Corporate Social Responsibility and Environmental Management

WILEY

Corporate Social Responsibility and Environmental Management

RESEARCH ARTICLE OPEN ACCESS

Corporate Social Responsibility (CSR) Decoupling and Tax Avoidance: Symbolic Use of Sustainable Boards in the European Union?

Patrick Velte

Leuphana University Lüneburg, Institute of Management, Accounting & Finance, School of Management & Technology, Lüneburg, Germany

Correspondence: Patrick Velte (patrick.velte@leuphana.de)

Received: 7 January 2025 | **Revised:** 25 February 2025 | **Accepted:** 2 March 2025

Keywords: CSR decoupling | legitimacy theory | sustainability-related executive compensation | sustainable board | sustainable board committee | tax avoidance

ABSTRACT

This study explores the relationship between corporate social responsibility (CSR) decoupling and tax avoidance, as well as the moderating effect of sustainable boards on this relationship. Based on agency and legitimacy theories, we used panel data of listed firms headquartered in the European Union (2076 firm-year observations) in the 2017–2022 fiscal period. In line with the theoretical framework and based on several regression analyses, we found that CSR decoupling and tax avoidance were significantly positively related. In line with the assumption of a symbolic, sustainable boards strengthen this relationship. The results remained consistent following several robustness tests and endogeneity checks. The study mainly contributes to the literature by raising awareness about the relationship between CSR and tax avoidance. To the best of our knowledge, this is the first empirical study on the link between CSR decoupling and tax avoidance and the moderating effect of sustainable boards. Future research should determine the impact of the sub-pillars of CSR decoupling and evaluate tax disclosure in CSR reports. Corporations should promote integrated tax and sustainability management as substantive stakeholder tools.

1 | Introduction

Many researchers have examined the link between corporate social responsibility (CSR) and corporate tax avoidance in recent years and in different settings (e.g., Chandrasena et al. 2024; Sarhan 2024). Corporate tax avoidance can be defined as "anything that reduces the firm's taxes relative to its pretax income" (Dyreng et al. 2008). The effective tax rate (ETR) and book-tax-difference (BTD) are the two most prominent variables of tax avoidance in empirical research (e.g., Ling and Liu 2023). Tax avoidance refers to various strategies, regardless of how aggressive they are or their legality.

Empirical studies on the impacts of CSR performance and reporting on tax avoidance have produced heterogeneous results (e.g., Marques et al. 2024). While some studies have found a positive impact of CSR performance on tax avoidance (e.g., Garcia et al. 2024; Meniacci and Simoni 2024), others have stressed a negative relationship (e.g., Du and Li, 2024; Ortas and Gallego-Álvarez 2020). Inconclusive results are also related to the impact of CSR reporting on tax avoidance, as positive (e.g., Chandrasena et al. 2024; Lin et al. 2017) and negative results (e.g., Lanis and Richardson 2012) could be stated. CSR decoupling as a possible driver of tax avoidance has not yet been recognized. We define CSR decoupling as a discrepancy between external CSR efforts (reporting/"talk") and internal CSR actions (performance/"walk") (Sauerwald and Su 2019).

Our research topic was chosen based on the observation that most public interest entities (PIEs) have neglected integrated CSR and tax management systems in recent years (Hardeck et al. 2024). Voluntary CSR reports and related performance measures lack

comparability and reliability, as they are mostly separated from financial and tax information (Hardeck et al. 2024). The value of CSR data is lowered by information overload and greenwashing, which are aspects of CSR decoupling (Mahoney et al. 2013). Due to a restricted level of objectivity and quantification, CSR reports can be used for self-impression management to realize individual management goals (Jiang et al. 2022). Instead, CSR reports can fulfill a major signaling function for stakeholders, as top managers use them to inform the public about their CSR ambitiousness (Mahoney et al. 2013). This can lead to increases in CSR performance and overall firm reputation (Lin et al. 2017). In line with the notion that CSR decoupling is an unethical management strategy, non-shareholding stakeholders criticize the low tax payments of multinational corporations (e.g., Apple, Facebook and Starbucks) due to their extensive tax avoidance strategies (Kovermann and Velte 2019). CSR decoupling and tax avoidance contradict stakeholder demands when business strategies promote classical shareholder value and short-term financial goals (Muller and Kolk 2015). Tax payments are a significant contribution to public value creation and are thus a key element of CSR attitudes (Sarhan 2024). Consequently, CSR decoupling and tax avoidance are complementary unethical management practices.

Our study contributes to the literature on the link between CSR and tax avoidance. To the best of our knowledge, ours is the first study to analyze the effect of CSR decoupling on tax avoidance. Based on agency and legitimacy theories, CSR decoupling leads to increased information asymmetries and conflicts of interest between top management and relevant stakeholders (Mao 2019). However, as stakeholders cannot fully analyze the degree of CSR decoupling, increased stakeholder attraction to the positive tone of CSR reports could be the consequence (Donkor et al. 2022). Top managers may hide their unethical CSR and tax behavior by presenting a positive corporate image without achieving proper CSR performance or making adequate tax payments (Jiang et al. 2022). Moreover, as stakeholders cannot analyze the link between CSR and tax strategies in detail, management incentives to realize an increased degree of CSR decoupling *and* tax avoidance are relatively high (Lanis and Richardson 2012). CSR decoupling relates to the symbolic use of CSR to reach legitimacy (Velte 2023a). In line with this, tax avoidance may be attractive to unethical managers aiming to increase short-term financial performance and shareholder attraction (Kovermann and Velte 2021) while neglecting other stakeholder interests.

In line with CSR reporting, the (voluntary) implementation of sustainable board attributes (e.g., the implementation of sustainable board committees) is a common business practice for obtaining legitimacy and stakeholder trust (e.g., Chandrasena et al. 2024). However, as stakeholders cannot properly evaluate the ambitiousness of these strategies, sustainable boards can relate to the symbolic use of CSR for self-impression management (Velte and Stawinoga 2020).

Based on agency and legitimacy theories (Ross 1973; Jensen and Meckling 1976; Shocker and Sethi 1973), we assumed that CSR decoupling and tax avoidance are *positively* correlated in our chosen sample of EU listed firms. We were also interested in the moderating effect of sustainable boards as a potential monitoring and incentive function of sustainable corporate governance. We relied on *sustainability-related management compensation and sustainability board committees* as the most important characteristics of sustainable boards (e.g., Velte 2023b) and assumed a major moderating effect. Our analysis was based on a sample of listed firms headquartered in an EU member state (2076 firm-year observations) in the 2017–2022 fiscal period, and it shows that CSR decoupling and tax avoidance are positively correlated. Based on legitimacy theory and self-impression management, sustainable boards, as a symbolic management tool, strengthen this positive link. Our results remained consistent following several robustness tests and endogeneity checks. Our results have implications for business practices, regulators, and research based on future challenges in CSR and tax regulations for European listed firms. The connections between CSR decoupling, tax avoidance, and sustainable boards should be recognized in future discussions to increase our knowledge of this topic.

We justify this study's empirical focus on the *European* capital market as follows: Based on the EU Non-Financial Reporting Directive (NFRD) of 2014, big PIEs must publish a non-financial declaration, which started in the 2017 fiscal year. The EU Taxonomy Regulation 2020, as a milestone of the ambitious EU Green Deal project, requires these firms to classify whether business activities relate to six environmental goals and include environmental performance indicators in the non-financial declaration. The EU Directive on Corporate Sustainability Reporting (CSRD) of 2022 stipulates that listed firms and large non-listed corporations must publish sustainability reports. These EU regulations should lead to better CSR reports and performance measures. Another EU directive is linked to mandatory country-by-country reporting for specific multinational PIEs starting in 2026 as a reform measure to increase tax transparency. The additional qualitative tax reporting elements of the Global Reporting Initiative (GRI) Standard No. 207 as a best practice for voluntary CSR reporting have not yet been addressed in any EU regulation. Moreover, while sustainability-related management compensation and sustainable board expertise are not mandatory for European firms, they are a best practice through which PIEs can gain legitimacy (e.g., Velte 2023b). Consequently, empirical research on CSR decoupling, tax avoidance, and sustainable boards in the EU capital market is most relevant.

This study is structured as follows: First, we present agency and legitimacy theories, a literature review on the link between CSR, tax avoidance, and board attributes, and our two hypotheses. Next, we describe the data and methodology used in the empirical analysis, including the sample selection process, the main variables, and our regression models. We then present the results of the correlation, regression, robustness, and endogeneity analyses. Finally, we present our conclusions and discuss the implications of the results and limitations of the study.

2 | Theoretical Framework, Literature Review, and Hypotheses

2.1 | Hypothesis 1: The Positive Relationship Between CSR Decoupling and Tax Avoidance

In what follows, we develop our first hypothesis, which assumes a positive link between the degree of CSR decoupling and tax avoidance. From a *theoretical* perspective, the relationship

between CSR outputs and tax avoidance is complex (Kovermann and Velte 2021). We follow prior reviews on this topic in using *principal agent theory* to highlight the positive link between the CSR outputs and tax avoidance (e.g., Krieg and Li 2021). According to principal agent theory (Ross 1973; Jensen and Meckling 1976) and the so-called "moral licensing hypothesis," top managers intend to receive a license from something good they have done. CSR activities, such as CSR performance and reporting, may hide the opportunistic behavior of executive directors, leading to higher levels of tax avoidance (Krieg and Li 2021). In this context, CSR decoupling, which refers to a mismatch between CSR reporting and performance, is a tool for self-impression management without any substantial sustainable management goals (Kovermann and Velte 2021). This behavior leads to increased risks of information overload and opportunistic management behavior (Mahoney et al. 2013). As CSR reporting and related performance metrics are linked to restricted comparability and objectivity, intensive agency problems may arise (Ross 1973; Jensen and Meckling 1976). Except for GRI 207, a voluntary CSR and tax reporting standard, CSR reports and tax information are normally disconnected, leading to a low degree of information value for stakeholders (Krieg and Li 2021). CSR reports may be used symbolically to hide unethical tax practices, leading to higher degrees of tax avoidance (Mahoney et al. 2013).

In line with agency theory, we also include *legitimacy theory* to explain a positive link between CSR decoupling and tax avoidance. Based on legitimacy theory, firms must fulfill society's values and expectations through a social contract (Shocker and Sethi 1973). Societal expectations have recently shifted (Deegan 2002) toward CSR-related issues. Firms are forced to establish solid tools through which they gain legitimacy for CSR activities (Dyllick and Muff 2016). CSR reporting is a major instrument that is used to achieve CSR-oriented legitimacy (Patten 2020) and improve CSR-related reputation. However, CSR may relate to either substantive or symbolic management behavior (Shocker and Sethi 1973). Substantive CSR management leads to a low probability of CSR decoupling, as stakeholders rely on the match between CSR reporting and related performance (Velte 2023a). However, stakeholders cannot fully judge the quality of CSR information and related performance figures (Hardeck et al. 2024). CSR reports with symbolic CSR-related activities and unbalanced descriptions of positive achievements may be the consequence of opportunistic management (Sarhan 2024). CSR decoupling is an opportunistic management behavior related to the symbolic use of CSR to influence stakeholder reactions in a positive way.

Tax avoidance also represents an unethical management strategy to achieve legitimacy in the eyes of shareholders (Kovermann and Velte 2021). The aim of tax avoidance is to pay low taxes, which can lead to increased short-term financial performance and shareholder attraction (Kovermann and Velte 2019). Managers may signal to the market that these increases in financial performance are related to their specific business successes. Finally, according to agency and legitimacy theories, CSR decoupling and tax avoidance as complementary mechanisms are *positively* related (e.g., Chandrasena et al. 2024; Lin et al. 2017).

In what follows, we provide a literature review on the link between CSR decoupling and tax avoidance and similar relationships. Prior *empirical research* has neglected the relationship between *CSR decoupling* and tax avoidance. While researchers often measure the degree of CSR decoupling as the difference between CSR reporting and performance (e.g., Velte 2023a), prior studies on CSR reporting, performance, and tax avoidance are used for our research topic. Various studies have analyzed the impact of *CSR performance* and *reporting* on tax avoidance over the last decade (e.g., Feng et al. 2024). Meta-analyses and literature reviews on this topic have produced heterogeneous results (e.g., Marques et al. 2024; Kovermann and Velte 2021). Researchers have found a positive impact of *CSR performance* in international samples of firms (e.g., Feng et al. 2024) and country-specific designs (e.g., Timbate 2023; Sim et al. 2024; Özbay et al. 2023). Relying on European firms, Meniacci and Simoni (2024) and Alsaadi (2020) also found that CSR performance has a positive impact on tax avoidance. However, some studies have stressed that CSR performance and tax avoidance are negatively related (e.g., Du and Li, 2024; Sarhan 2024; Jiang et al., 2024). This relationship can be explained by the substantive use of CSR to gain legitimacy and the recognition of stakeholder concerns, which should lead to less tax avoidance (Du and Li, 2024).

Only a few studies have examined the link between *CSR reporting* and tax avoidance. Researchers have found a positive relationship between the two variables (Chandrasena et al. 2024; Lin et al. 2017; Jiang et al. 2022). A Norwegian study found that mandatory (voluntary) environmental reporting has a negative (positive) impact on tax avoidance (Fallan and Fallan 2019). Few studies have stressed a negative link between CSR reporting and tax avoidance (e.g., Cao et al. 2024; Donkor et al. 2022).

As CSR decoupling is linked with the symbolic use of CSR and unethical management strategies, an increased degree of tax avoidance is realistic. Thus, in line with agency and legitimacy theories and previous research, we formulated the following hypothesis (H1):

H1. *CSR decoupling is positively associated with corporate tax avoidance.*

2.2 | Hypothesis 2: Sustainable Board Governance as a Moderator of the Link Between CSR Decoupling and Tax Avoidance

In this section, we develop our second hypothesis, which assumes a moderating effect of sustainable board governance on the link between CSR decoupling and tax avoidance. As the board of directors is of crucial importance in achieving solid CSR and tax strategies (Chandrasena et al. 2024), we focused on the *sustainability-related aspects of board incentives and composition* as moderators of the link between CSR decoupling and tax avoidance. We have already mentioned that CSR decoupling and tax avoidance relate to information asymmetries and conflicts of interest between managers and stakeholders (Ross 1973; Jensen and Meckling 1976). Sustainable boards, as a subpart of sustainable corporate governance, should fulfill a

monitoring and incentive function to decrease the amount of CSR decoupling and tax avoidance (Chandrasena et al. 2024; Kovermann and Velte 2019; Kovermann and Velte 2021). The main task of boards of directors is to promote connectivity between CSR and tax issues, leading to an integrated CSR and tax management system (Hardeck et al. 2024). The recognition of sustainability aspects in board composition and compensation should encourage managers to implement substantive CSR strategies and ethical tax behavior (Chandrasena et al. 2024). Sustainable boards with sustainability experts and sustainability-related executive compensation are likely to recognize stakeholder concerns about CSR and tax practices (Velte 2024). Sustainable boards classify the CSR report as a major communication tool for solid business strategies, operational processes, and tax policies (Velte and Stawinoga 2020). While sustainability board composition and compensation often symbolize a firm's commitment to ethical CSR and tax principles, their actual impact on related strategies and processes has been debated (e.g., Hsu et al. 2018).

One way to gain CSR-oriented legitimacy (Patten 2020) is to establish *sustainability board committees and sustainability-related executive compensation*, as this may improve CSR-related reputation and stakeholder attraction. Substantive use of sustainable boards should be related to decreased CSR decoupling and tax avoidance, as boards have increased CSR expertise and incentives to increase CSR activities and implement ethical tax policies (Chandrasena et al. 2024). Nevertheless, CSR committees and CSR-related compensation can also be linked with higher degrees of CSR decoupling and tax avoidance, including *symbolic CSR-related activities* and boilerplate information (Velte and Stawinoga 2020; Velte 2024). Thus, when sustainable boards are included for either symbolic or substantive management behavior, according to legitimacy theory, the moderating effect of sustainability-related management compensation and sustainability board committees can be *positive or negative* (Patten 2020).

From an *empirical perspective*, the effects of board attributes such as executive compensation (e.g., Armstrong et al. 2012) and board composition (e.g., Lanis et al. 2015) on tax avoidance have been well documented (Kovermann and Velte 2019). In line with our theoretical arguments, the results of studies on the impacts of board compensation and composition on tax avoidance have been inconclusive. Regarding a positive relationship between *board compensation* and tax avoidance, managerial decisions depend on the extent to which management incentives are aligned with shareholder interests by means of equity-based incentive compensation (Jensen and Murphy 1990). Consequently, some researchers have found that incentive compensation is associated with increased levels of tax avoidance (e.g., Huang et al. 2018), whereas others have assumed that tax avoidance is complementary with managerial rent diversion due to the corporate opaqueness that is a precondition for tax avoidance (Desai and Dharmapala 2006). Given this complementarity, incentive alignment by means of equity-based compensation has a negative effect on tax avoidance (Desai and Dharmapala 2006).

Prior empirical research on *board composition* and tax avoidance has addressed board independence (Hsu et al. 2018), board gender diversity (Richardson et al. 2016), educational background (Taylor and Richardson 2014), and audit committee characteristics (Richardson et al. 2013). The impacts of independent members of the audit committee on tax avoidance have been found to be negative or positive (Richardson et al. 2013; Hsu et al. 2018). While female board members and tax avoidance are negatively correlated (Francis et al. 2014; Richardson et al. 2016), board expertise increases the degree of tax avoidance (Taylor and Richardson 2014).

In line with these results, we stress a limited number of board variables as *moderators* of the link between CSR and tax avoidance in empirical research. Prior studies have recognized board governance (Raithatha and Shaw 2022), board independence (Lanis and Richardson 2018), political board connections (Cao et al. 2024) and board gender diversity (Rakia et al. 2024) with inconclusive moderating results. The specific roles of sustainability-related compensation and sustainability board committees in influencing corporate tax aggressiveness are an emerging field of research that has not yet been considered. We identified only one recent study (which focused on US and Canadian firms) on the moderating effect of sustainability board committees on the link between CSR reporting and tax avoidance (Chandrasena et al. 2024). The authors found that sustainability board committees weaken the positive relationship between CSR reporting and tax avoidance in line with agency and legitimacy theories as a substantive use of sustainable boards.

Based on agency and legitimacy theories and previous research, we predict that sustainable board governance has a significant moderating effect on the positive link between CSR decoupling and tax avoidance. However, given the potential symbolic or substantive use of sustainable boards, this moderating effect can be positive or negative. Thus, we developed the following hypothesis (H2):

H2. *Sustainability board governance (sustainable board committees and sustainability-related management compensation) moderates the positive link between CSR decoupling and tax avoidance.*

Figure 1 illustrates our research framework.

3 | Data and Methodology

3.1 | Sample Selection

The study sample consisted of listed firms headquartered in an EU member state from the LSEG (formerly known as Refinitiv) database in the 2017–2022 fiscal period. We addressed the EU capital market in view of the unique setting of CSR regulations in this period. As previously mentioned, the European Commission has published CSR regulations that had a major effect on CSR reporting and performance, especially for firms with headquarters in EU member states. Notably, 2017 was the first year of the mandatory implementation of the NFRD and the duty to prepare a non-financial declaration. Prior to 2017, sustainability disclosure, such as GRI reporting, was a voluntary management decision. As previously mentioned,

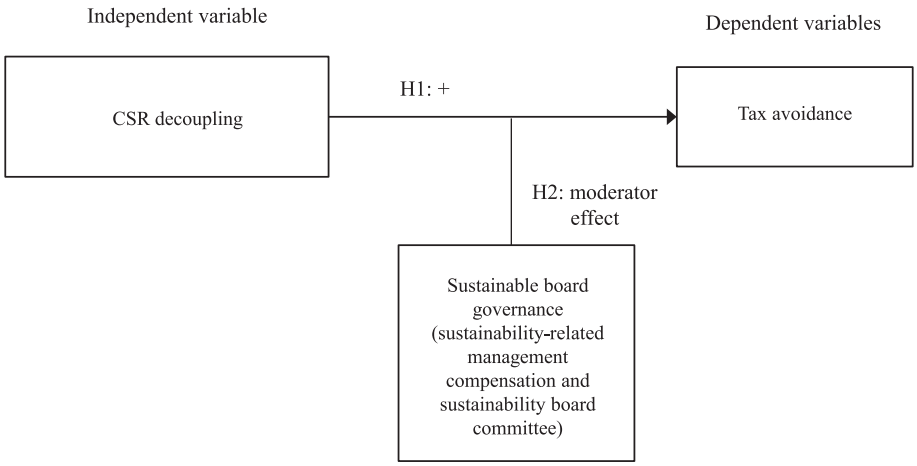

FIGURE 1 | Research framework.

significant regulatory pressure on firms to prepare CSR reports with a major impact on CSR decoupling can be found. The CSR regulations of the EU Green Deal project (e.g., Taxonomy Regulative and the CSRD), which started in 2019, have been a major catalyst for sustainability transformation processes. The 2022 fiscal year was selected as the final year for which data were collected since we aimed to collect an adequate amount of firm data and the 2023 fiscal year had fewer observations. We included the United Kingdom in our sample as a former EU member state for most of the fiscal years. Primary data was obtained from the LSEG database. We excluded financial services firms due to their specific capital structure and regulatory environment. Additionally, missing (non-)financial datapoints led to a decrease in firm-year observations. We winsorized all continuous variables at the bottom 1% and top 99% levels for outlier correction. Our final sample consisted of 2076 firm-year observations.

3.2 | Independent Variable

Three major categories of CSR decoupling are prominent in empirical research. First, Hawn and Ioannou (2016) measured CSR decoupling as the difference between external CSR actions and internal CSR actions, based on *one* CSR database (e.g., LSEG). Second, CSR decoupling can be measured as the difference between CSR reporting, based on content analyses, and CSR performance, based on external CSR databases. Third, *two* external CSR databases can be used to analyze the gap between CSR reporting (e.g., Bloomberg) and CSR performance (e.g., LSEG). As we did not have access to sustainability reporting databases and the Bloomberg terminal, we used the first strategy.

Following Hawn and Ioannou (2016), we classified CSR decoupling as the difference between external and internal CSR actions using the Refinitiv database. CSR decoupling (GAP) is the absolute difference between current external and one year lagged internal actions scaled by the logged total assets (Hawn and Ioannou 2016). Internal CSR actions refer to dummy variables based on the (non) existence of policies on environmental and social issues (e.g., the use of renewable energy). External CSR actions relate to dummy variables based on the (non) existence of disclosure of environmental and social targets (e.g., reporting on initiatives to reduce, reuse, substitute or phase out toxic chemicals or substances).

As robustness tests, two more proxies were implemented to analyze whether greenwashing (GREEN) and brownwashing (BROWN), as the two subpillars of our CSR decoupling variable (GAP) have an impact on tax avoidance. Thus, we separate GAP into GREEN and BROWN as follows: BROWN (GREEN) is the negative (positive) gap between current external and lagged internal CSR actions scaled by the logged total assets. The separation of CSR decoupling into greenwashing and brownwashing is common in prior literature (e.g., Velte 2023a). Greenwashing (brownwashing) relates to an over-reporting (under-reporting) of CSR issues in comparison to actual CSR performance. Both management strategies conflict with stakeholder demands. Greenwashing is based on self-impression management to signal increased CSR activities to stakeholders. Brownwashing, as a "silent green" strategy, does not lead to proper CSR communication (Huang et al. 2022). Stakeholders are not adequately informed about CSR activities, which may lead to decreased levels of stakeholder trust and firm reputation.

3.3 | Dependent Variables

In line with prior research (e.g., Li, Liu et al. 2021; Li, Wang et al. 2021), we used two predominant measures of tax avoidance as dependent variables. First, the cash effective tax rate (CET), which equals the cash tax paid scaled by the pretax income, and second, the total book-tax difference (TBTD), which is estimated using Li, Liu et al. 2021; Li, Wang et al. 2021 methods. A lower CET value or a higher TBTD value indicates that firms engage in more temporary tax planning strategies and more tax avoidance. To increase comparability, we multiplied the CET by −1 so that both measures showed the same direction.

3.4 | Moderator Variable

As previously stated, we used a sustainable board score (SB), based on (1) the existence of a sustainability board committee (SSC) and (2) sustainability-related executive compensation (SSE). SSC is a dummy variable that takes a value of 1 if the firm has an

environmental or social committee within its board of directors. As the implementation of sustainability board committees is voluntary for European firms, the range of duties is heterogeneous, for example, restricted to environmental or social aspects or covering all sustainability issues. In view of the restricted validity of this dummy variable, we tried to manually gather more information on the members of the sustainability committees. We noted a rather low transparency of the firms regarding the composition of these committees. Many firms did not upload full CVs of committee members or had outdated versions. A more detailed analysis of the composition variables of sustainability board committees would lead to a significant reduction in observations and a lower validity of our analyses. Thus, we solely referred to the dummy variable of the LSEG database.

SSE is a dummy variable that takes a value of 1 if the firm includes environmental or social issues as part of the variable compensation of its executive directors. Sustainability-related compensation is also voluntary for European firms. Thus, the variety of sustainability factors included should be high. In line with our former remarks on sustainability board committees, we tried to gather detailed information on sustainability-related executive compensation in the compensation reports. We found that these reports were low in comparability and quality. Thus, we relied on the dummy variable of the LSEG database. The two dummy variables were collected as SB ranging from 0 to 2. We also used SSC and SSE separately as robustness tests.

3.5 | Control Variables

We included several control variables commonly used in previous studies on similar research topics (e.g., Chandrasena et al. 2024). Agency and legitimacy theories (Ross 1973; Jensen and Meckling 1976; Shocker and Sethi 1973) assume that corporate governance, as a monitoring tool, decreases the level of CSR decoupling and tax avoidance. It should motivate executives to decrease both unethical management practices (Hsu et al. 2018). As corporate governance variables should have a negative impact on these outputs, in line with previous studies (Chandrasena et al. 2024), we included board independence (IND). Board independence is the ratio of independent directors on the board as stated in the business reports. Board size (BSIZE) is calculated as the natural logarithm of the number of board members. We also included the natural logarithm of the number of analysts following the firm (ANAL) and the percentage of shares held by public investors (FF) as external corporate governance and assumed a negative impact on tax avoidance.

As for fundamental firm characteristics, prior research has included firm size, financial performance, leverage, R&D expenses, and Tobin's Q as control variables (Chandrasena et al. 2024). Corporate financial conditions should have a major impact on CSR decoupling and tax avoidance due to their connectivity. Firm size (FSIZE), calculated as the natural logarithm of total assets, includes economics of scale or scope, which may indicate competitive advantages (Chandrasena et al. 2024). We assumed a positive impact of firm size on tax avoidance. Financial performance is also assumed to be positively related to tax avoidance. We used return on assets (ROA) as an accounting-based performance measure and leverage (LEVE) to control for corporate financial stability (Chandrasena et al. 2024). Market-based financial performance was measured using Tobin's Q (TOBIN), assuming a positive impact on tax avoidance. R&D expenses (RD) are a relevant variable of corporate innovation, thus a positive impact on tax avoidance is assumed.

Table 1 summarizes the included variables.

3.6 | Regression Models

Our major goal is to analyze the link between CSR decoupling and tax avoidance as well as the moderating effect of sustainable boards. Our main regression models recognized whether (lagged) GAP has a positive impact on tax avoidance (CET and TBTD) and whether this link is moderated by sustainable boards (SB). We applied the following specifications (Equations 1–4) to test the two hypotheses:

$$\begin{aligned} CET_{it+1} = {} & alpha + beta_1\, GAP_{it} + beta_2\, SB_{it} + beta_3\, IND_{it} \\ & + beta_4\, BSIZE_{it} + beta_5\, ANAL_{it} + beta_6\, FF_{it} \\ & + beta_7\, FSIZE_{it} + beta_8\, ROA_{it} + beta_9\, LEVE_{it} \\ & + beta_{10}\, RD_{it} + beta_{11}\, TOBIN_{it} + e_{it} \end{aligned} \tag{1}$$

$$\begin{aligned} TBTD_{it+1} = {} & alpha + beta_1\, GAP_{it} + beta_2\, SB_{it} + beta_3\, IND_{it} \\ & + beta_4\, BSIZE_{it} + beta_5\, ANAL_{it} + beta_6\, FF_{it} \\ & + beta_7\, FSIZE_{it} + beta_8\, ROA_{it} + beta_9\, LEVE_{it} \\ & + beta_{10}\, RD_{it} + beta_{11}\, TOBIN_{it} + e_{it} \end{aligned} \tag{2}$$

$$\begin{aligned} CET_{it+1} = {} & alpha + beta_1\, GAP_{it} + beta_2\, SB_{it} + beta_3\, GAP_{it}{}^{*} SB_{it} \\ & + beta_4\, IND_{it} + beta_5\, BSIZE_{it} + beta_6\, ANAL_{it} \\ & + beta_7\, FF_{it} + beta_8\, FSIZE_{it} + beta_9\, ROA_{it} \\ & + beta_{10}\, LEVE_{it} + beta_{11}\, RD_{it} + beta_{12}\, TOBIN_{it} + e_{it} \end{aligned} \tag{3}$$

$$\begin{aligned} TBTD_{it+1} = {} & alpha + beta_1\, GAP_{it} + beta_2\, SB_{it} + beta_3\, GAP_{it}{}^{*} SB_{it} \\ & + beta_4\, IND_{it} + beta_5\, BSIZE_{it} + beta_6\, ANAL_{it} \\ & + beta_7\, FF_{it} + beta_8\, FSIZE_{it} + beta_9\, ROA_{it} \\ & + beta_{10}\, LEVE_{it} + beta_{11}\, RD_{it} + beta_{12}\, TOBIN_{it} + e_{it} \end{aligned} \tag{4}$$

Panel data regressions based on significant Lagrange multiplier tests, *F*-tests for overall significance, and Hausman tests were conducted. Panel data regressions are superior to classical OLS regressions due to endogeneity concerns. We included country fixed effects, industry fixed effects based on two-digit SIC codes, and year fixed effects as a best practice. GAP was forwarded by 1 year to model a possible causal relationship and mitigate potential endogeneity concerns due to reverse causality. Panel regressions with robust standard errors adjusted for heteroscedasticity were conducted. We calculated the variance inflation factors (VIF) to test for multicollinearity. Multicollinearity can occur if the VIF is higher than 10 (Hair et al. 2009). In our analyses, since no VIF was higher than 2.7, multicollinearity concerns could be ignored.

TABLE 1 | Variables of the study.

Panel A: independent variables	
GAP	Difference between external CSR actions and internal CSR actions, based on Hawn and Ioannou (2016)
GREEN (robustness tests)	The positive gap between external CSR actions and internal CSR actions, based on Hawn and Ioannou (2016)
BROWN (robustness tests)	The negative gap between internal CSR actions and external CSR actions, based on Hawn and Ioannou (2016)
Panel B: dependent variable	
CET	Cash taxes paid scaled by pretax income. CET is set to missing when values are zero or negative. CET is winsorized to the range [0; 1].
TBTD	Total book-tax differences, computed following Li, Liu et al. 2021; Li, Wang et al. 2021 as: $TBTD_t = \frac{TXDI_t + (STR - ETR_t) \times PI_t}{AT_{t-1}}$ where TXDI is deferred tax expense, STR is the corporate statutory tax rate, ETR is income tax expense divided by pretax income, PI is pretax book income, and AT is total assets
Panel C: control variables	
SB (also moderator variable)	Sustainable board governance score (SB) as the sum of (1) existence of a sustainability board committee (SSC) and (2) the inclusion of sustainability-related executive compensation (SSE), 0 = otherwise
SSC (robustness test)	Sustainability board committee: dummy variable taking the value 1 if a corporate sustainability committee was implemented within the board of directors, 0 = otherwise
SSE (robustness test)	Sustainability-related executive compensation: dummy variable taking the value 1 if the management compensation contract of executive directors includes environmental and/or social goals, 0 = otherwise
Other corporate governance variables	
IND	Board independence = (independent board members)/(total number of board members).
BSIZE	Board size = natural logarithm of the amount of directors on the board
ANAL	Natural logarithm of the number of analysts following the firm
FF	Free float as a percentage of shares outstanding
Other firm variables	
FSIZE	Firm size = natural logarithm of total assets
ROA	Return on assets = (net income before preferred dividends + ((interest expense on debt-interest capitalized) * (1-Tax rate)))/Average of last year's and current year's total asset
LEVE	Leverage = Long-term debt scaled by total assets
RD	(Research and development expense)/(net sales or revenues)
TOBIN	Measure for a firm's investment growth opportunities by year-end

TABLE 2 | Descriptive statistics.

Variable	*N*	Mean	Median	SD	Min	Max
Panel A: independent variable						
GAP	2076	−1.172	−0.923	1.371	−3.179	2.686
Panel B: dependent variables						
CET	2076	0.236	0.210	0.173	0.027	0.549
TBTD	2076	0.007	0.003	0.02	0.001	0.024
Panel C: control variables						
SB (also moderator)	2076	1.154	1.000	0.292	0.000	2.000
SSC (robustness test)	2076	0.667	1.000	0.154	0.000	1.000
SSE (robustness test)	2076	0.424	1.000	0.196	0.000	1.000
IND	2076	0.343	0.387	11.321	0.000	1.000
BSIZE	2076	9.234	10.000	5.029	4.000	21.000
ANAL	2076	2.434	2.654	0.623	0.000	4.232
FF	2076	0.689	0.728	0.298	0.000	1.000
FSIZE	2076	13.434	12.879	2.098	7.123	14.212
ROA	2076	6.989	6.232	8.232	−1.323	25.323
LEVE	2076	0.323	0.314	0.414	0.211	0.689
RD	2076	0.231	0.298	0.192	0.000	0.449
TOBIN	2076	1.434	0.989	1.232	0.021	9.323

After conducting the basic regression models, we include greenwashing and brownwashing as the two subpillars of CSR decoupling and the separate effects of sustainable board committees and sustainability-related management compensation as robustness tests. Moreover, to check for endogeneity concerns, we include propensity score matching (PSM) and two-stage least squares (2SLS)/instrumental variables (IV). These strategies increase the validity of our regression models.

4 | Results

4.1 | Descriptive Statistics

Table 2 provides an overview of the descriptive statistics for the dependent, independent, moderator, and control variables. The average CET was 0.236, whereas the average TBTD was 0.07.

The mean (median) score of GAP was −1.172 (−0.923). Many firms in our sample had implemented sustainable board committees and sustainability-related management compensation as voluntary management decisions, leading to a mean SB of 1.545.

4.2 | Correlation Results

Table 3 presents the Pearson correlation matrix for the dependent, independent, moderator, and control variables. GAP is positively and significantly correlated with CET and TBTD. These results are in line with agency and legitimacy theories and prior research on the impact of CSR performance and reporting on tax avoidance (e.g., Garcia et al. 2024; Meniacci and Simoni 2024). Based on the symbolic use of sustainable boards and self-impression management, we also found that SB is positively related to GAP, CET, and TBTD. Most of the included studies found a positive rather than a negative impact on CET and TBTD. However, some relationships showed insignificant correlations.

4.3 | Basic Regression Results

The results of the basic regression analyses are presented in Table 4. Model 1 (2) refers to the relationship between GAP and CET (TBTD), and Model 3 (4) includes the moderator variable GAP*SB, which is based on the two measures of tax avoidance (CET and TBTD). GAP was positively and significantly correlated with CET and TBTD, which supports the first hypothesis. Regarding Models 3 and 4, we found that the significant positive link between GAP and tax avoidance was moderated by SB, which supports our second hypothesis. The degree of R^2 was quite satisfactory in all regression models.

The basic regression results are congruent with agency and legitimacy theories (Ross 1973; Jensen and Meckling 1976) as well as prior studies (e.g., Chandrasena et al. 2024; Lin et al. 2017; Jiang et al. 2022; Fallan and Fallan 2019). Agency and legitimacy theories assume that CSR decoupling and tax avoidance represent complementary and unethical management practices. While stakeholders demand the implementation of sound CSR

TABLE 3 | Pearson correlation matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) GAP	1												
(2) CET	0.24**	1											
(3) TBTD	0.28**	0.35**	1										
(4) SB	0.31**	0.27**	0.11**	1									
(5) IND	−0.23**	−0.21*	−0.13*	0.43**	1								
(6) BSIZE	−0.28**	−0.03	−0.12*	0.32**	0.12*	1							
(7) ANAL	−0.29***	−0.21	−0.02	0.43	0.12	0.06	1						
(8) FF	0.29*	0.21*	0.18*	0.12	0.14*	0.12	0.12**	1					
(9) FSIZE	0.34*	0.28*	0.07	0.32**	0.21**	0.34***	0.21**	0.12**	1				
(10) ROA	0.24**	0.21***	0.12**	0.21**	0.10**	0.21*	0.23**	0.12*	0.13**	1			
(11) LEVE	0.29**	0.12	0.11	0.12	0.12*	0.13	−0.14*	−0.12*	0.03*	−0.21*	1		
(12) RD	0.21*	0.11*	0.17**	0.24	0.12	0.23*	0.11	0.12*	0.19	−0.14*	−0.16*	1	
(13) TOBIN	0.26**	0.13**	0.04*	0.32*	0.21*	0.32**	0.22*	0.02	0.15**	0.13**	0.14	0.12*	1

Note: This table represents the correlation coefficients between independent, dependent, and control variables for the whole sample. The variables are defined in Table 1. CET is multiplied by −1. Significance levels: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

TABLE 4 | Regression analyses.

Variables	Model 1 (CET)	Model 2 (TBTD)	Model 3 (CET; interaction)	Model 4 (TBTD; interaction)
GAP	0.265**	0.287**	0.197**	0.194**
	(0.034)	(0.031)	(0.032)	(0.020)
SB	0.332**	0.319**	0.325***	0.306***
	(0.026)	(0.038)	(0.009)	(0.006)
GAP*SB	—	—	0.262***	0.241***
			(0.007)	(0.008)
IND	−1.676*	−1.627*	−1.487*	−1.493*
	(0.138)	(0.139)	(0.146)	(0.141)
BSIZE	−1.996**	−1.937**	−1.894**	−1.879**
	(0.054)	(0.056)	(0.064)	(0.062)
ANAL	−4.042*	−4.243*	−4.338*	−4.398*
	(0.165)	(0.176)	(0.179)	(0.178)
FF	1.321**	1.342**	1.314**	1.324**
	(0.065)	(0.076)	(0.063)	(0.067)
FSIZE	2.657**	2.698**	2.276***	2.265***
	(0.015)	(0.017)	(0.002)	(0.002)
ROA	0.325**	0.331**	0.309**	0.312**
	(0.089)	(0.091)	(0.088)	(0.089)
LEVE	0.179**	0.188**	0.191**	0.199**
	(0.076)	(0.079)	(0.081)	(0.084)
RD	0.434	0.431	0.441	0.437
	(0.245)	(0.232)	(0.265)	(0.265)
TOBIN	0.332**	0.343**	0.304**	0.312**
	(0.098)	(0.096)	(0.089)	(0.086)
CONSTANT	−3.589**	−3.606**	−3.127**	−3.150**
	(1.056)	(1.089)	(1.053)	(1.079)
Observations	2076	2076	2076	2076
R^2 (adj.)	0.221	0.232	0.204	0.207
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: This table presents results from panel regressions of CSR decoupling (GAP) on tax avoidance, based on CET (model 1), TBTD (model 2), and the interaction of sustainable board score (SB) (models 3–4) and controls for the whole sample. Total variables are explained in Table 1. CET is multiplied by −1; Robust and clustered (by firm) standard errors are reported in parentheses. The *p* values are two-tailed. The symbols ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

and tax practices, they cannot fully analyze real management practices in this context. CSR decoupling is linked to the symbolic use of CSR reporting for self-impression management (Velte 2023a; Mahoney et al. 2013). Consequently, CSR decoupling is also related to a high probability of tax avoidance as managers like to increase short-term financial performance in line with shareholders' preferences. Our results are also in line with those of prior empirical studies that found a positive impact of CSR reporting and performance on tax avoidance (e.g., Garcia et al. 2024; Meniacci and Simoni 2024; Alsaadi 2020).

Agency theory assumes that sustainable boards (e.g., sustainability board committees and sustainability-related executive compensation) fulfill a major incentive and monitoring function toward better CSR and more ethical corporate tax practices. However, based on legitimacy theory (Shocker and Sethi 1973), sustainable boards can be implemented for either substantive or symbolic management purposes. Thus, the moderating effect of sustainable boards on the positive link between CSR decoupling and tax avoidance can be positive or negative. As our regression results indicate a positive moderating effect of sustainable boards, this may be explained by self-impression management. Sustainable boards are symbolically implemented for legitimacy purposes without any meaningful possibility of reducing tax avoidance and increasing CSR outputs. Sustainability board committees may lack adequate tax skills, and CSR goals

in management compensation contracts may exclude ethical tax strategies. Consequently, these boards are more likely to promote tax avoidance to improve short-term financial performance and shareholder relations.

4.4 | Robustness Tests and Endogeneity Checks

We conducted several robustness checks to test the sensitivity of our regressions (Table 5). First, we separated CSR decoupling into the following two subcategories: greenwashing (GREEN), an over-reporting strategy, and brownwashing (BROWN), an under-reporting ("silent green") strategy. We measured the impact of GREEN on tax avoidance (Models 5 and 6) and the moderating effect of SB on that link (Models 7 and 8). Then, the relationship between BROWN and tax avoidance (Models 9 and 10), as well as the moderating effect of SB on this relationship, was analyzed (Models 11 and 12). In congruence with CSR decoupling, greenwashing and brownwashing lead to major agency conflicts, which increase the probability of tax avoidance. Stakeholders expect a sound and realistic description of corporate sustainability strategies and achievements. If the firm engages in over-reporting (greenwashing) or under-reporting (brownwashing), stakeholders cannot accurately evaluate CSR activities. Thus, in line with agency and legitimacy theories, we assumed and found that GREEN and BROWN lead to increased CET and TBTD levels. Moreover, the symbolic use of sustainable boards promotes a positive link between both variations of CSR decoupling and tax avoidance (see Table 5).

In the main regressions, we included the combined sustainable board score. To check for robustness, in Table 5, we modified our moderator variable as follows: We analyzed the individual moderating effects of SSC and SSE on the link between GAP and tax avoidance (Models 13–16). Our results are in line with our basic regressions, which showed that SB is positively and significantly linked with CET and TBTD. Both sustainable board characteristics are likely to be used symbolically for self-impression management in line with legitimacy theory to promote unethical CSR and tax strategies.

Empirical research on the relationship between CSR decoupling and tax avoidance is characterized by endogeneity concerns (e.g., Wintoki et al. 2012; Kovermann and Velte 2021), especially self-selection bias and reverse causality. As the implementation of sustainable boards is a voluntary management decision, self-selection bias may be present. Among others, propensity score matching (PSM) is a useful method to address potential self-selection bias and has been used in several prior studies (e.g., Ling and Liu 2023). PSM partials out selection bias by creating a control group. Using a set of firm characteristics in a probit regression, this technique pairs every firm in the treatment group with a statistical twin firm from a large set of non-participant firms to form the control group. These statistical twins can be used for comparison to examine the treatment effects. We created a control sample using firms with no sustainability-related management compensation and no sustainable board committees in which firms are matched on factors that affect the likelihood of sustainable boards except for CSR decoupling. We then compared the degree of CSR decoupling between the treatment sample (firms with sustainable boards) and the control sample. We estimated propensities using a logit model that estimates the probability of sustainable boards of the included controls. We estimated a propensity score for each firm using the predicted probabilities from the logit model and matched each treatment firm to a control firm by year based on the matching score of the nearest neighbor. To test whether the PSM procedure was effective, we performed a *t*-test for differences in means between the two groups. The untabulated results show that none of the firm characteristics are significantly different at the 0.10 level, suggesting that the PSM procedure was effective in controlling for observed firm characteristics. Table 6 (Models 17 and 18) summarizes our PSM findings. Similar to our basic regressions, CSR decoupling is positively related to CET and TBTD. Thus, self-selection bias should not be a major concern in our regression models.

The two-stage least squares (2SLS)/instrumental variables (IV) method is a useful tool for checking for potential reverse causality issues. As we assumed an impact of CSR decoupling on tax avoidance, an inverse or even bidirectional relationship can be assumed. Two-stage regression analysis requires identifying an instrumental variable that is highly correlated with CSR decoupling but that does not influence tax avoidance except through CSR decoupling. Following Huang et al. (2017), we used the average CSR decoupling score of firms in the same industry as the instrumental variable. In the first stage of the 2SLS regression, we regressed GAP on the average CSR decoupling score of surrounding firms and on the control variables. We then used the estimated coefficients to compute the instrumented value of CSR decoupling. In the second stage, we used the instrumented value of CSR decoupling as an independent variable. Models 19 and 20 in Table 6 summarize the second-stage regressions. The coefficient on the instrumented CSR decoupling is significant and positive, thus supporting our basis regressions and our second hypothesis.

5 | Summary

5.1 | Conclusions

In this study, we analyzed the impact of CSR decoupling on tax avoidance in the European capital market. We also measured the moderating effect of sustainable boards (sustainability-related executive compensation and sustainable board committees) on this link. Based on agency and legitimacy theories (Ross 1973; Jensen and Meckling 1976; Shocker and Sethi 1973), we assumed that CSR decoupling and tax avoidance are positively correlated as complementary, unethical management practices. CSR decoupling is defined as a mismatch between CSR reporting and performance that contradicts stakeholder demands, for example, through boilerplates or unrelated CSR and tax information (Velte 2023a). While we assumed a significant moderating effect of sustainable boards on this link, the sign could be positive or negative. Sustainable boards can be used for symbolic or substantive CSR practices, leading to lower or higher monitoring and incentive functions of sustainable corporate governance (Chandrasena et al. 2024).

While many studies have analyzed the link between CSR performance, CSR reporting, and tax avoidance (e.g., Marques

TABLE 5 | Robustness checks.

Variables	Model 5 (GREEN_CET)	Model 6 (GREEN_TBTD)	Model 7 (INT_CET)	Model 8 (INT_TBTD)	Model 9 (BROWN_CET)	Model 10 (BROWN_TBTD)	Model 11 (INT_CET)	Model 12 (INT_TBTD)	Model 13 (INT_CET_SSC	Model 14 (INT_CET_SSE)	Model 15 (INT_TBTD_SSC)	Model 16 (INT_TBTD_SSE)
GREEN	0.215** (0.039)	0.207** (0.035)	0.218** (0.032)	0.224** (0.035)	—	—	—	—	—	—	—	—
SB	0.314** (0.028)	0.325** (0.025)	0.342*** (0.007)	0.335*** (0.006)	0.296** (0.010)	0.386** (0.015)	0.368*** (0.009)	0.346*** (0.007)	—	—	—	—
GREEN*SB	—	—	0.243*** (0.006)	0.257*** (0.005)	—	—	—	—	—	—	—	—
BROWN	—	—	—	—	0.385** (0.015)	0.367** (0.014)	0.350** (0.013)	0.346** (0.015)	—	—	—	—
BROWN*SB	—	—	—	—	—	0.227*** (0.003)	0.233*** (0.002)	0.256*** (0.005)	—	—	—	—
GAP	—	—	—	—	—	—	—	—	0.204** (0.038)	0.214** (0.035)	0.204** (0.023)	0.189** (0.019)
SSC	—	—	—	—	—	—	—	—	0.328*** (0.008)	—	0.321*** (0.006)	—
SSE	—	—	—	—	—	—	—	—	—	0.314*** (0.006)	—	0.305*** (0.007)
GAP*SSC	—	—	—	—	—	—	—	—	0.268*** (0.006)	—	0.256*** (0.007)	—
GAP*SSE	—	—	—	—	—	—	—	—	—	0.265*** (0.004)	—	0.244*** (0.005)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076	2076
R^2 (adj.)	0.193	0.185	0.191	0.209	0.211	0.189	0.196	0.209	0.203	0.198	0.219	0.203
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents results from panel regressions of greenwashing (GREEN) and Brownwashing (BROWN) on tax avoidance, based on CET (models 5 and 9) and TBTD (models 6 and 10), interaction of sustainable board score (SB) (models 7–8 and 11–12) and interaction of sustainability board committees (models 13 and 15) and sustainability-related executive compensation (models 14 and 16). Controls are not tabulated. Total variables are explained in Table 1. Robust and clustered (by firm) standard errors are reported in parentheses. The *p* values are two-tailed. The symbols ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

et al. 2024), ours is the first analysis of *CSR decoupling* and tax avoidance. Due to the increased research activity on CSR decoupling in general (e.g., Velte 2023a), we contributed to this stream of research, focusing on the European capital market. Empirical studies for EU member states are necessary due to corporate sustainability regulations passed in the last decade (e.g., Kovermann and Velte 2021). We used a sample of listed firms headquartered in an EU member state in the 2017–2022 period (2076 firm-year observations). We conducted several regression analyses and found that CSR decoupling has a significant and positive impact on the degree of tax avoidance and that this relationship is positively moderated by sustainable boards. There are indications that the symbolic use of sustainable boards counteracts the incentive and monitoring function of sustainable corporate governance. Our regression results remained robust after conducting several robustness tests (subcategories of decoupling and separate moderating effects of sustainability board committees and sustainability-related executive compensation) and endogeneity controls (PSM and 2SLS/IV). Our study complements prior studies that have found a positive impact of CSR performance and reporting on tax avoidance (e.g., Alsaadi 2020; Chandrasena et al. 2024).

In the following sections, we highlight implications for researchers, regulators, and business practices to prevent or at least decrease the occurrence of CSR decoupling and tax avoidance and to promote the substantive use of sustainable boards.

5.2 | Managerial Implications

Top managers, boards of directors, and stakeholders should implement effective tools to prevent or at least decrease the degree of CSR decoupling and tax avoidance (Du and Li, 2024). Significant intrinsic and extrinsic motivations of executive directors should be promoted to connect CSR and tax strategies (Hardeck et al. 2024). Stakeholders demand integrated CSR and tax management that includes the various connections (Hardeck et al. 2024). As tax management is also linked to corporate finance decisions (e.g., dividend policies), an integrated thinking process of financial, tax, and CSR aspects, as well as the implementation of interdisciplinary teams, is necessary (Hsu et al. 2018).

Regarding sustainable boards, the voluntary implementation of sustainability-related management compensation and sustainable board committees can only be the first step in successful change management (Kovermann and Velte 2021). The symbolic use of sustainable board attributes to attract stakeholders without any meaningful impact on CSR and tax strategies is doubtful (Patten 2020). Sustainable board committees should recognize a critical mass of sustainable experts, have an adequate budget, and relate to an ambitious job profile to fulfill an active monitoring function for executive directors (Mahoney et al. 2013). In line with environmental and social skills, sustainability committees need adequate expertise in corporate tax strategies and close cooperation with corporate tax departments.

5.3 | Regulatory Implications

From a regulatory perspective, the European Commission should introduce regulations to promote sustainable board composition and compensation. Listed EU firms should be requested to implement sustainability-related management compensation schemes and sustainability board committees. While the draft version of the EU Corporate Sustainability Due Diligence Directive (CSDDD) included the mandatory implementation of climate-related compensation schemes for boards of directors, this topic was deleted in the final version of the directive as a political compromise. Sustainability-related board expertise and compensation are still voluntary in EU member states, in contrast to the duty of financial

TABLE 6 | Endogeneity tests.

Variables	Model 17 propensity score matching (PSM_CET)	Model 18 propensity score matching (PSM_TBTD)	Model 19 2SLS/IV (CET) (second stage regression)	Model 20 2SLS/IV (TBTD) (second stage regression)
GAP	0.274**	0.265**	0.260**	0.268**
	(0.035)	(0.038)	(0.039)	(0.036)
SB	0.365***	0.359***	0.346***	0.354***
	(0.007)	(0.009)	(0.006)	(0.008)
GAP*SB	0.245***	0.254***	0.273***	0.268***
	(0.004)	(0.006)	(0.007)	(0.005)
Controls	Yes	Yes	Yes	Yes
Observations	2076	2076	2076	2076
R^2 (adj.)	0.189	0.194	0.187	0.179
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: This table presents results from propensity score matching (PSM) of the moderating effect of sustainable board score (SB) on the link between CSR decoupling (GAP) and tax avoidance, based on CET (model 17) and TBTD (model 18) and two-stage least squares (2SLS)/instrumental variable (IV) (models 19–20). Controls are not tabulated. Total variables are explained in Table 1. Robust and clustered (by firm) standard errors are reported in parentheses. The *p* values are two-tailed. The symbols ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

and industry expertise in audit committees for PIEs. Without proper recognition of the incentive and monitoring function of sustainable corporate governance, the risk of unreliable information in CSR reports will remain high (Mahoney et al. 2013).

Moreover, the European Commission should introduce regulations to prevent CSR decoupling and tax avoidance. The CSRD includes a reporting duty, whether sustainability-related management compensation and sustainability board expertise are included in the firm as a comply or explain principle. Detailed explanations of the concrete elements of sustainability expertise and targets for variable remuneration for board members are not requested. The new CSR report may not achieve an adequate level of comparability and reliability on sustainable boards for stakeholders. Moreover, the EU directive on country-by-country reporting addresses only a small part of PIEs in comparison to the larger scope of the CSRD. Qualitative tax reporting based on the GRI 207 is not included in the future EU country-by-country report or in the CSRD report (Hardeck et al. 2024). These major information gaps should be filled by the European Commission.

5.4 | Research Implications

Future researchers should analyze the impact of CSR decoupling on tax avoidance in more detail. First, as we relied on a total CSR decoupling measure, the sub-pillars of environmental or social decoupling should be addressed in future studies. As environmental and social topics are complex and linked with limited comparability, we see the need to include sub-pillars of CSR, for example, climate decoupling. Among others, this strategy can be justified by the climate-first approach of the International Sustainability Standards Board and the increased stakeholder pressure on climate transformation in multinational PIEs.

Second, the effects of EU regulations, such as the NFRD, the EU Taxonomy Regulation, and the CSRD, should be analyzed. Third, since we used only one measure of CSR decoupling, which has some limitations (Velte 2023a), future studies should include more CSR decoupling variables for robustness checks based on different databases and methods. As the validity of Hawn and Ioannou (2016) classification was criticized, automated text analyses of CSR reports should be a best practice to create innovative CSR reporting and performance variables. Automated text analyses conducted with AI support should explicitly refer to tax disclosure in CSR reports in line with GRI 207 (e.g., Hardeck et al. 2024). As prior research has predominantly relied on quantitative elements of tax information, the qualitative and strategic elements of (voluntary) tax disclosure should be included in future research designs.

Acknowledgments

Open Access funding enabled and organized by Projekt DEAL.

References

Alsaadi, A. 2020. "Financial-Tax Reporting Conformity, Tax Avoidance and Corporate Social Responsibility." *Journal of Financial Reporting and According* 18: 639–659.

Armstrong, C. S., J. L. Blouin, and D. F. Larcker. 2012. "The Incentives for Tax Planning." *Journal of Accounting and Economics* 53: 391–411.

Cao, J., A. A. Haji, and J. Hu. 2024. "The Effect of Mandatory CSR Disclosures on Corporate Tax Avoidance: Evidence From a Quasi-Natural Experiment." *Journal of International Accounting Research* 23: 33.

Chandrasena, S., L. Matthews, and A. M. Gerged. 2024. "Does the Presence of a Sustainability Committee Strengthen the Impact of ESG Disclosure on Tax Aggressiveness? Insights From North America." *Review of Quantitative Finance and Accounting*: 1.

Deegan, C. 2002. "The Legitimising Effect of Social and Environmental Disclosures: A Theoretical Foundation." *Accounting, Auditing and Accountability Journal* 15: 282–311.

Desai, M., and D. Dharmapala. 2006. "Corporate Tax Avoidance and High-Powered Incentives." *Journal of Financial Economics* 79: 145–179.

Donkor, A., H. G. Djajadikerta, S. M. Roni, and T. Trireksani. 2022. "Integrated Reporting Quality and Corporate Tax Avoidance Practices in South Africa's Listed Companies." *Sustainability Accounting, Management and Policy Journal* 13: 899–928.

Dyllick, T., and K. Muff. 2016. "Clarifying the Meaning of Sustainable Business: Introducing a Typology From Business-As-Usual to True Business Sustainability." *Organization and Environment* 29: 156–174.

Dyreng, S. D., M. Hanlon, and E. L. Maydew. 2008. "Long-Run Corporate Tax Avoidance." *Accounting Review* 85: 1163–1189.

Fallan, E., and L. Fallan. 2019. "Corporate Tax Behaviour and Environmental Disclosure: Strategic Trade-Offs Across Elements of CSR?" *Scandinavian Journal of Management* 35: 101042.

Feng, Z.-Y., Y.-C. Wang, and W.-G. Wang. 2024. "Corporate Carbon Reduction and Tax Avoidance: International Evidence." *Journal of Contemporary Accounting and Economics* 20: 100416.

Garcia, C. A., I. Verleyen, and A. Roggeman. 2024. "Corporate Social Responsibility and Tax Avoidance: The Moderating Role of Economic Freedom." *Society and Business Review* 19: 620–647.

Hardeck, I., K. K. Inger, K. K. Moore, and J. Schneider. 2024. "The Impact of Tax Avoidance and Environmental Performance on Tax Disclosure in CSR Reports." *Journal of the American Taxation Association* 46: 1–30.

Hawn, O., and I. Ioannou. 2016. "Mind the Gap: The Interplay Between External and Internal Actions in the Case of Corporate Social Responsibility." *Strategic Management Journal* 37: 2569–2588.

Hsu, P.-H., J. A. Moore, and D. O. Neubaum. 2018. "Tax Avoidance, Financial Experts on the Audit Committee, and Business Strategy." *Journal of Business Finance and Accounting* 45: 1293–1321.

Huang, H. H., L. Sun, and T. R. Yu. 2017. "Are Socially Responsible Firms Less Likely to Expatriate? An Examination of Corporate Inversions." *Journal of the American Taxation Association* 39: 43–62.

Huang, W., T. Ying, and Y. Shen. 2018. "Executive Cash Compensation and Tax Aggressiveness of Chinese Firms." *Review of Quantitative Finance and Accounting* 51: 1151–1180.

Huang, Y., C. Francoeur, and S. Brammer. 2022. "What Drives and Curbs Brownwashing?" *Business Strategy and the Environment* 31, no. 5: 2518–2532.

Jensen, M. C., and W. H. Meckling. 1976. "Theory of the Firm. Managerial Behaviour, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3: 305–360.

Jensen, M. C., and K. J. Murphy. 1990. "Performance Pay and Top-Management Incentives." *Journal of Political Economy* 98: 225–264.

Jiang, W., C. Zhang, and C. Si. 2022. "The Real Effect of Mandatory CSR Disclosure: Evidence of Corporate Tax Avoidance." *Technological Forecasting and Social Change* 179: 121646.

Kovermann, J., and P. Velte. 2019. "The Impact of Corporate Governance on Corporate Tax Avoidance. A Literature Review." *Journal of International Accounting, Auditing and Taxation* 36: 1002770.

Kovermann, J., and P. Velte. 2021. "CSR and Tax Avoidance. A Review of Empirical Research." *Corporate Ownership and Control* 18: 20–39.

Krieg, K. S., and J. Li. 2021. "A Review of Corporate Social Responsibility and Reputational Costs in the Tax Avoidance Literature." *Accounting Perspectives* 20: 477–542.

Lanis, R., and G. Richardson. 2012. "Corporate Social Responsibility and Tax Aggressiveness: An Empirical Analysis." *Journal of Accounting and Public Policy* 31: 86–108.

Lanis, R., and G. Richardson. 2018. "Outside Directors, Corporate Social Responsibility Performance, and Corporate Tax Aggressiveness: An Empirical Analysis." *Journal of Accounting, Auditing and Finance* 33: 228–251.

Lanis, R., G. Richardson, and G. Taylor. 2015. "Board of Director Gender and Corporate tax Aggressiveness: An Empirical Analysis." *Journal of Business Ethics* 144: 577–596.

Li, B., Z. Liu, and R. Wang. 2021. "When Dedicated Investors Are Distracted: The Effect of Institutional Monitoring on Corporate Tax Avoidance." *Journal of Accounting and Public Policy* 40: 106873.

Li, Z., P. Wang, and T. Wu. 2021. "Do Foreign Institutional Investors Drive Corporate Social Responsibility? Evidence From Listed Firms in China." *Journal of Business Finance and Accounting* 48: 338–373.

Lin, K. Z., S. Cheng, and F. Zhang. 2017. "Corporate Social Responsibility, Institutional Environments, and Tax Avoidance: Evidence From a Subnational Comparison in China." *International Journal of Accounting* 52: 303–318.

Ling, Q., and L. Liu. 2023. "Corporate Giving and the Case of Tax Avoidance." *Advances in Accounting* 61: 100644.

Mahoney, L. S., L. Thorne, L. Cecil, and W. LaGore. 2013. "A Research Note on Standalone Corporate Social Responsibility Reports: Signaling or Greenwashing?" *Critical Perspectives on Accounting* 24: 350–359.

Mao, C. 2019. "Effect of Corporate Social Responsibility on Corporate Tax Avoidance: Evidence From a Matching Approach." *Quality and Quantity* 53: 49–67.

Marques, M., T. M. Montenegro, and F. A. Bras. 2024. "Tax Avoidance and Corporate Social Responsibility: A Meta-Analysis." *Journal of the American Taxation Association* 46: 1–20.

Meniacci, L., and L. Simoni. 2024. "Negative Media Coverage of ESG Issues and Corporate Tax Avoidance." *Sustainability Accounting, Management and Policy Journal* 15: 1–33.

Muller, A., and A. Kolk. 2015. "Responsible Taxes as Corporate Social Responsibility: The Case of Multinational Enterprises and Effective Tax in India." *Business and Society* 54: 435–463.

Ortas, E., and I. Gallego-Álvarez. 2020. "Bridging the Gap Between Corporate Social Responsibility Performance and Tax Aggressiveness." *Accounting, Auditing &Amp; Accountability Journal* 33: 825–855.

Özbay, D., H. Adigüzel, and M. K. Gökmen. 2023. "Corporate Social Responsibility and Tax Avoidance: Channeling Effect of Family Firms." *Journal of Corporate Accounting and Finance* 34: 11–30.

Patten, D. M. 2020. "Seeking Legitimacy." *Sustainability Accounting, Management and Policy Journal* 11: 1009–1021.

Raithatha, M., and T. S. Shaw. 2022. "Firm's Tax Aggressiveness Under Mandatory CSR Regime: Evidence After Mandatory CSR Regulation of India." *International Review of Finance* 22: 296.

Rakia, R., M. Kachouri, and A. Jarboui. 2024. "The Moderating Effect of Women Directors on the Relationship Between Corporate Social Responsibility and Corporate Tax Avoidance? Evidence From Malaysia." *Journal of Accounting in Emerging Economies* 14: 1–24.

Richardson, G., G. Taylor, and R. Lanis. 2013. "The Impact of Board of Director Oversight Characteristics on Corporate Tax Aggressiveness: An Empirical Analysis." *Journal of Accounting and Public Policy* 32: 68–88.

Richardson, G., G. Taylor, and R. Lanis. 2016. "Women on the Board of Directors and Corporate Tax Aggressiveness in Australia: An Empirical Analysis." *Accounting Research Journal* 29: 313–331.

Ross, S. A. 1973. "The Economic Theory of Agency." *American Economic Review* 63: 134–139.

Sarhan, A. A. 2024. "Corporate Social Responsibility and Tax Avoidance: The Effect of Shareholding Structure: Evidence From the UK." *International Journal of Disclosure and Governance* 21: 1–15.

Sauerwald, S., and W. Su. 2019. "CEO Overconfidence and CSR Decoupling." *Corporate Governance* 27: 283–300.

Shocker, A. D., and S. P. Sethi. 1973. "An Approach to Incorporating Societal Preferences in Developing Corporate Action Strategies." *California Management Review* 15: 97–105.

Taylor, G., and G. Richardson. 2014. "Incentives for Corporate Tax Planning and Reporting: Empirical Evidence From Australia." *Journal of Contemporary Accounting and Economics* 10: 1–15.

Timbate, L. 2023. "CSR and Corporate Taxes: Substitutes or Complements." *Business Research Quarterly* 26: 327–346.

Velte, P. 2023a. "Determinants and Consequences of Corporate Social Responsibility Decoupling. Status Quo and Limitations of Recent Empirical Quantitative Research." *Corporate Social Responsibility and Environmental Management* 30: 2695–2717.

Velte, P. 2023b. "Determinants and Financial Consequences of Environmental Performance and Reporting: A Literature Review of European Archival Research." *Journal of Environmental Management* 340: 117916.

Velte, P. 2024. "Sustainable Board Governance and Environmental Performance. European Evidence." *Business Strategy and the Environment* 33: 3397–3421.

Velte, P., and M. Stawinoga. 2020. "Do Chief Sustainability Officers and CSR Committees Influence CSR-Related Outcomes? A Structured Literature Review Based on Empirical-Quantitative Research Findings." *Journal of Management Control* 31: 333–377.

Wintoki, M. B., J. S. Linck, and J. M. Netter. 2012. "Endogeneity and the Dynamics of Internal Corporate Governance." *Journal of Financial Economics* 105, no. 3: 581–606.