus more on financial metrics and corporate structure. Aurora and Neptune are on similar tracks for strategy and financial-oriented words. In further analyses, the use of the word Marijuana was always missing; this reflects how the firm tried to present itself as a pharmaceutical use to avoid the stigma around its legitimacy.

**Table 4: Word frequency by Nvivo12 software**

Aleafia Health Inc			Aphria			Aurora Cannabis Inc		
Word	Count	Weight	Word	Count	Weight	Word	Count	Weight
Cannabis	25	3.08	Company	1106	3.1	Cannabis	726	1.44
Health	23	2.83	Cannabis	427	1.2	Company	687	1.36
Aleafia	15	1.85	Financial	270	0.76	Million	495	0.98
Report	11	1.35	Value	217	0.61	Aurora	432	0.85
Welness	11	1.35	Assets	215	0.6	Value	407	0.8
Annual	9	1.11	Share	208	0.58	Financial	377	0.75
Medical	8	0.99	Shares	196	0.55	Assests	283	0.56
Revenue	8	0.99	Operations	178	0.5	Share	266	0.53
Director	6	0.74	cost	172	0.48	Shares	249	0.49
Facility	6	0.74	Aphria	161	0.45	ended	230	0.45

CannTrust Holdings Inc			HEXO Corp			Neptune Wellness		
Word	Count	Weight	Word	Count	Weight	Word	Count	Weight
Company	444	1.92	Company	289	1.09	Million	244	1.08
December	282	1.22	Cannabis	205	0.77	Neptune	214	0.95
Cannabis	193	0.84	Value	200	0.75	Products	202	0.9
Financial	192	0.83	Financial	174	0.65	Financial	197	0.87
CannTrust	179	0.78	Warrants	149	0.56	March	176	0.78
Assets	166	0.72	Price	148	0.56	Company	162	0.72
Value	163	0.71	Assets	134	0.5	Corporation	157	0.7
Share	147	0.64	Future	125	0.47	Cannabis	143	0.63
Ended	134	0.58	Market	109	0.41	Ended	142	0.63
Statemnets	133	0.58	Share	108	0.41	Business	130	0.58

### **Media-generated news analysis result:**

In order to understand if the CSR messages provided in the CEO letter and the annual reports of the six analyzed firms help to gain and maintain legitimacy to secure societal approval or serve as mechanisms for corporate self-legitimation, I compare the finding of their CSR messages and the actual context of behavior reported by the media generated news. I read word by word the 55 media-generated news on CSR from the Factiva database, and I identified the four essential outcomes proposed by Deephouse et al., 2017 to assess legitimacy: regulatory, pragmatic, moral, and cultural cognitive, which are not entirely distinct and separate. These four dimensions provide insight into how firms gain and maintain legitimacy to achieve stakeholder expectations and societal alignment of their behavior. Table 5 presents the findings of the CEO letter CSR message and the annual reports CSR messages compared to the findings on media-generated news reports to understand if their behavior and practice are aligned and accepted by the broader society. The result suggests that the six firms validate their legitimacy through the four dimensions proposed by Deephouse et al., 2017.

The six firms have gained moral legitimacy through social and environmental attention, which is disclosed by their CEO in the CEO letter and their annual reports, as well as the reaction of the stakeholders reported by media-generated news. The firm discloses its efforts to support the "Do not Tax Medicine" campaign as a social commitment to society to highlight its social responsibility. It also emphasizes a commitment to impact through funding various CSR initiatives, such as donating funds to medical cannabis amnesty organizations, poverty help, wellness, safe consumption sites, and sustainability, reinforcing firms' role in meeting societal challenges. These efforts are reported positively in media coverage and supported by stakeholders as written by the news. The media generated positive news comments on those

firms and considered them as they transformed from sin stocks into environment, social, and governance (ESG) darlings. Society values such CSR initiatives and activities undertaken by those firms, such as donations and support for medical cannabis amnesty organizations, focusing on poverty, health, wellness, safe consumption, and sustainability, and this is well communicated in their corporate report by their CEO. The firm achieved the moral legitimacy of its stakeholders and gained societal acceptance as its CSR communication aligned with stakeholders' expectations.

The six firms have also reported their investment in building cognitive legitimacy by adopting innovative practices aligned with sustainability norms. The media reported positive reports about compliance with and respect for the rules and standards of those firms. Their alignment with ESG frameworks helps normalize cannabis practices, promoting a vision of sustainable and responsible industry standards. The news of media coverage reports positively on corporate growth and environmental impact initiatives, highlighting the firms' alignment with sustainable technological processes. These efforts enhance operational efficiency and contribute to the broader understanding among stakeholders of cannabis as a viable, responsible industry. By promoting cognitive legitimacy through reporting the sustainable and innovative approaches adopted, the firms build stakeholder confidence in their long-term trust.

Regarding regulatory legitimacy, firms make a significant effort to follow international standards and report about them, thus being marked and valued by media-generated news. For instance, by adhering to EU-GMP (Good Manufacturing Practice) standards, they demonstrate compliance with industry regulations. Additionally, their participation in the Global Reporting Initiative (GRI) reflects a commitment to transparency and accountability. This adherence to regulatory frameworks is essential for compliance and establishes trust with stakeholders, showing a proactive approach to maintaining industry standards. Media-generated news highlights these regulatory efforts positively as steps toward gaining credibility and earning regulatory trust in the cannabis sector. The firms succeed in reporting about their compliance and regulation in the way the stakeholders expect, and to do so, they succeed in gaining and maintaining the trust of society and different groups of stakeholders, such as regulators.

Pragmatic legitimacy is demonstrated through the firms' practical efforts to create value for stakeholders. Strategic partnerships and stakeholder engagement disclosed by the CEO and in the firm reports are emphasized in news media coverage reports, portraying the firms as entities prioritizing society's welfare. The media generated news comments positively and appreciated

those firms' partnership, stakeholder engagement, and donation for environmental causes. The six firms are accessible, responsible, and community-focused, reinforcing their pragmatic legitimacy and succeeding in gaining the social operating license.

Overall, the six firms perform efforts across all four legitimacy dimensions, although the extent of their success varies. The alignment of their disclosures and initiatives with moral, cognitive, regulatory, and pragmatic legitimacy demonstrates an essential approach to establishing themselves as reputable firms in the cannabis industry and maintaining their legitimacy. The media-generated news reports positively about their behaviors, which could affirm their alignment with stakeholder expectations and the effort to contribute to broader acceptance in the cannabis industry. However, consistent and transparent engagement across all dimensions is crucial for sustaining long-term stakeholder trust and legitimacy.

**Table 5: Firm CSR disclosures versus media coverage news reporting about the CSR behavior of the six firms**

Topic	Firm CSR message disclosures	The 55 Media generated news reports about the CSR behavior of the six firms
<b>Moral Legitimacy</b>	<ul style="list-style-type: none"> <li>- ‘Do not Tax Medicine’ campaign.</li> <li>- Improve community welfare.</li> <li>- Donating to planting trees through the firm’s partnership with One Tree Planted.</li> <li>-Commitment to patient-focused healthcare and medical cannabis care.</li> <li>-Deliver wellness through diversification.</li> </ul>	<ul style="list-style-type: none"> <li>- The transform from sin stocks into ESG darlings.</li> <li>- Donation and support for medical cannabis amnesty.</li> <li>- Focusing on poverty, health, wellness, safe consumption and sustainability.</li> </ul>
<b>Cultural/Cognitive Legitimacy</b>	<ul style="list-style-type: none"> <li>-Innovative practice aligned with sustainability norms.</li> <li>-Alignment with the regulator system.</li> </ul>	<ul style="list-style-type: none"> <li>- Alignment with ESG frameworks to normalize cannabis practice.</li> <li>-Focus on corporate growth and environmental impact initiatives.</li> <li>- Sustainable technological processes.</li> </ul>
<b>Regulatory Context</b>	<ul style="list-style-type: none"> <li>-The adherence to EU-GMP standards.</li> <li>-Joined the Global Reporting Initiative (GRI).</li> </ul>	<ul style="list-style-type: none"> <li>-Industry efforts to earn regulatory trust.</li> </ul>
<b>Pragmatic Legitimacy</b>	<ul style="list-style-type: none"> <li>-Expanding access to medical cannabis through strategic partnerships with private payers.</li> <li>- Support for rainwater collection for sustainability.</li> </ul>	<ul style="list-style-type: none"> <li>-Partnership and stakeholder engagement.</li> <li>-Donation for environmental causes.</li> </ul>

## **Section 6: Discussion and conclusion**

This study explores how the Canadian cannabis sector uses CSR messages in its corporate reporting to gain and maintain legitimacy. The findings are discussed in the context of legitimacy based on four fundamental assessments: “Accepted”, “Proper”, “Debated”, and “Illegitimate”. This study shows that firms gain Proper legitimacy through CSR reporting, which should be interpreted the most as "legitimacy-as-perception," which means firms are attempting to change specific "evaluators" perceptions of themselves and thus become positively evaluated in terms of legitimacy (Suddaby et al., 2017).

Regulators and consumers are the most important stakeholders for firms in controversial industries. Public opinion plays an important role in influencing the legitimacy of firms in controversial industries, which is the key to persuading the community and getting accepted by those stakeholders favorably. The findings show that the CSR message from the Canadian cannabis sector tends to influence the policy and regulations, gain stakeholder support, and secure approval for financial furnishing. Their reporting highlights what they do well to portray themselves positively by participating in NGOs, charitable programs, Kids support, initiatives towards environmental impacts, and other CSR initiatives designed to distract attention away from the harmful reputation. In their reporting, the Canadian cannabis sector tends to disclose more positive initiatives and avoid reporting about the environmental and social risks that could harm their reputation. This way of disclosure is consistent with the findings of previous studies that environmental disclosures made in annual reports are typically designed to portray the firm positively (O'Donovan, 2002; Dhandhanian & O'Higgins, 2021).

My findings on the CSR practices of Canadian cannabis firms align with the tobacco industry's CSR practices (Dhandhanian & O'Higgins, 2021). Cannabis firms exploit CSR initiatives as marketing tools that serve to entice consumers and stakeholders, foster consumption, open new markets, and legitimize their harmful products by focusing on the benefit of pharmaceutical use. Moreover, they avoid the use of the word marijuana and focus on medical or wellness; this approach of putting cannabis on a path through pharmaceuticalization may help in the normalization and commercialization of cannabis as a wellness or medical treatment, enabling further markets for increasing consumption and profits for the cannabis industry. My finding aligns with a previous study (Ben Yousef and Arroyo Pardo, 2024.). Cannabis firms then use donations and partnerships with advocacy organizations to build a reputation, essentially the

same efforts seen used by tobacco companies targeting similar groups (Dhandhanian & O'Higgins, 2021)

This study has three main contributions to the growing literature on cannabis firms. It contributes to CSR research on Canadian cannabis industries (Ju et al., 2021; Ben Youssef & Arroyo Pardo, 2024); as the former literature primarily focuses on social media, this study focuses on the CSR message addressed in their annual reports. It contributes to the literature on CSR disclosures in industries with dual reputations, as in the case of pharmaceuticals cannabis, where such firms face the challenge of protecting their reputation from damage versus promoting the benefits resulting from their activities, highlighting their socially responsible activities (Ben Youssef & Arroyo Pardo, 2024). While there are potential benefits to be gained, such as chronic pain alleviation, there is also a risk associated with other areas, such as memory loss or addiction (Acuti et al., 2024). It also contributes to the literature on CEO letters communication about CSR and how it shapes the CSR discourse when social norms, values, and societal expectations are present (Arvidsson, 2022), and how it influences the legitimacy and stakeholder approval,

By exploring the CSR message reported by Canadian cannabis firms, this study has both theoretical and practical implications. By implying the legitimacy theory, I contribute to the literature on CSR disclosure in a new institutional context and industry (Dhandhanian & O'Higgins, 2021). Also, this study has practical implications. Understanding the way Canadian cannabis firms report their CSR to gain legitimacy and mitigate the harm that could cause the firm operating in controversial industries.

This study addresses limits by focusing on one year of extended and firm reports. Future studies may evaluate the years later since legitimacy is unstable and could change over time. Also, future studies may consider the effects of social drivers such as the institutional environment when the firm operates and evaluate CSR perception as enhanced by a firm's mission, vision, and employee values; different methods, such as interviews, focus groups, or employee surveys, could obtain richer data closely connected with broader contextual factors affecting CSR initiatives in the organizational and social domains.

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