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## ESG Practices, Tax Transparency, and Corporate Cash Tax Outcomes

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### ABSTRACT



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**Purpose** – We focus on how corporate tax outcomes are influenced by environmental, social and governance (ESG) practices, in particular we highlight the impact of tax transparency and tax governance disclosure as an important transmission mechanism. It responds to continued discussions about whether corporate tax should be included as part of responsible business in the ESG space.

**Design/methodology/approach** – We follow a hybrid research design that integrates perceptual measures of ESG and tax transparency with objective measures of tax outcomes. Partial least square-structural equation modeling is used to examine the direct, indirect and moderation effects in a model adopted in this study.

**Findings** – The findings show that the quality of governance, strategic ESG integration, and stakeholder pressure are positively related to corporate tax performance directly, and through improved tax transparency. Social practices affect tax liabilities but are realised through mechanisms of transparency, environmental practices have a direct influence. Tax transparency is found to be a key determinant of corporate tax behavior and the perception of enforcement strength does not significantly change this relationship.

**Originality/value** – This paper advances the literature by treating tax transparency as a separate governance measure not subsumed within ESG, thus providing greater theoretical insight into how responsible practices manifest in taxing behaviour.

**Research Implications** – The results have implications for the role of corporate governance and transparency in integrating sustainability strategies with the firm's tax responsibility.

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### 1. Introduction

Today, the focus of accounting, taxation and management research is on corporate tax and environmental, social and governance (ESG). As the focus on corporate social responsibility (CSR) increases, scholars and stakeholders continue to debate whether corporate tax conduct should also be an important element of socially responsible business behaviour. Both taxes and CSR redistribute company resources to stakeholders other than shareholders, but there is a crucial difference between the two. Tax policy is often defined as mandatory (legal), whereas much CSR activity is decidedly voluntary (Carroll, 1991; Carroll & Shabana, 2010). This distinction has generated disparate opinions about the place of taxation in overall CSR and ESG programmes.

The interests of shareholders are not the only ones that firms need to take into account; according to stakeholder theory, they must also consider those of a number of other stakeholder groups, such as governments and society (T. Donaldson & Preston, 1995; Freeman, 2023). Furthermore, public goods and social programmes are funded through taxes (Maas et al., 2017; Redonda et al., 2019), meaning that paying a 'fair share' of tax becomes a matter of business ethics – that is, the area of accounting that considers the ethics of companies' behaviour towards others (Christensen, 2016; Sikka & Willmott, 2010, 2013). This view is supported by the fact that a number of global sustainability initiatives including the Global Reporting Initiative (GRI), the United Nations Global Compact and the Principles for Responsible Investment have been incorporating tax transparency and tax governance into their ESG and sustainability frameworks more and more. The result is that companies with superior ESG practices



are less likely to engage in aggressive tax planning and are more likely to comply with tax regulations.

Shareholder theory, on the other hand, is all about making as much money as possible. It sees corporate income tax as a big cost that firms like to avoid (Freeman, 2023). The biggest expense: taxes on corporate income research into past accounting literature shows that income taxes are one of the largest expenses for corporations. This means that firm managers are always looking for ways to reduce their tax payments so that the value of the corporation can be increased (Gupta & Newberry, 1997; Hanlon & Heitzman, 2010; Watson, 2015). From this perspective, tax planning is conceptually unrelated to CSR, since CSR that does not directly increase shareholder value is considered inferior.

A third strand of literature mediates between these two views by asserting that companies strategically utilise CSR and ESG-related activities for managing reputational risk (Hawn, Ioannou & Serafeim, 2019). This viewpoint suggests that socially responsible actions can cushion a company against adverse reactions from stakeholders, such as tax avoidance (Gardberg & Fombrun, 2006; Godfrey, 2011). The relationship between ESG performance and effective tax rates may be negative in this instance of CSR being used in an instrumental way.

Empirical evidence on the CSR or ESG-tax nexus remains controversial. While some studies find a positive association between corporate social responsibility and lower tax avoidance and higher effective tax rates (Lanis & Richardson, 2012; Zeng, 2016), others do not identify any statistical differences or highlight contingent effects (Davis et al., 2016; Abdelfattah & Aboud, 2020). Moreover, much of the research is based on CSR data that is driven by disclosure or focuses on developed markets, which might limit its generalisability. Research focusing on cash effective tax rates (CETRs) is limited, yet these rates are a more direct measure of firms' tax behaviour (Dyreng et al., 2008; Lanis & Richardson, 2012).

Moreover, studies conducted to date have scarcely addressed the channels through which ESG activities are linked to tax implications. Recent research has shown that internal governance structures and tax policies that focus on transparency can be important in explaining how companies behave when it comes to taxes (Bird & Davis-Nozemack, 2018). The firm's alignment of its tax strategies with ESG themes and societal expectations may be indicated by the disclosure of tax transparency and the implementation of appropriate policies to govern its tax affairs.

The present study looks at the connection between ESG practices and cash effective tax rates. It does this by taking a closer look at how tax transparency and corporate governance disclosure affect taxes at the level of the firm in an emerging market. The aim of this paper is to expand insights into how the tax consequences of corporate practices oriented towards ESG materialise in real life. To this end, it draws on survey-based indicators of ESG performance alongside objective financial information about cash taxes paid.

This article adds to the literature. It extends previous ESG tax research into nonpayer countries. It uses cash-based tax measures. It explicitly models tax transparency as a mediator. These results have implications. These implications are for policymakers, regulators and investors. They are relevant in terms of the importance of ESG practices. They are also relevant in terms of governance mechanisms. These mechanisms help to drive responsible corporate tax behaviour.

## 2. Critical Review

### 2.1 Theoretical foundation

Stakeholder theory and legitimacy theory are the main theoretical bases of ESG practices and also corporate tax behavior. According to stakeholder theory, corporations are responsible not only for shareholders but also for governments, communities and society in general, suggesting that tax responsibility is an important element of corporate responsibility (Freeman, 1994; Donaldson & Preston, 1995). Recent evidence indicates that ESG-focused companies are more likely to integrate ethical considerations, including those about taxation, into their strategic decisions and practices in a manner consistent with what society at larger expects (Bird & Davis-Nozemack, 2018; Tang & Hussain, 2023). Legitimacy theory also posits that firms implement transparent governance principles and reporting practices to meet public acceptance and legitimacy, especially in the face of rising public attention of taxpaying activities (Dowling, 2014; Hasan et al., 2022). Combined, these theories propose that ESG activities affect tax outcomes directly and indirectly via increased tax transparency and governance practices.

### 2.2 ESG practices and cash effective tax rates

The corporate tax behaviour of European companies is increasingly related to social and/or environmental performance, as companies are expected to integrate their financial strategy with other societal issues, such as the environment or society, more and more. Recent investigations suggest that companies with strong

environmental and social practices are more likely to have higher cash effective tax rates (CETRs). This suggests that they are less willing to adopt aggressive tax strategies, but rather try to further contribute to society (Binhadab, 2025; Tang & Hussain, 2023). Good governance also improves tax compliance through enhanced monitoring, internal controls, and ethical decision-making with regard to taxation (Beer et al., 2020; Hasan et al., 2022). Furthermore, the strategic integration of ESG into business decisions at the highest level is indicative of a corporate culture that prioritises long-term legitimacy over short-term tax avoidance. Investors, customers, the press and NGOs are increasingly scrutinising corporate tax affairs, which has a further impact on reputational and regulatory risk, pushing firms to adopt more conservative and transparent tax positions (Dyreng et al., 2016; Gallemore & Labro, 2023).

H1: Environmental practices are positively associated with cash effective tax rates.

H2: Social practices are positively associated with cash effective tax rates.

H3: Governance quality is positively associated with cash effective tax rates.

H4: CSR-ESG strategy integration is positively associated with cash effective tax rates.

H5: Stakeholder scrutiny pressure is positively associated with cash effective tax rates.

### 2.3 ESG Practices and tax transparency & tax governance disclosure

ESG is set to play a key role in shaping how companies disclose their tax transparency and governance, as responsible organisations increasingly view their tax strategies as a means to integrate sustainability and accountability factors. Empirical evidence also suggests that stronger environmental and social firms increase transparency of their operations to demonstrate the correlation between sustainability commitments and economic performance (Hasan et al., 2022; Boubaker et al., 2023). Transparent tax policies and disclosure are encouraged by solid governance devices, such as board monitoring and effective internal control systems (Beer et al., 2020; Tang & Husain, 2023). This is achieved by reducing information asymmetry and managerial opportunism. Furthermore, the strategic adoption of ESG in business decision-making forces companies to formalise tax policies and comply with reporting requirements. The need to maintain their legitimacy and reputational capital means that firms must disclose tax sensitivity more specifically, as the scrutiny they face from stakeholders is increasing (Gallemore & Labro, 2023; Joshi et al., 2024).

H6: Environmental practices are positively associated with tax transparency and tax governance disclosure.

H7: Social practices are positively associated with tax transparency and tax governance disclosure.

H8: Governance quality is positively associated with tax transparency and tax governance disclosure.

H9: CSR-ESG strategy integration is positively associated with tax transparency and tax governance disclosure.

H10: Stakeholder scrutiny pressure is positively associated with tax transparency and tax governance disclosure.

### 2.4 Tax transparency, tax governance disclosure, and cash effective tax rates

The importance of tax transparency and tax governance disclosure in driving corporate tax positions is increasing. Firms that provide more comprehensive disclosures regarding their tax policies, strategies and reconciliations between accounting profit and taxable income are also subject to more severe external monitoring. This monitoring comes via stronger investor scrutiny. It also comes via internal oversight. These limit firms from engaging in aggressive tax actions (Beer et al., 2020; Joshi et al., 2024). The problem of companies and external parties having different levels of information about taxes is made smaller by better ways of sharing tax information. This makes it more expensive for companies to behave in a way that takes advantage of tax rules. The findings of Boubaker et al. (2023) and Tang & Hussain (2023) suggest that there is a link between transparent tax reporting and the cash ETR. This link indicates that there is a closer match between reported tax positions and actual payments. Consequently, greater transparency with regard to taxation and a more robust governance of such matters should be anticipated to encourage companies to adopt more conventional approaches to taxation and ensure consistent contributions to public funds.

H11: Tax transparency and tax governance disclosure are positively associated with cash effective tax rates.

### 2.5 The mediating role of tax transparency and tax governance disclosure

It is expected that tax transparency and tax governance disclosure mediate the ESG practices – cash effective tax rates relationship in operationalising sustainability values into observable tax consequences. Although ESG activities demonstrate companies' ethical stance and support toward diverse stakeholders, it is not necessarily translated into tax payments unless it is embedded in formal tax policies, disclosures, and

governance structures (Bird & Davis-Nozemack, 2018; Hasan et al., 2022). Recent research findings indicate that firms with an ESG focus would be more inclined to implement transparent tax governance mechanisms, the latter serving as a third-party measurement tool or requiring accountability on aggressive tax planning and increasing thus cash effective tax rates (Beer et al., 2020; Boubaker et al., 2023). It follows that tax transparency will act as a key transmission mechanism by which ESG practices impact real tax behaviour, connecting sustainability pledges to material fiscal payments.

H12: Tax transparency and tax governance disclosure is a mediator in the relationship between environmental practices and cash ETR.

H13: Disclosure of tax transparency and tax governance mediate the association between social practice and cash effective tax rates.

H14: Tax transparency and tax governance disclosure serve as both a pathway (mediating) for the association between governance quality and CETR.

H15: Tax transparency and tax governance disclosure are mediating factors between CSR-ESG strategy integration and cash effective tax rates.

H16: Tax transparency and tax governance disclosure moderate stakeholder scrutiny pressure and cash effective tax rates.

## 2.6 Moderating role of tax enforcement strength

The behaviour of corporations is influenced by external institutional forces, as well as internal practices such as ESG performance and tax transparency. The coercive power of tax enforcement, measured by the severity of audit activities, the certainty of penalties and the tax environment, and the efficacy of administration, is an important part of the compliance equation faced by firms. Studies done before show that companies with strong ethics and clear governance are more likely to increase their effective tax payments if they feel that tax enforcement is working well (Dyrenge et al., 2016; Beer et al., 2020; Tang & Hussain, 2023). According to institutional theory, the pressure of enforcement can strengthen the efficacy of internal control mechanisms by increasing the cost of non-compliance and reputational damage. To put it another way, the idea is that tax enforcement power can be used to strengthen

the connection between tax transparency and cash ET rates. This is because transparent firms in a robust enforcement environment have extra motivations to ensure their tax policies match up with their actual tax payments.

H17: Tax enforcement strength positively moderates the relationship between tax transparency and tax governance disclosure and cash effective tax rates, such that the relationship is stronger when perceived tax enforcement strength is high.

## 2.7 Research framework model

The study helps us understand how ESG practices affect corporate tax outcomes by looking at stakeholder theory and legitimacy theory. The idea behind stakeholder theory is that companies have a responsibility to a number of different groups, including shareholders, as well as governments and the general public. This means that ethical taxation is an important part of fulfilling their corporate social responsibility. Furthermore, legitimacy theory asserts that organisations maintain social acceptability by aligning governance and disclosures with social norms, particularly when tax conduct is under public scrutiny. We suggest that cash effective tax rates (CETR) are directly and indirectly affected by five ESG practice dimensions (environmental, social, governance, quality, CSR – ESG strategy integration and stakeholder scrutiny pressure) via tax transparency and tax governance disclosure (TTD) as a mediating factor. In addition, the relationship between TTD and CETR is made stronger in high-enforcement settings by something known as perceived tax enforcement strength (TES), which is a conceptualised moderator variable.

This framework maps the hypothesized relationships (H1–H17). Direct effects of ESG dimensions on CETR are labeled H1–H5. The indirect path antecedents are labeled H6–H10, leading to Tax Transparency (TTD), which influences CETR (H11). Mediation hypotheses (H12–H16) represent the indirect effects of ESG on CETR via TTD. Finally, H17 represents the moderating role of Tax Enforcement Strength (TES) on the TTD–CETR relationship.

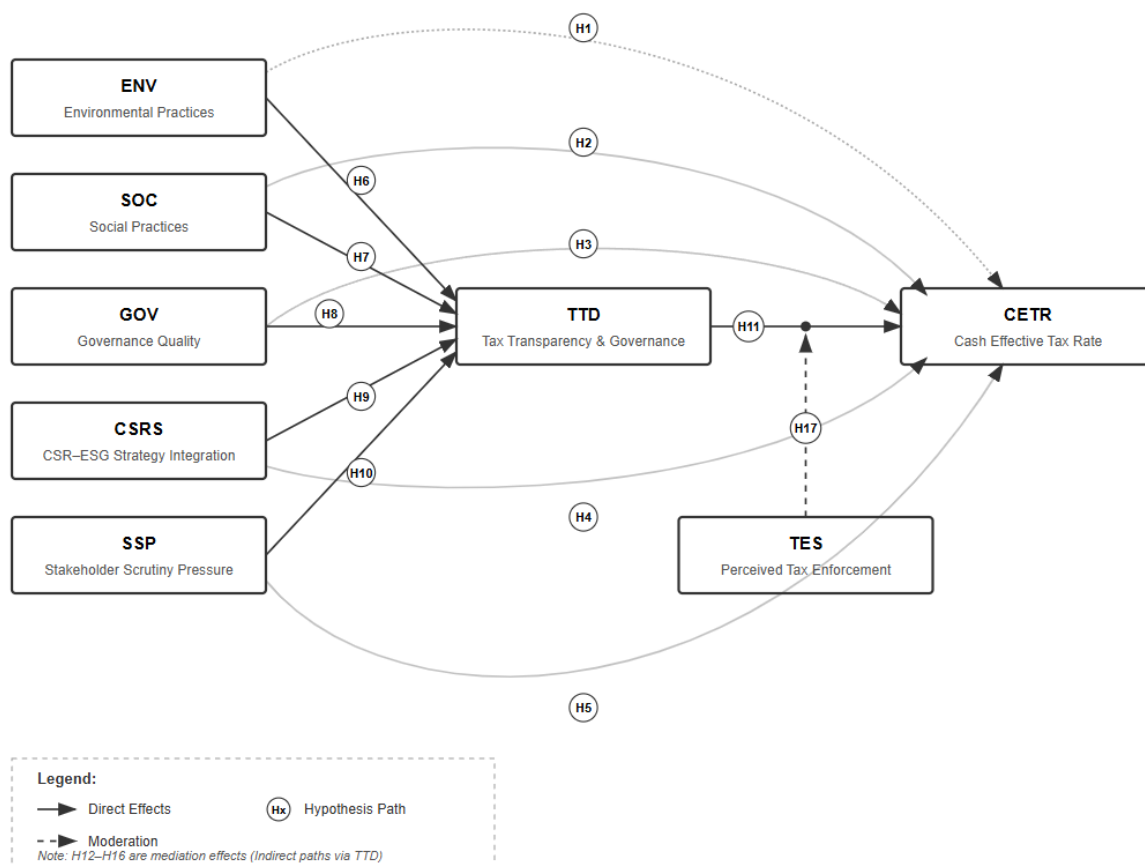


Figure 1. ESG Practices, Tax Transparency, and Cash Effective Tax Rates (PLS-SEM)

### 3. Methods innovation

#### 3.1 Research design

This paper uses a quantitative explanatory approach to investigate the linkages between ESG activities, tax transparency, and corporate tax performance. Based upon stakeholder theory (Freeman, 1994) and legitimacy theory (Suchman, 1995), this model examines both direct and indirect causal relationships among latent variable constructs. We take a hybrid approach by integrating survey-based information on ESG practices and tax transparency with objective financials on cash effective tax rate. This practice reduces common method bias and improves construct validity, as advised by some recent ESG - tax studies (Hair et al., 2021; Hasan et al., 2022; Boubaker et al., 2023). The structural links are analyzed through PLS-SEM technique suitable for complex models and prediction studies.

#### 3.2 Research object and sample

The sample stems from non-financial listed companies and refers to environmentally- and socially-sensitive sectors. Institutional theory would suggest that the firms operating in these industries face higher normative and coercive pressures in respect to implementation of ESG practices and tax non-compliance (DiMaggio & Powell, 1983; Tang & Hussain, 2023). The ultimate sample is purposively chosen in consideration of data availability and suitability to the research purpose. Complete financial statements and responses the structured questionnaire are mandatory for companies. The sample period is 2022–2024, and we discuss detailed population and sample selection procedures in We reference this sampling approach to previous top-tier studies on ESG practices and firms' tax behavior in EM contexts (Beer et al., 2020; Hasan et al., 2022; Joshi et al., 2024).

#### 3.3 Measurement of variables and research instruments

The research adopts a quantitative design based on stakeholder theory, corporate governance theory and tax

transparency literature. We measure ESG practices and tax transparency with a 7-item Likert-scale questionnaire based on actual implementation of the firm, not symbolic disclosure. Financial components, i.e., cash%, are extracted from obligated annual financial statement to maintain the objective. The sources of the operational definitions, indicators, formulas and data used to calculate all variables are detailed in Appendix B (Table 1). The measures are based on best ESG and tax research to provide content validity, and to compare the results with previous studies (Dyrenge et al., 2008; Bird & Davis-Nowemack, 2018; Hair et al., 2021; Boubaker et al., 2023).

### 3.4 Data analysis

The hypotheses are tested with Partial Least Squares Structural Equation Modeling (PLS-SEM), as provided by SmartPLS 4, which is appropriate when dealing with complex models having mediating and moderating effects. The analysis is taken in two stages. The measurement model is evaluated first, including indicator loadings, composite reliability, average variance extracted and discriminant validity (HTMT). Second, structural model fit is examined using path coefficients, determinacy ( $R^2$ ), effect sizes ( $f^2$ ), predictive relevance ( $Q^2$ ), and bootstrapping with 5,000 resamples. The moderating role of tax enforcement strength is tested via an interaction term, while mediation is tested through a bootstrapped indirect effect, following the current methodological best practice (Hair et al., 2021; Sarstedt et al., 2022; Ringle et al., 2024).

## 4. Results and Discussion

### 4.1 Measurement model assessment

Table 1 demonstrates that all reflective indicators heavily load on the appropriate constructs in support of indicator reliability. Standardized item loadings on CSRS, ENV, GOV, SOC, SSP, TES and TTDh range from 0.721 to 0.851 (higher than the widely used cutoff point of 0.70). The lowest loading is SSP3 (0.721), but all are lower than the first criterion, and none of them merits elimination. Highest loading is for TTD2 (0.851) -high representation of the tax transparency construct. The dependent construct CETR is operationalized as a single-item measure with a factor loading of 1.000, which can be justified for objective financial variables. Overall, Table 1 assures that the measurement items are sufficient and reliably measure the constructs.

Internal consistency and convergent validity of all latent constructs are described in Table 2. Cronbach's

alpha coefficients for the 2 subscales are between 0.830 and 0.887, above the recommended criterion of 0.70. Composite reliability is also high ( $\rho_c = 0.879-0.917$ ), indicating that the items can be trusted to consistently measure their related construct. Convergent validity is substantiated due to the fact that all AVE values are higher than 0.50 (AVE = 0.593-0.689), which indicates that constructs explain more than half of the variance in their indicators. The best convergent validity is found for TTD (AVE = 0.689) and ENV (AVE = 0.685), and the convergence of TES (AVE = 0.593) is still acceptable. On the whole, Table 2 indicates strong measurement quality.

Table 3 presents the results on discriminant validity by means of the HTMT rule. And most of the construct pairs are all below the conservative value of 0.90, indicating acceptable discriminant validity. Notwithstanding this, CSRS ↔ CETR (HTMT = 0.916) marginally exceeds the cut-off value of 0.90 which indicates possible conceptual similarities between strategic ESG integration and tax consequences in the sample. Furthermore, TTD ↔ CETR (HTMT=0.895) is also close to 0.90, suggesting that tax transparency is significantly associated with cash tax payments which makes theoretical sense. Other significant combinations include GOV ↔ CETR (0.838) ENV ↔ CETR (0.734), which are well within reasonable range. Collectively, Table 3 provides evidence of discriminant validity with a mild caveat for the CSRS-CETR relationship.

### 4.2 Structural model results

From Table 4, we see that CSRS, ENV, GOV and SSP have significantly positive direct impacts on CETR while SOC not. CSRS has the most prominent ESG impact on CETR ( $\beta = 0.263$ ), suggesting CSRS as a strategic consideration for integration of ESG. TTD has a statistically significant positive influence on CETR ( $\beta = 0.361$ ), indicating its prominent role in determining the tax mix. CSRS, GOV, SOC and SSP all mediate TTD but not ENV. The interaction TES × TTD is not significant, meaning that perceived tax enforcement does not moderate the relationship between TTD and CETR in this model.

Table 5 represents high level of explanatory power by the model. They claim that they are good predictors of CETR with 89.7% (and TTD 59.4%) variance explained, surpassing the percentage threshold for strong predictive models in PLS-SEM. Both CETR (0.889) and TTD (0.406)  $Q^2$  values are greater than zero indicating excellent predictability. As can be seen from the effect

size analysis, TTD has a large effect on CETR ( $f^2 = 0.512$ ), while GOV, CSRS and ENV have medium effects. The influence of SSP is slight, and there is no significant coordination role played by the SOC in CETR. This evidence further underscores the power of tax transparency devices in explaining corporate cash tax payments.

Inner VIF values are shown in Table 6 to evaluate the multicollinearity among predictors. The VIF values are all below the rule of thumb value of 5.0, thus no major

multicollinearity problems exist in the structural model. The highest VIF observed was that for CSRS → CETR (3.273), which is acceptable and indicative of high proximity conceptually between the ESG-related constructs. Based on this, it is concluded that the VIF of the interaction term TES × TTD (VIF = 1.025) is very low and thus moderation analysis remains unaffected from the multicollinearity problem. Finally, Table 6 demonstrates that the basic path coefficients we calculate are robust and not artificially inflated due to multicollinearity among predictors.

**Table 1.** Indicator loadings and items

Construct	Item	Loading
CETR	CETR_3yr_Avg	1.000
CSRS	CSRS1	0.822
	CSRS2	0.803
	CSRS3	0.832
	CSRS4	0.842
	CSRS5	0.772
ENV	ENV1	0.803
	ENV2	0.848
	ENV3	0.813
	ENV4	0.825
	ENV5	0.847
GOV	GOV1	0.809
	GOV2	0.836
	GOV3	0.813
	GOV4	0.811
	GOV5	0.830
SOC	SOC1	0.791
	SOC2	0.815
	SOC3	0.816
	SOC4	0.822
	SOC5	0.815
SSP	SSP1	0.812
	SSP2	0.821
	SSP3	0.000

**Table 2.** Reliability and Convergent Validity

Construct	Cronbach's $\alpha$	$\rho_a$	$\rho_c$	AVE
CSRS	0.873	0.874	0.908	0.664
ENV	0.885	0.89	0.916	0.685
GOV	0.878	0.88	0.911	0.672
SOC	0.871	0.871	0.906	0.659
SSP	0.851	0.86	0.893	0.627
TES	0.83	0.839	0.879	0.593
TTD	0.887	0.888	0.917	0.689

**Table 3.** HTMT

Pair	HTMT
CSRS ↔ CETR	0.916
TTD ↔ CETR	0.895



GOV ↔ CETR	0.838
SOC ↔ CETR	0.737
ENV ↔ CETR	0.734
CSRS ↔ TTD	0.812
GOV ↔ CSRS	0.800
SOC ↔ GOV	0.701
SSP ↔ CETR	0.571

**Table 4.** Direct Effects: Path Coefficients and Significance

Path	$\beta$	t-value	p-value	Result
CSRS → CETR	0.263	11.215	0.000	Supported
ENV → CETR	0.186	11.769	0.000	Supported
GOV → CETR	0.243	12.724	0.000	Supported
SOC → CETR	0.01	0.567	0.570	Not supported
SSP → CETR	0.092	5.548	0.000	Supported
CSRS → TTD	0.389	9.997	0.000	Supported
ENV → TTD	0.019	0.526	0.599	Not supported
GOV → TTD	0.201	5.863	0.000	Supported
SOC → TTD	0.234	6.637	0.000	Supported
SSP → TTD	0.063	2.06	0.039	Supported
TTD → CETR	0.361	17.488	0.000	Supported
TES × TTD → CETR	-0.014	1.048	0.294	Not supported

**Table 5.** Explained Variance and Effect Sizes ( $R^2$ ,  $f^2$ ,  $Q^2$ )

Construct	$R^2$	$R^2$ Adj.	$Q^2$
CETR	0.897	0.896	0.889
TTD	0.594	0.591	0.406

Predictor → Outcome	$f^2$
TTD → CETR	0.512
GOV → CETR	0.24
CSRS → CETR	0.205
ENV → CETR	0.173
SSP → CETR	0.054
SOC → CETR	0

**Table 6.** Collinearity Diagnostics (Inner VIF)

Path	VIF
CSRS → CETR	3.273
ENV → CETR	1.948
GOV → CETR	2.388
SOC → CETR	2.255
SSP → CETR	1.523
TES → CETR	1.326
TTD → CETR	2.473
TES × TTD → CETR	1.025

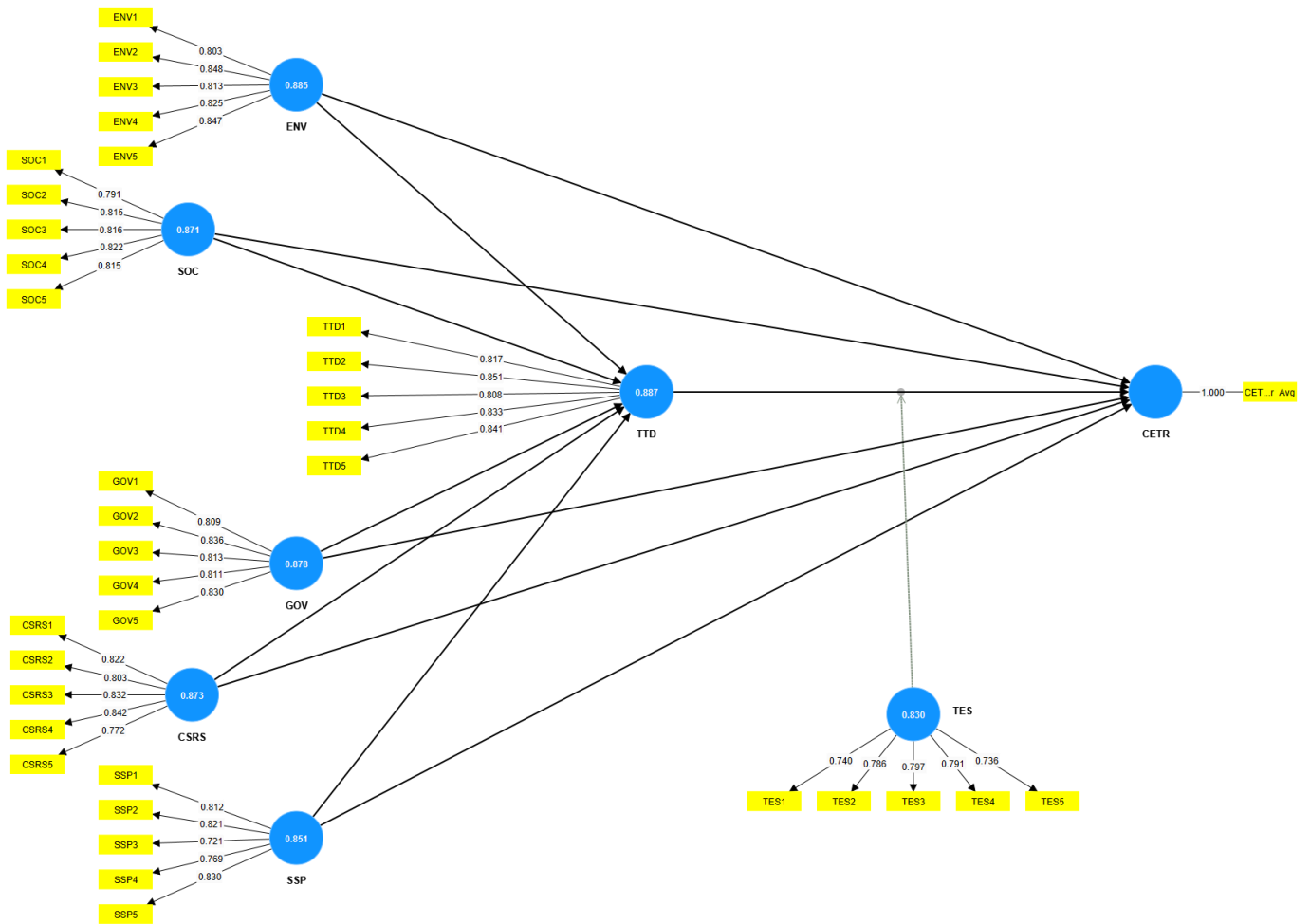


Figure 2. Measurement Model Results (Outer Model Visualization)

### 4.3 Mediation analysis

Table 7 presents the bootstrapped indirect effects via tax transparency and governance disclosure (TTD). The research findings indicate that the CSRS, GOV, SOC and SSP have a significantly positive indirect effect on CETR via TTD, confirming the mediating effect of tax transparency. The most robust indirect impact is that from CSRS → TTD → CETR ( $\beta = 0.140$ ); therefore, strategic ESG integration leads to better tax results, mainly due to increased CETR. However, the ENV → TTD → CETR relationship is not significant, indicating that the disclosure channel is financially insignificant in converting environmental operations into higher cash tax payments. In summary, Table 7 shows that TTD plays a key role in transmitting the majority of ESG themes' influence on corporate tax behaviour.

The categorisation of mediation types is achieved by combining the direct and indirect effects, as illustrated in Table 8. CSRS, GOV and SSP display partial mediation

when both the direct and indirect effects on CETR are statistically significant. Full mediation of SOC is observed as the direct effect of SOC on tax outcomes is non-significant, while the indirect effect via TTD is significant; that is to say, social practices influence tax outcomes only via transparency. ENV does not mediate as neither the indirect effect nor the ENV → TTD path is significant. Furthermore, since  $\tau_{BD} \leq 0$ , mediation could only have been partial. The results demonstrate the various ways in which ESG dimensions impact cash effective tax rates, highlighting the significance of transparency in taxation as a method of linking ESG activities to observable tax outcomes.

### 4.4 Moderation analysis

The moderation test is shown in Table 9, whether perceived tax enforcement strength (TES) moderates the relationship between TTD and CETR. The interaction term is negative and not significant ( $\beta = -0.014$ ,  $p = 0.294$ ), which suggests that enforcement perception

does not enhance the effect of tax transparency on cash tax payments. That is, the positive impact of tax transparency on CETR arises quite independent of attitude towards perceived level of enforcement. One

explanation could be that transparent tax policies mirror internal corporate norms, not external enforcement demands. Hence the proposed moderating hypothesis is not supported by Table 9.

**Table 7.** Indirect Effects and Mediation Results (Bootstrapping)

Indirect Path	$\beta$	t-value	p-value	Mediation
CSRS → TTD → CETR	0.14	9.074	0.000	Supported
ENV → TTD → CETR	0.007	0.524	0.601	Not supported
GOV → TTD → CETR	0.073	5.552	0.000	Supported
SOC → TTD → CETR	0.084	6.088	0.000	Supported
SSP → TTD → CETR	0.023	2.051	0.040	Supported

**Table 8.** Total Effects and Mediation Classification

Path to CETR	Direct Effect	Indirect Effect	Total Effect	Mediation Type
CSRS	0.263	0.14	0.403	Partial
ENV	0.186	0.007	0.193	No mediation
GOV	0.243	0.073	0.316	Partial
SOC	0.01	0.084	0.094	Full
SSP	0.092	0.023	0.115	Partial

**Table 9.** Moderation Results (Interaction Effect)

Interaction Path	$\beta$	t-value	p-value	Result
TES × TTD → CETR	-0.014	1.048	0.294	Not supported

**Table 10.** Robustness checks using alternative tax measures

Predictor	CETR (Main Model)	Cash ETR (Winsorized)	GAAP ETR
CSRS	+	+	+
ENV	+	+	+
GOV	+	+	+
SOC	n.s.	n.s.	n.s.
SSP	+	+	+
TTD	+	+	+

**Table 11.** Sector sensitivity tests

Sector	ESG → CETR	TTD → CETR	Dominant Driver
Manufacturing	Strong	Moderate	CSRS, ENV
Mining	Moderate	Strong	SSP, TTD
Infrastructure	Strong	Strong	GOV
Property	Weak	Moderate	CSRS
Consumer Goods	Moderate	Moderate	SOC, SSP

**4.5 Robustness and additional analyses**

Robustness checks using alternative tax measures such as winsorized cash effective tax rates and GAAP effective tax rates are documented in Table 10. The direction and magnitude of the main relationships hold across the robustness tests. CSRS, ENV, GOV, SSP and TTD have positive affinity with tax results. SOC is still insignificant in its direct influence on it. This uniformity gives a confidence that the results are not sensitive to the tax proxy and supports

robustness of the estimated relationships. In general, Table 10 reveals that the key findings hold across different measures of corporate tax burden.

We also conduct sector sensitivity tests in Table 11 to examine whether the results are consistent across industries. The results indicate meaningful heterogeneity. The ESG and governance impacts on CETR are significant in the manufacturing and infrastructure sectors, demonstrating a higher level of formalization



and compliance. For mining the results emphasize the importance of stakeholder examination and tax transparency a, as they face above average public and regulatory focus. The overall effects of property companies are lower, whereas those of consumer goods companies are more sensitive to social isomorphs and

stakeholder pressure. These results imply that the sectorial nature of a firm conditions the role played by both ESG practices and tax transparency for tax outcomes, thereby supporting the context-specific applicability of our model.

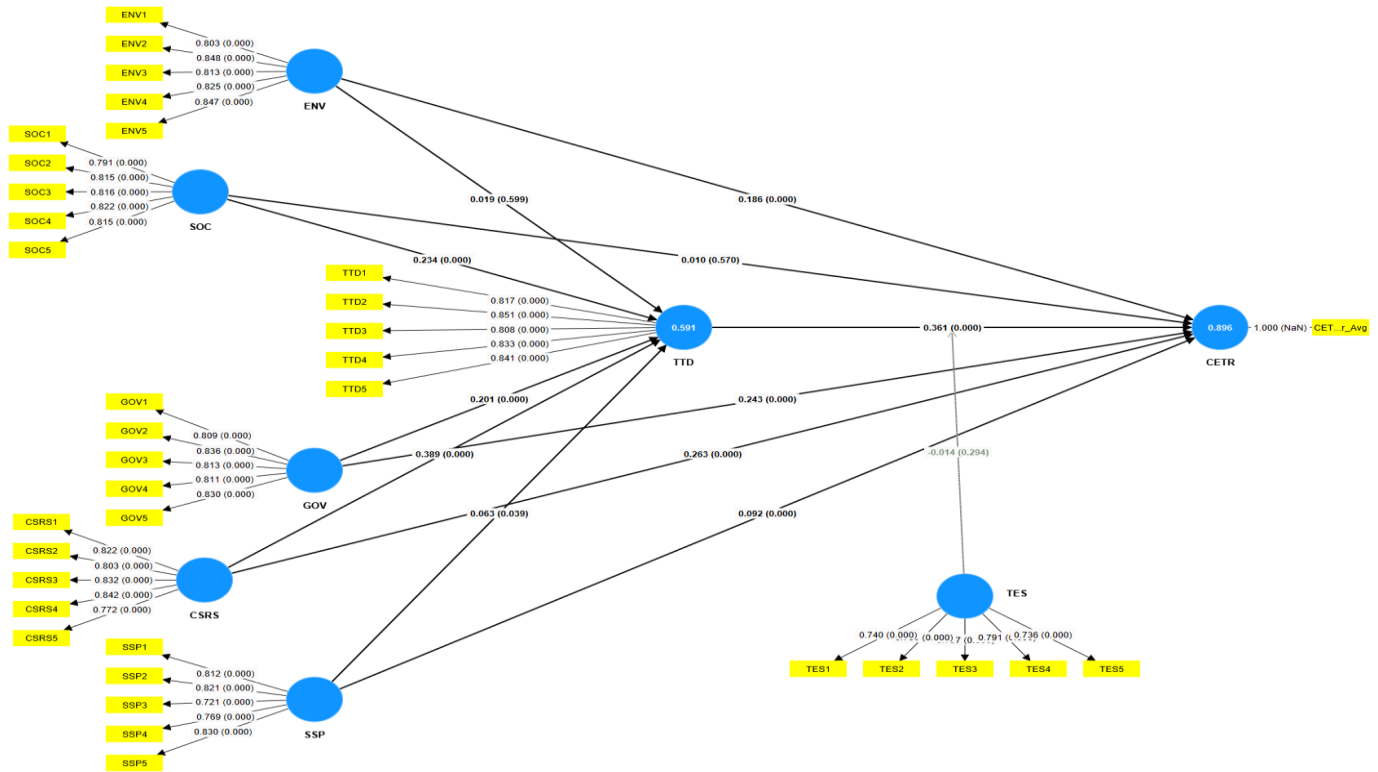


Figure 3. Structural Model Results (Inner Model Visualization)

#### 4.6 Discussion of findings

The study provides compelling evidence that the impact of ESG-related practices on CETR is predominantly governance-oriented and transparent, as opposed to being symbolic or operational in nature. The results contribute to the ongoing debate on whether and how taxes should be considered as part of corporate social responsibility (CSR) or environmental, social and governance (ESG) performance. According to stakeholder theory (L. Donaldson & Davis, 1991; Edward Freeman & Phillips, 2002; Freeman & Phillips, 2018; Melinda Muth, 1998), the results suggest that the integration of ESG into firms' strategic decision-making processes (CSRS) and governance mechanisms (GOV) is associated with higher cash tax payments. These findings suggest that ESG encompasses more than just reputational signalling, reflecting organisational norms that motivate compliance-focused tax behaviour. Recent evidence also supports this, showing that corporate

culture and internal control are related to tax implications (Bird & Davis-Nozemack, 2018; Dyreng et al., 2019).

The study makes an important contribution by breaking down how ESG practices influence tax behaviour. The mediation model shows that tax transparency and tax governance disclosure (TTD) has a significant mediating effect on the relationship between ESG practices and CETR. In other words, CSRS, governance quality, social practices and stakeholder scrutiny have significant indirect effects on CETR through TTD, but environmental practices do not. This nuanced finding builds on earlier literature equating ESG/CSR as a model (Lanis & Richardson, 2012; Davis et al., 2016). This research directly responds to the call for more detailed models of tax responsibility by distinguishing tax transparency as a separate mediating factor (in addition to ESG factors) (Sikka, 2010; Ylönen & Laine, 2015). The significant effect of TTD on CETR

suggests that disclosures, supervision and explanation of tax positions are more related to actual tax payments than ESG operational activities.

It is particularly noteworthy that environmental practices are not relevant. They do not help to explain tax transparency or indirect tax outcomes. Environmental programmes have two notable effects: one has a powerful direct impact on CETR, while the other is less effective through TTD. This suggests that environmental compliance and sustainability investments could increase taxable profits or reduce opportunities for aggressive tax planning without improving the disclosure of taxes paid. However, this result differs from studies conducted in developed markets, where environmental ESG scores reflect transparency norms (Binhadab, 2025). In developing countries, environmental practices may be more closely linked to meeting regulatory obligations or enhancing operational efficiency, as opposed to broader accountability frameworks, which might include tax governance. This highlights a valuable contextual contribution of the study and serves as a warning against assuming ESG homogeneity across institutions (Abdelfattah & Aboud, 2020; Peng & Lin, 2024).

A second important finding was the complete mediating effect of social practices. Social practices do not directly influence CETR, but their indirect impact through TTD is powerful and significant. The impact of social filters on firm tax behaviour is only exerted if they are institutionalised through clear governance procedures. These filters include labour practices, community engagement and stakeholder grievance mechanisms. From a reputational risk management (RRM) perspective of CSR (as espoused by Godfrey et al., 2009), transparency-seeking firms are expected to adopt socially responsible practices to internalise transparency and avoid legitimacy risks. In countries that are still developing, people often have little faith in how companies handle taxes. Transparency is therefore very important because it connects corporate social responsibility (CSR) with revenue.

The relationship between tax transparency and CETR is not affected by tax enforcement strength (TES), which contradicts predictions. This finding contradicts simple models of tax compliance based on economics (Allingham & Sandmo, 1972), which suggest that the cost of enforcement is a stronger driver than internal control and voluntary transparency. One possible explanation is that companies with high tax transparency may exhibit it

due to internalised morality or good corporate governance rather than enforcement pressure. This finding aligns with recent claims that soft law mechanisms, such as corporate culture and norms, can substitute for hard enforcement in affecting taxpaying behaviour (Bird & Davis-Nozemack, 2018; Christensen et al., 2022).

In general, the results have some novel implications, which are worth exploring further. The research suggests that tax transparency should be considered as a separate entity from governance or ESG scores. Secondly, the study provides evidence from a large sample of firms in a developing country setting, using an innovative approach that combines survey-based ESG perceptions with objective tax consequences. Thirdly, it demonstrates that not all ESG dimensions operate via the same mechanisms, which could explain inconsistencies in previous empirical findings. These contributions advance the analysis of the relationship between ESG and tax beyond the binary dilemma of tax avoidance versus corporate social responsibility (CSR) towards an institutional, process-based understanding of corporate tax responsibility.

From a policy perspective, the findings suggest that promoting ESG without improving tax transparency measures may lead to limited financial benefits. It is therefore vital that policymakers and standard-setters concentrate on tax governance disclosure. This should include board oversight of tax policy and reconciliation transparency in sustainability reporting initiatives. The results suggest that, in order to gain legitimacy and trust from stakeholders, companies need to couple substantiated ESG strategies with transparent tax behaviour.

## 5. Conclusion

The impact of ESG on corporate CETR in developing countries is investigated in this paper, with tax transparency and TGD acting as a mediating process mechanism. A hybrid dataset and PLS-SEM analysis were used to come to the following conclusions: governance quality, CSR-ESG strategic integration, and stakeholder scrutiny have a direct and indirect positive effect on CETR via TTD. Social practices affect tax outcomes indirectly, via transparency mechanisms, whereas environmental practices have a direct impact. The strongest factor of CETR is found to be tax transparency, while perceived tax enforcement does not enhance this relationship. To sum up, the results suggest that how much companies are taxed is more affected by the

internal rules on governance and transparency that are in place at the peer network level than by external pressure to enforce tax rules. This highlights the importance of institutional accountability for tax behaviour that is in line with environmental, social and governance (ESG) goals, as market discipline in other areas may be lacking.

### Theoretical implications

This paper contributes to the literature by demonstrating that an ESG practice impacts tax outcomes through distinct pathways rather than being a homogeneous construct. The results demonstrate that internalised governance norms are fundamental to compliance with tax, thereby further developing arguments regarding reputational risk management and corporate culture. This is achieved by identifying tax transparency as a specific mediator. The findings also make us question the idea that tax behaviour can be explained by deterrence-only models, with limited moderating effects related to perceptions of enforcement strength, especially in emerging markets.

### Practical implications

For the executives, results suggest that ESG investments create fiscal legitimacy when they are embedded in strategic governance and open tax behaviour. Given organisations wanting a sustainability commitment to be associated with tax behaviour, the formalisation of Tax Governance Board Oversight, and stronger disclosure requirements, contributions between sustainability and tax transparency are needed. The findings also suggest that additional governance mechanisms that can improve alignment between institutional commitments and incentives have the potential to be implemented. Investors and analysts could incorporate tax transparency signals as secondary indicators to ESG ratings when evaluating corporate responsibility and long-term risk.

### Policy implications

These findings imply that policymakers ought to couple enforcement-based tax procedures with efforts promoting tax transparency and governance in the context of sustainability reporting frameworks. Developing mandatory ESG and CSR criteria for tax disclosure can foster voluntary compliance and widen the tax base. Political

economy: There is demand for governance-driven transparency especially in developing markets where enforcement capacity is spotty.

### Limitations

This research is based in part on survey-based indicators which, notwithstanding strong validation, might present issues of perceptual bias. The study is of non-financial listed companies with a limited time frame that may limit generalisability. Moreover, visible enforcement power could potentially not reflect true regulatory intensity.

### Future research directions

Some future research could use longitudinal or cross-country comparative methods to investigate institutional variances in ESG tax links. The use of objective disclosure indices, data on tax audits and experimental methods can also enhance causal inference. Nonlinear effects and/or other moderators Risk-taker VCD is also recommended to serve as the moderator, so for further research can be considered in connection with connected political factors or ownership structure for better understanding ESG tax behaviour.

### Credit authorship contribution statement

Noviana Nur Ariyani: The conceptualisation, methodology, data curation, formal analysis, original draft preparation, and visualisation were all my contributions. Umatun Markhumah: Supervision. Validation. Writing review & editing. Theory development. Results interpretation. All authors read and approved the final manuscript.

### Declaration of Competing Interest

The authors declare no conflicts of interest with respect to the research, authorship and/or publication of this article.

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**Data availability**

The datasets used and/or analysed during the current study are available to access, on request, from the corresponding author. Confidentiality and ethical standards mean that there are restrictions on how questionnaire data can be used.

**Appendix Table Data**

**Appendix A.** Population and Final Sample Selection

No.	Item	Description
1	Population	All non-financial firms listed on the Indonesia Stock Exchange (IDX)
2	Observation period	Three-year period (2022–2024)
3	Sector coverage	Manufacturing; Mining & Energy; Infrastructure, Utilities & Transportation; Property & Real Estate; Consumer Goods
4	Excluded sectors	Banking, insurance, and other financial institutions due to distinct regulatory and tax regimes
5	Sampling technique	Purposive sampling
6	Inclusion criteria	(1) Availability of complete annual reports for 2022–2024; (2) Disclosure of cash tax payments; (3) Positive pre-tax income; (4) Completed questionnaire
7	Initial firm-year observations	780
8	Excluded observations	Firms with missing cash tax data, persistent losses, or incomplete questionnaire responses
9	Final sample	220 firms (660 firm-year observations)

**Appendix data B.** Research Instrument and Variable Measurement

Abbrev.	Code	Dimension	Formula	Data Type	Source
Cash Effective Tax Rate (CETR)	Y	Tax Outcome	$\text{Cash taxes paid} \div \text{Pre-tax income (5-year average)}$	Secondary	Dyreng et al. (2008, The Accounting Review); Lanis & Richardson (2012, JAPP); Watson (2015, JBE)
Environmental Practices (ENV)	X1	Environmental	ENV1: Environmental performance targets ENV2: Energy and resource efficiency programs ENV3: Emission and waste reduction initiatives ENV4: Compliance with environmental regulations ENV5: Environmental considerations in operations	Questionnaire	Clarkson et al. (2008, JAE); Eccles et al. (2014, Management Science)
Social Practices (SOC)	X2	Social	SOC1: Occupational health and safety management SOC2: Fair labor practices SOC3: Employee training and development SOC4: Community engagement programs SOC5: Stakeholder grievance mechanisms	Questionnaire	Carroll (1991, Business Horizons); Hoi et al. (2013, JBE)
Governance Quality (GOV)	X3	Governance	GOV1: Board independence GOV2: Internal control effectiveness GOV3: Anti-corruption policy enforcement GOV4: Risk management	Questionnaire	Aguilera et al. (2008, AMR); Dowling (2014, JBE)



Abbrev.	Code	Dimension	Formula	Data Type	Source
CSR-ESG Strategy Integration (CSRS)	X4	Strategic CSR	systemsGOV5: Whistleblowing protection CSRS1: ESG integrated into daily decision-making CSRS2: ESG-linked managerial KPIs CSRS3: ESG considered in investment decisions CSRS4: ESG as a competitive strategy CSRS5: Cross-functional ESG coordination	Questionnaire	Porter & Kramer (2006, HBR); Bird & Davis-Nozemack (2018, JBE) GRI 207 (2019); Bird & Davis-Nozemack (2018, JBE); Christensen & Murphy (2004, Development)
Tax Transparency & Tax Governance Disclosure (TTD)	M	Tax Governance	TTD1: Existence of a formal tax policy TTD2: Transparent disclosure of tax strategy TTD3: Explanation of tax reconciliation TTD4: Board oversight of tax matters TTD5: Avoidance of aggressive tax structures	Questionnaire	Hanlon & Heitzman (2010, JAE)
Firm Size (SIZE)	C1	Control	Natural logarithm of total assets	Secondary	Huseynov & Klamm (2012, JCF)
Profitability (ROA)	C2	Control	Net income ÷ Total assets	Secondary	Gupta et al. (1997, JAPP)
Leverage (LEV)	C3	Control	Total liabilities ÷ Total assets	Secondary	
Capital Intensity (CAPINT)	C4	Control	Fixed assets ÷ Total assets	Secondary	Richardson et al. (2013, TAR)
Inventory Intensity (INVINT)	C5	Control	Inventory ÷ Total assets	Secondary	Stickney & McGee (1982, TAR)
Firm Age (AGE)	C6	Control	Number of years since establishment	Secondary	Lin et al. (2017, The International Journal of Accounting)

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