Marmara University Journal of Economic and Administrative Sciences • Special Issue: 2024, ISSN: 2587-2672, pp. e36-58
DOI: 10.14780/muiibd.1461075

ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

DETERMINANTS OF SUSTAINABILITY REPORTING PRACTICE IN TÜRKİYE

TÜRKİYE'DE SÜRDÜRÜLEBİLİRLİK RAPOLAMA UYGULAMALARININ BELİRLEYİCİLERİ

Çağrı AKSOY HAZIR*

Abstract

The aim of the study is to analyze the level and determining factors of sustainability reporting practice in Türkiye. A GRI-based sustainability disclosure index was employed to evaluate the sustainability reporting practice and the company level characteristics of sustainability reporting practice of 67 companies, which are listed in BIST Sustainability Index, over a period of 2 years, using a panel data analysis were examined. It was documented that listed companies in Türkiye are soft sustainability disclosurers and prefer to disclose environmental-related information more than economic and social information. The findings suggest that profitability, company size, leverage, and company age are positively associated with the level of sustainability disclosure in Türkiye. Moreover, the cash flow capacity of the companies has a significant and negative impact on the level of sustainability disclosure. Specifically, the results of the additional analysis indicate that company size is a significant determining factor of economic, environmental, and social sustainability disclosure.
Keywords: Sustainability Reporting, Sustainability Disclosure Score, GRI, Türkiye
JEL Classification: M41, M48, Q56, Q01

Öz

Bu çalışmanın amacı, Türkiye'de sürdürülebilirlik raporlaması uygulamalarının düzeyini ve belirleyicilerini analiz etmektir. Sürdürülebilirlik raporlaması uygulamalarını değerlendirmek amacıyla, GRI tabanlı sürdürülebilirlik açıklama endeksi kullanılmıştır ve sürdürülebilirlik raporlaması uygulamasının işletmeye özgü özellikleri BIST Sürdürülebilirlik Endeksi'nde yer alan 67 adet işletmenin iki yıllık verileri dikkate alınarak, panel veri analizi ile incelenmiştir. Çalışmada, Türkiye'de borsada işlem gören şirketlerin sürdürülebilirlik konusunda genel açıklamalarda bulundukları ve çevre ile ilişkili bilgileri ekonomik ve sosyal bilgilerden daha fazla açıkladıkları tespit edilmiştir. Çalışmada, karlılık, şirket büyüklüğü, kaldıraç oranı ve şirket yaşının Türkiye'deki sürdürülebilirlik açıklama düzeyi ile pozitif yönde ilişkili olduğu ortaya konmuştur. Öte yandan, şirketlerin nakit akış kapasitelerinin sürdürülebilirlik açıklama düzeyinin üzerinde önemli düzeyde negatif bir etkisi olduğu da tespit edilmiştir. İlave analiz sonuçları da şirket büyüklüğünün ekonomik, çevresel ve sosyal sürdürülebilirlik açıklamalarında önemli bir belirleyici faktör olduğunu göstermiştir.
Anahtar Kelimeler: Sürdürülebilirlik Raporlaması, Sürdürülebilirlik Açıklama Skoru, GRI, Türkiye
JEL Sınıflandırması: M41, M48, Q56, Q01

* Assoc. Prof. Dr., Marmara University, Department of Business Administration, Istanbul. E-mail: cagri.aksoy@marmara.edu.tr, ORCID ID: 0000-0003-1172-1412

How to cite this article: Aksoy Hazır, Ç. (2024). Determinants Of Sustainability Reporting Practice in Türkiye. Marmara Üniversitesi İktisadi ve İdari Bilimler Dergisi, Sustainability and Green Economics Özel Sayısı, e36-58. DOI: 10.14780/muiibd.1461075

Makale Gönderim Tarihi: 29.03.2024
Yayına Kabul Tarihi: 30.04.2024
Benzerlik Oranı: %20

1. Introduction

Over the years, global attention to sustainable development has inspired companies to be more transparent and promote stakeholder accountability. The emerging interest in contributions to sustainable development forced companies to improve their disclosure practices on environmental and social matters (Stefanescu, 2022). Unlike conventional financial reporting, which largely focuses on financial performance, sustainability reporting gives stakeholders access to information on a company's environmental, social, and economic performance. (de Villiers and Sharma, 2020). The activities of companies and their positive or negative consequences on environmental and social issues increased the desire of stakeholders' information needs for diversified and detailed sustainability information (Ebaid, 2023). Sustainability reporting promotes a company's accountability and helps companies fulfill the expectations of various stakeholders (Orazalin and Mahmood, 2020). By implementing sustainability reporting, companies seek to enhance their brand value, boost employee morale, ensure competitiveness, and assist corporate information and control systems (Hahn and Kühnen, 2013).

To provide guidelines, standards, and frameworks to disclose sustainability information, several sustainability reporting frameworks have emerged. The World Business Council for Sustainability Development (WBCSD), the Climate Disclosure Standards Board (CDSB), the Task Force on Climate Related Financial Disclosure (TCDF), the Value Reporting Foundation (VRF), the Sustainability Accounting Standards Board (SASB), the International Integrated Reporting Council (IIRC) and the Global Reporting Initiative (GRI), are the enormous organizations that have developed different frameworks for sustainability disclosure (Afolabi et al., 2022). Among these organizations, SASB and IIRC were consolidated under VRF and VRF merged with CDSB under IFRS Foundation (Hummel and Jobst, 2024). Typically, companies have voluntarily reported sustainability information in response to requests for increased accountability, and GRI is the widely recognized guideline for sustainability disclosure (Ali et al., 2023). Stakeholder-oriented reporting guidelines have been developed by GRI to ensure the disclosure of information about how companies impact on social and environmental matters (de Villiers et al., 2022). Prior to mandatory requirements for sustainability disclosure, the GRI Guidelines were a driving force behind the development of voluntary sustainability reporting (Carungu et al., 2020). However, there have been concerns about the accountability gap and the incompatibility of sustainability reports. To overcome those concerns and to build a comprehensive infrastructure for sustainability reporting, new standard-setters; the European Financial Reporting Advisory Group (EFRAG, under EU) and International Sustainability Standards Board (ISSB, under the IFRS Foundation) have both played pivotal roles in advancing reporting standards for sustainability (Korca et al., 2023). EFRAG issued the first set of ESRS (European Sustainability Reporting Standards), and the European Commission adopted this first set of ESRS in July 2023. EU based large companies are mandated to use ESRSs for sustainability reporting from financial year 2024. In parallel, ISSB released general requirements for the disclosure of sustainability-related financial information (IFRS S1) and climate-related disclosures (IFRS S2) (Hummel and Jobst, 2024).

As the demand for comparable sustainability information has largely arisen from stakeholders, different studies have been carried out to evaluate the sustainable reporting practices of companies across different nations (Aksoy-Hazır, 2023; Bhatia and Tuli, 2017; Clarkson et al., 2008; Greiling et al., 2015; Jadhav et al., 2020; Mamun, 2022; Ong et al., 2016; Penney et al., 2023; Zahid and Ghazali, 2015). A substantial amount of literature exists that examines the company level attributes of sustainability disclosure (Bhatia and Tuli, 2017; Chen et al., 2015; Dissanayake et al., 2019; Jadhav et al., 2020; H. Z. Khan et al., 2021; Laskar and Gopal Maji, 2018; Nazari et al., 2015; Orazalin and Mahmood, 2020), the effect of board attributes and corporate governance (Girón et al., 2021; Ong and Djajadikerta, 2020; Tumwebaze et al., 2022), and the association of sustainability reporting and firm reputation (Bhatia and Tuli, 2017; Ul Abideen and Fuling, 2024).

Adopting sustainability reporting is currently optional in most countries. Despite the lack of enforceable legal frameworks, Türkiye is an example of those countries, whose jurisdictions give companies a choice among various sustainability reporting frameworks. Listed companies in Türkiye are only required to declare their compliance with sustainability principles (Aksoy-Hazır, 2023). Furthermore, the existence of diversity in sustainability reporting practices raises concerns about assessing the extent, quality, and company-level characteristics of sustainability reporting in Türkiye. In line with global developments in sustainability reporting, Turkish government mandated sustainability reporting in accordance with IFRS S1 and IFRS S2 for large companies, that exceed two of the following three criteria: 250 employees, total assets of 500 million TL and net revenue of 1 million TL, beginning from the financial year 2024 (https://www.kgk.gov.tr/surdurulebilirlik).

This study attempts to investigate the scope and various factors that affect sustainability reporting practices in Türkiye. Although mandatory sustainability reporting does not exist and varies among Turkish companies due to its voluntary nature, this study explores the extent and drivers of sustainability reporting utilizing sustainability information based on the GRI framework. A survey report by KPMG (2022) indicates that GRI is the most widely utilized and comprehensive framework for evaluating the sustainability reporting practices of companies. In this perspective, sustainability disclosure scores are evaluated using a GRI-based sustainability disclosure index, and hence the association between company-level characteristics and sustainability disclosure scores is explored.

The study is structured in the following manner: In the second section, the theoretical perspectives of sustainability reporting are discussed including a review of relevant literature regarding the factors influencing sustainability reporting practices. Section 3 displays an overview of the study's dataset, variables, and the methodology. The empirical results are outlined in Section 4, and the final section concludes the study with discussion, policy implications, and limitations.

2. Literature Review and Hypothesis Development

To explore the company-level characteristics of sustainability reporting, the underlying theories explaining companies' commitment to sustainability reporting should be reviewed. The theoretical

justification of voluntary sustainability reporting relies on stakeholder theory, agency theory, and legitimacy theory.

Since the stakeholders comprise the society in which companies operate, satisfying the demands of these stakeholders is essential to raising the company's profitability and value (Freeman, 1984). Consequently, from the stakeholder theory perspective, corporations have a widening role and responsibility to understand the implied contractual nature of relationships between companies, the environment and society (Dissanayake et al., 2019). Zahid and Ghazali (2015) argue that corporate sustainability establishes who the companies should answer to and what obligations they have to complete in order to meet stakeholders' expectations. Hence, companies can build strong bonds with various stakeholders, increase company reputation, and create competitive advantage through voluntary reporting on sustainability (Schmelzer, 2013). Agency theory proposes that by disclosing all relevant information available to stakeholders, information asymmetries between managers and owners can be mitigated (Jensen and Meckling, 1976). As stated in the work of De Klerk and De Villiers (2012), investors' sense of risk rises when corporations fail to disclose information appropriately, and as a result, the market either undervalues the stock or demands higher returns from those companies. The enhanced sustainability reporting practices enable managers to be completely accountable for all the resources entrusted to them, and through proper accountability with the sustainability reporting agency costs between managers and owners can decrease (Tumwebaze et al., 2022). According to Suchman (1995), within a socially constructed framework of beliefs, assumptions, ideals, and norms, legitimacy refers to the broad presumption that a company's actions are right and appropriate. In this regard, legitimacy theory posits that there exists a social agreement between the company and society, and it requires that companies operate with goals and values that are in line with societal goals and values (Zahid and Ghazali, 2015). Within this context, sustainability reporting functions as a tool for validating company operations and certifies that a reporting company is operating in accordance with societal ideals and values (Orazalin and Mahmood, 2020).

Based on the theoretical frameworks, numerous previous studies have paid attention to the scope of sustainability reporting practice (Aksoy-Hazır, 2023; Bhatia and Tuli, 2018; Chen et al., 2015; Clarkson et al., 2008; Dissanayake et al., 2016; Ehnert et al., 2016; Greiling et al., 2015; I. Khan et al., 2023; Mamun, 2022; Ong et al., 2016; Papa et al., 2022; Zahid and Ghazali, 2015). Another stream of studies has concentrated on the factors that have an impact on sustainability reporting practice (Bhatia and Tuli, 2017; Dissanayake et al., 2019; Nazari et al., 2015; Orazalin and Mahmood, 2020; Sharma et al., 2020). Several studies have explored the association between corporate performance and sustainability reporting practice (Chen et al., 2015; Ebaid, 2023; Jadhav et al., 2020; Laskar and Gopal Maji, 2018), the relation of corporate governance and sustainability reporting practice (Ong and Djajadikerta, 2020), and the impact of sustainability reporting practice on corporate reputation (Ul Abideen and Fuling, 2024).

To ascertain the company-level characteristics of sustainability reporting practice in Türkiye, theoretical frameworks were utilized. To legitimize the operations of the companies, profitability can be a relevant influencing factor in sustainability disclosure. In the existence of higher profitability,

companies can prefer disclosing more information on sustainability for the external assurance of society (Orazalin and Mahmood, 2020). From the agency theory viewpoint, the management of a highly profitable company will have the tendency to use sustainability-related information to their personal advantage in order to uphold their positions within the company (Sharma et al., 2020). On the other hand, profitable businesses can also be motivated to report higher levels of sustainability information to have a better relationship with stakeholders and to create a good reputation (Ebaid, 2023). These theoretical explanations are supported by the research of Chen et al. (2015), Jadhav et al. (2020), Laskar and Gopal Maji (2018), Nazari et al. (2015), Orazalin and Mahmood (2020) and Sharma et al. (2020). On the contrary, in the studies of Bhatia and Tuli (2017) and Saha et al. (2023) it is found that companies with higher profitability disclose less information on sustainability matters. Other studies, such as Orazalin and Mahmood (2018), Tadros and Magnan (2019), H. Z. Khan et al. (2021) and Ebaid (2023) conclude that there is no notable correlation between sustainability reporting practice and profitability. Regarding the theoretical frameworks and prior findings, the first hypothesis is formulated below:

H1: Profitability is related with sustainability reporting practices.

Several studies of Clarkson et al. (2008), Nazari et al. (2015), Bhatia and Tuli (2017), Dissanayake et al. (2019), Tadros and Magnan (2019), Orazalin and Mahmood (2020) and H. Z. Khan et al. (2021) report that larger corporations are more motivated to reveal their sustainability activities. Aligned with legitimacy and stakeholder theory, larger companies, which are visible to stakeholders and should avoid losses of illegitimacy, are motivated to make disclosures on sustainability to demonstrate their corporate citizenship (Dissanayake et al., 2016). Further, larger companies are financially healthier than smaller companies and have the capability to put more resources into sustainability reporting. Due to economies of scale, the cost of sustainability reporting for smaller corporations is higher that of larger corporations (Bhatia and Tuli, 2017; Matuszak et al., 2019). However, Orazalin and Mahmood (2018) and Tumwebaze et al. (2022) find no evidence that the size of the company correlates with its sustainability disclosure level. Thus, the proposed hypothesis is posited:

H2: Company size is related with sustainability reporting practices.

According to Jensen and Meckling (1976), high-debt companies reveal greater information to reduce their cost of capital and agency costs. This leads to a positive relation between sustainability disclosure level and the leverage of companies. Consistent with the stakeholder theory, companies with high debt are expected to provide more sustainability-related information, because they have a higher level of responsibility to satisfy stakeholders' information needs. Clarkson et al. (2008) report a positive relationship between leverage and environmental disclosure practices. However, Bhatia and Tuli (2017), Tadros and Magnan (2019) and Orazalin and Mahmood (2020) provide evidence that companies with significant levels of debt are not involved in making sustainability-related disclosures. Studies by Nazari et al. (2015), Sharma et al. (2020) and H. Z. Khan et al. (2021) indicate no significant association between leverage and sustainability reporting practices. In the light of stakeholder and agency theories, the next hypothesis is proposed:

H3: Leverage is related with sustainability reporting practices.

Growth opportunity may be an important factor influencing sustainability reporting practice, since companies with higher growth opportunities may report sustainability information more actively to try to upgrade their sustainability disclosure level (Bhatia and Tuli, 2017). Al-Shubiri et al. (2012) support a positive relation between growth opportunity and non-financial reporting practice, whereas H. Z. Khan et al. (2021) and Saha et al. (2023) find no correlation between the two variables. The following hypothesis is formulated:

H4: Growth opportunity is related with sustainability reporting practices.

Capital expenditure investments may encourage companies to share more sustainability information with stakeholders, since they may wish to prove their competitive advantage in sustainability disclosures (Moussa and Elmarzouky, 2023). Hence, the next hypothesis is proposed as follows:

H5: Capital expenditure is related with sustainability reporting practices.

A company's capability to fulfill the expectations of its stakeholders is indicated by its level of cash flow. Cash flow capacity also allows the companies to allocate a certain amount of funds to the preparation of sustainability reports (Kuzey and Uyar, 2017). A sufficient amount of cash flow enables a higher commitment to sustainability reporting (Reverte, 2009). Given that the companies should satisfy the demands of stakeholders on sustainability information, as per stakeholder theory, higher cash resources can enable higher levels of disclosure on sustainability information. This relation is supported by the studies of Ruhnke and Gabriel (2013), who conclude that companies with significant amount of cash reserves, disclose more extensive information on sustainability matters. However, some studies indicate an insignificant relationship between cash flow level and sustainability disclosure (Orazalin and Mahmood, 2020). Accordingly, the proposed hypothesis is as follows:

H6: Cash flow is related with sustainability reporting practices.

One potential explanation for sustainability practices could be the company's age. According to legitimacy theory, it seems sense that older companies generate more information on sustainability matters since they have already established credibility with their stakeholders and have the ability to manage reporting frameworks (Orazalin and Mahmood, 2020). Considering the younger companies, older companies' more advanced accounting systems are able to generate more comprehensive information at lower costs (Al-Shammari, 2013). Bhatia and Tuli (2017) observe that older companies have a tendency to disclose more about sustainability. They conclude that older companies' economic objectives may have been met, and they have accumulated enough surpluses and resources to disclose more sustainability-related information. However, in the case of Bangladeshi banks, Orazalin and Mahmood (2020) notice no significant relationship between company age and sustainability disclosure. Therefore, the below hypothesis is posited:

H7: Company age is related with sustainability reporting practices.

3. Data and Methodology

The initial sample size for the study comprises 80 companies listed on the BIST Sustainability Index in Türkiye for the period of 2021 – 2022. In Türkiye, companies must have a combined ESG (Environmental, Social, and Governance) score of 50 or above, each pillar score of 40 or above, and at least 8 of the category scores 26 or above to be included in the BIST Sustainability Index. These sustainability scores are calculated by the contracted organization of BIST, and the assessment of ESG scores is based upon the publicly available sustainability information of companies (https://www.borsaistanbul.com/en/index/1/9/sustainability).

The companies that belong to the finance and insurance sectors and the companies that lacked data on sustainability disclosure were removed from the sample. The final sample comprises 67 companies that voluntarily disclose stand-alone sustainability reports, or integrated reports. 21 of those companies had integrated reports and 46 of those companies had stand-alone sustainability reports. The final sample comprises 134 company-year observations. The data was provided from a variety of sources, including the Thomson-Reuters database and companies' stand-alone sustainability reports and integrated reports. Since the level of sustainability reporting practice is assessed using a sustainability disclosure index based on GRI (2021) Standards, the base year of the study is 2021. Despite the limited sample size, the final sample is sufficient to perform statistical analysis and offer preliminary empirical support for future research (Orazalin & Mahmood, 2020).

In this study, the sustainability disclosure score (SustDS), which represents the level of sustainability reporting practice, serves as the dependent variable. For measuring the sustainability disclosure score, the methodology of content analysis is adopted. The most appropriate data gathering method for converting qualitative information into quantitative information is content analysis in the context of sustainability disclosure (Bhatia and Tuli, 2017; Chen et al., 2015; Clarkson et al., 2008; Dissanayake et al., 2019; Greiling et al., 2015; Guthrie and Farneti, 2008; Zahid & Ghazali, 2015). The scope of sustainability disclosure of Turkish listed companies was assessed using a newly developed sustainability disclosure index, which was first introduced as an environmental disclosure index by Clarkson et al. (2008) based on GRI G2 Guidelines, extended as a sustainability disclosure index by Ong et al. (2016) based on GRI G3 Guidelines and revised by Aksoy-Hazır (2023) based on the GRI (2021) Standards. Despite the fact that sustainability reporting is voluntary in Türkiye, the GRI-based disclosure index is appropriate for this study, since most of the sample companies have adopted the GRI Guidelines for sustainability reporting. Specifically, GRI Guideline contributed to institutionalization of sustainability reporting by forming a common framework for sustainability disclosure and is the most acclaimed sustainability reporting guideline that builds a comprehensible infrastructure to assess the sustainability disclosure level (de Villiers et al., 2022; La Torre et al., 2018). The sustainability disclosure index, which is applied in this study, is viewed as a checklist that consists of 7 categories (Appendix 1). The first 4 categories (A1, A2, A3, A4) represent hard disclosure items, and the last 3 categories (A5, A6 and A7) represent soft disclosure items. Soft disclosure items refer to information that can be provided by all companies regardless of their actual sustainability performance. Conversely, hard disclosure items focus on hard measures and

true commitment towards sustainability, that can be easily imitated by incompetent sustainability performers (Clarkson et al., 2011). For all the categories except A3, the items are given a value of 1 if the relevant information is reported and 0 otherwise. For the A3 category, the items depicting economic, environmental, and social performance indicators are assigned a maximum score of 6. When the indicator is missing, the score is 0. If the indicator is reported, the score is 1. If the indicator is presented with the industry's or competitor's data, the score is 2. When the indicator is revealed with the comparison to the previous year, the score is 3. If the indicator is reported with respect to targets, the score is 4. The score is 5, when the indicator is revealed with normalized data. Finally, if the indicator is disclosed at a categorized level (i.e. geographic segment), the score is 6 (Aksoy-Hazır, 2023; Clarkson et al., 2008; Ong et al., 2016). The sustainability disclosure index contains 144 items and has a maximum score of 569. Table 1 shows the categories of the sustainability disclosure index.

Table 1: Categories of Sustainability Disclosure Index

Category		**Items**	**Max. Score**
Hard Disclosure Items (A1-A4)			
A1	Governance Structure-Management System	12	12
A2	Credibility	4	4
A3	Economic Performance	17	102
	Environmental Performance	31	186
	Social Performance	37	222
A4	Sustainability Spending	2	2
Soft Disclosure Items			
A5	Vision and Strategy	7	7
A6	Sustainability Initiatives	3	3
A7	Disclosure on Management Approach-Economic	7	7
	Disclosure on Management Approach-Environmental	7	7
	Disclosure on Management Approach-Social	17	17
Total		144	569

The company's sustainability disclosure score is measured as a percentage of the maximum sustainability disclosure score. The dependent variables of the study are the sustainability disclosure score (SustDS), hard disclosure score (HardDS), and soft disclosure score (SoftDS) in percentages. A higher percentage of the score represents a higher level of sustainability practice.

The explanatory variables of this study are profitability, company size, leverage, growth opportunity, capital expenditure, cash flow, and company age. Profitability (ROA) is the ratio of net income to total assets. Company size (SIZE) is measured as the natural logarithm of the company's total assets. Leverage (LEV) is the ratio of total debt to total assets. Growth opportunity (GROWTH) is measured as the percentage change in revenue. Capital expenditure (CAPEX) is the ratio of total capital expenditure to total assets. Cash flow (CASH) is measured as the ratio of cash and cash equivalents

to total assets, and the years since the company was established is the company age, or AGE. All dependent and independent variables are winsorized at 1% and 99% percentiles to reduce the outlier effects.

The determinants of sustainability reporting practices are estimated using the regression models listed below.

1. $SustDS_{i,t} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 LEV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 CAPEX_{i,t} + \beta_6 CASH_{i,t} + \beta_7 AGE_{i,t} + YEAR_t + \beta_{it}$;

2. $HardDS_{i,t} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 LEV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 CAPEX_{i,t} + \beta_6 CASH_{i,t} + \beta_7 AGE_{i,t} + YEARt + \beta_{it}$;

3. $SoftDS_{i,t} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 LEV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 CAPEX_{i,t} + \beta_6 CASH_{i,t} + \beta_7 AGE_{i,t} + YEARt + \beta_{it}$;

4. Empirical Results

Table 2 represents and compares the sustainability disclosure level in Türkiye during the period 2021-2022.

Table 2: Extent of Sustainability Reporting

Years	2021	2022
Sustainability Disclosure Mean Scores	157	203
Range of SustDS (lowest to highest)	27 to 369	18 to 457
Mean Score of HardDS	134	180
Mean Score of SoftDS	24	26
Mean Score of Economic Disclosure (EcoDS)	15	21
Mean Score of Environmental Disclosure (EnvDS)	70	94
Mean Score of Social Disclosure (SocDS)	51	67
Highest sustainability disclosure category	Environmental	Environmental
Lowest sustainability disclosure category	Economic	Economic

During the study period, the extent of sustainability reporting by Turkish companies is overall low. However, the mean of sustainability disclosure scores and the mean score for each category have shown improvement in 2022. Moreover, it can be argued that Turkish companies give priority disclosing hard disclosure items over soft disclosure items in 2022. It is evident that the disclosure of soft items is showing a minimal upward trend. During the study period, companies reported higher levels of environmental items than economic and social items. In both years, the economic sustainability category has the lowest score, compared to the environmental and social sustainability categories. It is apparent that the average sustainability scores are below the maximum available scores in every category during the study period.

Table 3 exhibits the descriptive statistics of all variables.

Table 3: Descriptive Statistics of Variables

	N	Std. Dev.	Mean	min	max	p25	p75
SustDS	134	0.178	0.316	0.032	0.803	0.179	.424
EcoDS	134	0.159	0.166	0.000	0.936	0.037	.22
EnvDS	134	0.235	0.425	0.021	1.047	0.233	.57
SocDS	134	0.162	0.245	0.008	0.678	0.113	.331
HardDS	134	0.179	0.296	0.013	0.799	0.157	.396
SoftDS	134	0.198	0.577	0.146	0.951	0.415	.756

	N	Std. Dev.	Mean	min	max	p25	p75
ROA	134	0.250	0.138	-0.193	2.372	0.049	0.169
SIZE	134	0.662	10.271	7.925	12.095	9.782	10.766
LEV	134	0.496	0.361	0.000	4.768	0.187	0.441
GROWTH	134	0.833	1.062	-0.957	5.335	0.524	1.293
CAPEX	134	0.108	0.061	-0.086	0.870	0.021	0.069
CASH	134	0.944	0.250	0.003	8.428	0.065	0.199
AGE	134	18.091	40.701	6	87	26	55

The average sustainability disclosure score is 31.60 %, with a minimum of 3.20% and a maximum of 80.30%. Concerning the sub-categories of sustainability reporting, the average score of environmental disclosure is 42.50%, which indicates that companies provided more information on environmental aspects during the study period. Moreover, the average hard disclosure score is 29.60%, whereas the average soft disclosure score is 57.70%. This result implies that Turkish companies prefer to disclose more information on corporate vision and strategy and sustainability profile, regardless of their actual sustainability performance (Aksoy-Hazır, 2023). These findings demonstrate that Turkish companies are significantly behind the alignment of the GRI framework.

In the case of explanatory variables, the findings indicate that the average ROA is 13.80%. The mean value of SIZE is 10.27 and varies between 7.92 and 12. 09. The results for leverage show that the average value of LEV is 36.10%, indicating that Turkish companies, which are on the BIST Sustainability Index, have low levels of financial debt. The average value of GROWTH is 106.20%, whereas the average value of CAPEX is 6.10%. Cash flow (CF) has an average of 25%. The findings also reveal that the average age of the sampled companies is 41.

Table 4 presents the Pearson correlation among dependent and independent variables. The correlation of company size with the sustainability disclosure score is positively significant, with a value of 0.21. Among all variables, company age is also positively correlated with sustainability disclosure score at the 1% significance level. The findings confirm that companies with a higher age and size have greater sustainability disclosure scores. To address the concern of multicollinearity, variance inflation factors (VIF) for the explanatory variables are calculated. The results of the multicollinearity test indicate that all values are under 5, confirming the absence of multicollinearity issues. (Hair JR et al., 2009).

Table 4: Pearson Correlations

Variables	SustDS	ROA	SIZE	LEV	GROWTH	CAPEX	CASH	AGE
SustDS	1.000							
ROA	0.125	1.000						
SIZE	0.213**	-0.455***	1.000					
LEV	0.061	-0.126	0.169*	1.000				
GROWTH	0.048	0.013	0.108	-0.055	1.000			
CAPEX	0.089	0.859***	-0.402***	-0.083	-0.108	1.000		
CASH	0.089	0.893***	-0.406***	-0.074	-0.045	0.903***	1.000	
AGE	0.252***	-0.134	0.358***	0.084	-0.152*	-0.167*	-0.124	1.000

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

The study's data were panel time-series data, and to control for potential unobservable heterogeneities among companies, various regression models were employed, including pooled ordinary least squares (OLS), fixed effects models (FE) and random effects models (RE). In this context, to ascertain the most appropriate model, the Breusch-Pagan Langrange Multiplier (LM) test was first performed. According to the results of the LM test, both FE model and RE model are more appropriate than OLS. To understand whether the fixed effect or random effect model is suitable, the study employed the Hausman test. In all models, the estimated results of the Hausman test conclude that RE model is more suitable for the analysis. To mitigate the lack of independence among observations, the standard errors of companies were clustered due to the existence of autocorrelation and heteroscedasticity issues based on diagnostic tests (Roger, 1993). Table 5 demonstrates the regression results with robust standard errors for the models.

Table 5: Regression Results

	SustDS (Model 1)	HardDS (Model 2)	SoftDS (Model 3)
ROA	0.249***	0.251***	0.235***
	(0.0841)	(0.0857)	(0.0908)
SIZE	0.0827***	0.0814***	0.0815***
	(0.0293)	(0.0297)	(0.0304)
LEV	0.0273*	0.0272*	0.0225
	(0.0141)	(0.0145)	(0.0153)
GROWTH	0.0144	0.0172	-0.0213*
	(0.0143)	(0.0149)	(0.0129)
CAPEX	0.300	0.332	-0.201
	(0.283)	(0.284)	(0.325)
CASH	-0.0436*	-0.0472*	0.00564
	(0.0243)	(0.0246)	(0.0279)
AGE	0.00198*	0.00190*	0.00319***
	(0.00108)	(0.00108)	(0.00117)
Constant	-0.681**	-0.689**	-0.398

	(0.290)	(0.294)	(0.296)
Observations	134	134	134
Number of id	67	67	67
Prob>F	0.000	0.000	0.000
Hausman	0.330	0.231	0.707
R-squared	0.143	0.136	0.239

Robust standard errors enclosed in parentheses

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

The positive and significant (1% level) coefficient of the profitability reveals that a higher profitability has a positive effect on companies' sustainability disclosure scores. These findings suggest that companies with higher profitability have greater incentives to ensure more sustainability information in order to build a good and transparent bond with stakeholders (Chen et al., 2015; Jadhav et al., 2020; Laskar and Gopal Maji, 2018; Nazari et al., 2015; Orazalin and Mahmood, 2020; Sharma et al., 2020). The results in Model 2 and Model 3 show that higher profitability has a positive impact on both reporting on hard and soft disclosure items. Regarding company size, the findings confirm that in comparison to smaller companies, companies with larger sizes, which are facing greater stakeholder pressure, disclose more sustainability information. This result is supported by the results of Model 2 and Model 3. In line with the legitimacy theory, the visibility and long-term survival of companies depend on the disclosure of extensive information on both hard and soft disclosure items (Bhatia and Tuli, 2017; Clarkson et al., 2008; Dissanayake et al., 2019; Orazalin and Mahmood, 2020; Tadros and Magnan, 2019). The results imply that leverage influences sustainability disclosure ratings favorably. The regression results also reveal that the relationship between hard disclosure score and leverage is found to be significant. However, a significant association between soft disclosure score and leverage are not found. It seems that companies with higher debt place great weight on increasing their reputation and have a greater contractual obligation to reduce information asymmetry, by ensuring high levels of sustainable disclosure, especially hard disclosure items (Al-Shubiri et al., 2012). According to the findings, growth opportunity has a significant negative influence on the soft disclosure score, which reveals that companies with higher growth opportunities do not prefer to upgrade the level of soft disclosure items.

According to the stakeholder theory, companies with higher cash flow resources are expected to ensure increased transparency on sustainability. However, the results suggest that companies with higher cash flow resources provide less sustainability information to stakeholders. It can be concluded that sample companies prefer to hold cash to protect themselves from economic shocks and avoid the cost of disclosing high quality sustainability information due to economies of scale. The results in Model 2 are identical to the findings of Model 1. However, the relationship between the soft disclosure score and cash flow capacity is not significant at any level. Based on the results of all models, company age is found to be significantly related with sustainability disclosure score, as well as hard and soft disclosure scores. These findings imply that higher company age enhances both the level of hard sustainability disclosure and soft sustainability disclosure. Given that older

companies have longer reporting experience, it can be argued that they are more inclined to disclose information on sustainability matters to ensure external assurance (Bhatia and Tuli, 2017). As shown in Table 5, no significant relationship is detected between capital expenditure and sustainability reporting practices in Türkiye.

To further estimate the determinants of sustainability practice in Türkiye, the sustainability disclosure scores are decomposed into economic, environmental, and social disclosure scores as dependent variables, and the same explanatory factors were employed in the regression analysis. The findings of the regression analysis are presented in Table 6, below.

Table 6: Regression Results of Additional Analysis

	EcoDS (Model 4)	**EnvDS (Model 5)**	**SocDS (Model 6)**
ROA	0.136	0.244**	0.309***
	(0.0984)	(0.115)	(0.0837)
SIZE	0.0811***	0.103**	0.0665**
	(0.0237)	(0.0401)	(0.0273)
LEV	0.0233**	0.0191	0.0344***
	(0.0105)	(0.0246)	(0.0121)
GROWTH	0.0106	0.0279	0.0107
	(0.0124)	(0.0207)	(0.0119)
CAPEX	0.0714	0.628	0.184
	(0.271)	(0.403)	(0.273)
CASH	0.00263	-0.0708*	-0.0485*
	(0.0259)	(0.0364)	(0.0250)
AGE	0.00217***	0.00251*	0.00141
	(0.000842)	(0.00147)	(0.00103)
Constant	-0.800***	-0.828**	-0.561**
	(0.223)	(0.403)	(0.272)
Observations	134	134	134
Number of id	67	67	67
Prob>F	0.000	0.000	0.000
Hausman	0.711	0.090	0.420
R-squared	0.166	0.425	0.245

Robust standard errors enclosed in parentheses

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

The findings of Model 4 in Table 6 indicate that company size at the 1% significance level, leverage at the 5% significance level, and company age at the 1% significance level have significant positive impacts on the economic disclosure score. The regression coefficients of profitability and company size are at the 5% significance level, suggesting a positive impact on the environmental disclosure score. In Model 6, results indicate that profitability, company size and leverage have significant positive

relationships with the social disclosure score, whereas cash flow has a significant negative effect at the 10% significance level. Capital expenditure and growth opportunities found to be insignificant in all models. These analyzes support the idea that larger companies have the competence to accomplish sustainability information needs of stakeholders in all aspects. Moreover, companies with high debt have the tendency to issue more information on economic and social matters, whereas older companies prefer to issue more economic and environmental information.

5. Conclusion

Sustainability reporting practices help to build stakeholder trust, legitimize business operations, and protect a company's survival by demonstrating the company's dedication to environmental and social sustainability. Unlike existing studies, which generally focus on the level of sustainability reporting practice in developed countries, the present study aims to examine the factors influencing sustainability practice in an emerging market, Türkiye. Based on a sample of listed companies on the BIST Sustainability Index for the years 2021-2022, the study provides evidence that the level of sustainability reporting practices in economic, environmental, and social dimensions is overall low. Thus, there is an absence of pure accountability for sustainability. The results show that the most dominant sustainability practices are related to soft disclosure items. However, the level of sustainability disclosure has an upward trend and has increased over time.

The findings reveal that profitability, company size, leverage, cash flow, and company age are found to be influential in undertaking higher levels of sustainability reporting. The regression analysis supports the positive and significant association with respect to profitability, company size, leverage, and company age. Turkish companies concentrate on disclosing higher levels of sustainability, which results in increased profitability. The results also imply that larger and older companies have the awareness of the significance of sustainability reporting and are motivated to increase the level of sustainability disclosure. Furthermore, companies with higher debt are more engaged in sustainability reporting practices, whereas companies with high cash flow do not prefer to improve their sustainability reporting level. Certain factors, such as growth opportunity and capital expenditure, are not found to exert a significant impact on sustainability reporting practice. Overall, in accordance with the stakeholder, agency, and legitimacy theory, profitability, company size, leverage, cash flow, and company play pivotal roles in disclosing sustainability information.

The study's results contribute to existing knowledge on the extent and company-level characteristics of sustainability reporting practices in Türkiye. Firstly, the study highlights the Turkish companies' sustainability preferences and engagement level in sustainability reporting. Secondly, it suggests that companies in Türkiye should give equal consideration to disclosing hard and soft disclosure items. Thirdly, with regard to theoretical frameworks, sustainability reporting practice is heavily influenced by accounting-based factors in the context of Türkiye. The study also covers a wide spectrum of sustainability reporting practices.

The study has several contributions for many parties. Policymakers should be directed to issue legislation that obliges companies to disclose more hard disclosure items to improve the accountability of the company's sustainability practices. The decision-makers, who wish to signal a positive image and corporate citizenship to stakeholders, should concentrate on influential factors of sustainability practice, which in turn lead to improved sustainability practice. There are various limitations associated with the study. First, the study's sample size is relatively limited, with only 67 companies included. To generalize the results, larger samples over a broader time range can be used to examine the determinants of sustainability reporting practice. Secondly, it would be worthwhile to analyze the relationship between sustainability reporting practice and macro-level factors or associations with corporate governance or ownership structure across companies from different countries.

References

Afolabi, H., Ram, R., & Rimmel, G. (2022). Harmonization of Sustainability Reporting Regulation: Analysis of a Contested Arena. *Sustainability (Switzerland)*, *14*(9). https://doi.org/10.3390/su14095517

Aksoy-Hazır, Ç. (2023). Sustainability Reporting Practice of Listed Companies in Turkey: Are They Hard or Soft Sustainability Disclosures? In Ç. Çatak & M. ÖNER (Eds.), *Sustainable Finance: Challenges, Opportunities and Future Prospects.* (pp. 187–204). Peter Lang Verlag. https://doi.org/10.3726/b21415

Al-Shubiri, F. N., Al-abedallat, A. Z., & Orabi, M. M. A. (2012). Financial and Non Financial Determinants of Corporate Social Responsibility. *Asian Economic and Financial Review*, *2*(8), 1001–1012.

Al-Shammari, B. (2013). An investigation of voluntary disclosure by Kuwaiti Shariah -compliant companies . *Journal of Economic and Administrative Sciences*, *29*(1), 21–41. https://doi.org/10.1108/102.641.11311319213

Ali, I., Fukofuka, P. T., & Narayan, A. K. (2023). Critical reflections on sustainability reporting standard setting. *Sustainability Accounting, Management and Policy Journal*, *14*(4), 776–791. https://doi.org/10.1108/SAMPJ-01-2022-0054

Bhatia, A., & Tuli, S. (2017). Corporate attributes affecting sustainability reporting: an Indian perspective. *International Journal of Law and Management*, *59*(3), 322–340. https://doi.org/10.1108/IJLMA-11-2015-0057

Bhatia, A., & Tuli, S. (2018). Sustainability reporting: an empirical evaluation of emerging and developed economies. *Journal of Global Responsibility*, *9*(2), 207–234. https://doi.org/10.1108/JGR-01-2018-0003

Carungu, J., Di Pietra, R., & Molinari, M. (2020). Mandatory vs voluntary exercise on non-financial reporting: does a normative/coercive isomorphism facilitate an increase in quality? *Meditari Accountancy Research*, *29*(3), 449–476. https://doi.org/10.1108/MEDAR-08-2019-0540

Chen, L., Feldmann, A., & Tang, O. (2015). The relationship between disclosures of corporate social performance and financial performance: Evidences from GRI reports in manufacturing industry. *International Journal of Production Economics*, *170*, 445–456. https://doi.org/10.1016/j.ijpe.2015.04.004

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, *33*(4–5), 303–327. https://doi.org/10.1016/j.aos.2007.05.003

Clarkson, P. M., Overell, M. B., & Chapple, L. (2011). Environmental Reporting and its Relation to Corporate Environmental Performance. *Abacus*, *47*(1), 27–60. https://doi.org/10.1111/j.1467-6281.2011.00330.x

De Klerk, M., & De Villiers, C. (2012). The value relevance of corporate responsibility reporting: South African evidence. *Meditari Accountancy Research*, *20*(1), 21–38. https://doi.org/10.1108/102.225.21211234200

de Villiers, C., La Torre, M., & Molinari, M. (2022). The Global Reporting Initiative's (GRI) past, present and future: critical reflections and a research agenda on sustainability reporting (standard-setting). *Pacific Accounting Review*, *34*(5), 728–747. https://doi.org/10.1108/PAR-02-2022-0034

de Villiers, C., & Sharma, U. (2020). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, *70*, 101999. https://doi.org/10.1016/j.cpa.2017.05.003

Dissanayake, D., Tilt, C., & Qian, W. (2019). Factors influencing sustainability reporting by Sri Lankan companies. *Pacific Accounting Review*, *31*(1), 84–109. https://doi.org/10.1108/PAR-10-2017-0085

Dissanayake, D., Tilt, C., & Xydias-Lobo, M. (2016). Sustainability reporting by publicly listed companies in Sri Lanka. *Journal of Cleaner Production*, *129*, 169–182. https://doi.org/10.1016/j.jclepro.2016.04.086

Ebaid, I. E. S. (2023). Nexus between sustainability reporting and corporate financial performance: evidence from an emerging market. *International Journal of Law and Management*, *65*(2), 152–171. https://doi.org/10.1108/IJLMA-03-2022-0073

Ehnert, I., Parsa, S., Roper, I., Wagner, M., & Muller-Camen, M. (2016). Reporting on sustainability and HRM: a comparative study of sustainability reporting practices by the world's largest companies. *International Journal of Human Resource Management*, *27*(1), 88–108. https://doi.org/10.1080/09585.192.2015.1024157

Freeman, R.E. (1984), Stakeholder Theory of the Modern Corporation Strategic Management: A Stakeholder Approach, Cambridge University Press, Cambridge.

Girón, A., Kazemikhasragh, A., Cicchiello, A. F., & Panetti, E. (2021). Sustainability Reporting and Firms' Economic Performance: Evidence from Asia and Africa. *Journal of the Knowledge Economy*, *12*(4), 1741–1759. https://doi.org/10.1007/s13132.020.00693-7

Greiling, D., Traxler, A. A., & Stötzer, S. (2015). Sustainability reporting in the Austrian, German and Swiss public sector. *International Journal of Public Sector Management*, *28*(4–5), 404–428. https://doi.org/10.1108/IJPSM-04-2015-0064

GRI (2021) – Global Reporting Initiative Reporting Standards

Guthrie, J., & Farneti, F. (2008). GRI sustainability reporting by australian public sector organizations. *Public Money and Management*, *28*(6), 361–366. https://doi.org/10.1111/j.1467-9302.2008.00670.x

Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production*, *59*, 5–21. https://doi.org/10.1016/j.jclepro.2013.07.005

Hair JR, J. F., Black, W. C., J.Babin, B., & Anderson, R. E. (2009). *Joseph F. Hair, William C. Black, Barry J. Babin, Rolph E. Anderson – Multivariate Data Analysis (7th Edition)-Prentice Hall (2009).pdf* (p. 161).

https://www.borsaistanbul.com/en/index/1/9/sustainability

https://www.kgk.gov.tr/surdurulebilirlik

Hummel, K., & Jobst, D. (2024). An overview of corporate sustainability reporting legislation in the European Union. *Accounting in Europe,* 1-36. https://doi.org/10.1080/17449.480.2024.2312145

Jadhav, A., Rahman, S., & Ahsan, K. (2020). Sustainability practices disclosure of top logistics firms in Australia. *International Journal of Logistics Management*, *33*(5), 244–277. https://doi.org/10.1108/IJLM-09-2021-0452

Khan, H. Z., Bose, S., Mollik, A. T., & Harun, H. (2021). "Green washing" or "authentic effort"? An empirical investigation of the quality of sustainability reporting by banks. *Accounting, Auditing and Accountability Journal*, *34*(2), 338–369. https://doi.org/10.1108/AAAJ-01-2018-3330

Khan, I., Fujimoto, Y., Uddin, M. J., & Afridi, M. A. (2023). Evaluating sustainability reporting on GRI standards in developing countries: a case of Pakistan. *International Journal of Law and Management*, *65*(3), 189–208. https://doi.org/10.1108/IJLMA-01-2022-0016

Korca, B., Costa, E., & Bouten, L. (2023). Disentangling the concept of comparability in sustainability reporting. *Sustainability Accounting, Management and Policy Journal*, *14*(4), 815–851. https://doi.org/10.1108/SAMPJ-05-2022-0284

KPMG. (2022). *Big shifts, small steps: survey of corporate responsibility 2022* (Issue October). chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://assets.kpmg.com/content/dam/kpmg/se/pdf/komm/2022/Global-Survey-of-Sustainability-Reporting-2022.pdf

Kuzey, C., & Uyar, A. (2017). Determinants of sustainability reporting and its impact on firm value: Evidence from the emerging market of Turkey. *Journal of Cleaner Production*, *143*, 27–39. https://doi.org/10.1016/j.jclepro.2016.12.153

La Torre, M., Sabelfeld, S., Blomkvist, M., Tarquinio, L., & Dumay, J. (2018). Harmonising non-financial reporting regulation in Europe: Practical forces and projections for future research. *Meditari Accountancy Research*, *26*(4), 598–621. https://doi.org/10.1108/MEDAR-02-2018-0290

Laskar, N., & Gopal Maji, S. (2018). Disclosure of corporate sustainability performance and firm performance in Asia. *Asian Review of Accounting*, *26*(4), 414–443. https://doi.org/10.1108/ARA-02-2017-0029

Mamun, M. (2022). Sustainability reporting of major electricity retailers in line with GRI: Australia evidence. *Journal of Accounting and Organizational Change*. https://doi.org/10.1108/JAOC-01-2022-0005

Matuszak, Ł., Różańska, E., & Macuda, M. (2019). The impact of corporate governance characteristics on banks' corporate social responsibility disclosure: Evidence from Poland. *Journal of Accounting in Emerging Economies*, *9*(1), 75–102. https://doi.org/10.1108/JAEE-04-2017-0040

Moussa, S., A., Elmarzouky, M. (2023). Does capital expenditure matter for ESG disclosure? A UK perpective. *Journal of Risk and Financial Management,* 16 (10), 429. https://doi.org/10.3390/jrfm16100429

Nazari, J. A., Herremans, I. M., & Warsame, H. A. (2015). Sustainability reporting: External motivators and internal facilitators. *Corporate Governance (Bingley)*, *15*(3), 375–390. https://doi.org/10.1108/CG-01-2014-0003

Ong, T., & Djajadikerta, H. G. (2020). Corporate governance and sustainability reporting in the Australian resources industry: an empirical analysis. *Social Responsibility Journal*, *16*(1), 1–14. https://doi.org/10.1108/SRJ-06-2018-0135

Ong, T., Trireksani, T., & Djajadikerta, H. G. (2016). Hard and soft sustainability disclosures: Australia's resources industry. *Accounting Research Journal*, *29*(2), 198–217. https://doi.org/10.1108/ARJ-03-2015-0030

Orazalin, N., & Mahmood, M. (2018). Economic, environmental, and social performance indicators of sustainability reporting: Evidence from the Russian oil and gas industry. *Energy Policy*, *121*(January), 70–79. https://doi.org/10.1016/j.enpol.2018.06.015

Orazalin, N., & Mahmood, M. (2020). Determinants of GRI-based sustainability reporting: evidence from an emerging economy. *Journal of Accounting in Emerging Economies*, *10*(1), 140–164. https://doi.org/10.1108/JAEE-12-2018-0137

Papa, M., Carrassi, M., Muserra, A. L., & Wieczorek-Kosmala, M. (2022). The impact of the EU nonfinancial information directive on environmental disclosure: evidence from Italian environmentally sensitive industries. *Meditari Accountancy Research*, *30*(7), 87–120. https://doi.org/10.1108/MEDAR-03-2021-1247

Penney, E. K., Owusu-Ansah, A., Amewu, G., & Nsor-Ambala, R. (2023). Do firms operating in a shared institutional environment have similar sustainability disclosure practices? A comparative analysis of

multinational and locally listed firms in Africa. *Cogent Business and Management*, *10*(2). https://doi.org/10.1080/23311.975.2023.2207886

Reverte, C. (2009). Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. *Journal of Business Ethics*, *88*(2), 351–366. https://doi.org/10.1007/s10551.008.9968-9

Roger, W. (1993). Regression standard errors in clustered samples. *Stata Technical Bulletin,* 3 (13), 1-32.

Ruhnke, K., & Gabriel, A. (2013). Determinants of voluntary assurance on sustainability reports: an empirical analysis. *Journal of Business Economics*, *83*(9), 1063–1091. https://doi.org/10.1007/s11573.013.0686-0

Saha, R., Kabir, M. N., & Chowdhury, A. H. (2023). The impact of CEO attributes on sustainability performance: evidence from an emerging economy. *Accounting Research Journal*, *36*(6), 539–557. https://doi.org/10.1108/ARJ-12-2022-0323

Schmelzer, P. (2013). Value Relevance of Corporate Social Responsibility Reports. *Erasmus School of Economics Journal*, 70–73.

Sharma, P., Panday, P., & Dangwal, R. C. (2020). Determinants of environmental, social and corporate governance (ESG) disclosure: a study of Indian companies. *International Journal of Disclosure and Governance*, *17*(4), 208–217. https://doi.org/10.1057/s41310.020.00085-y

Stefanescu, C. A. (2022). Linking sustainability reporting frameworks and sustainable development goals. *Accounting Research Journal*, *35*(4), 508–525. https://doi.org/10.1108/ARJ-07-2020-0196

Suchman, M. C. (1995). Managing Legitimacy : Strategic and Institutional Approaches Author (s): Mark C . Suchman Source : The Academy of Management Review , Vol . 20 , No . 3 (Jul ., 1995), pp . 571-610 Published by : Academy of Management Stable URL : https://www.jstor.org. *The Academy of Management Review*, *20*(3), 571–610.

Tadros, H., & Magnan, M. (2019). How does environmental performance map into environmental disclosure?: A look at underlying economic incentives and legitimacy aims. *Sustainability Accounting, Management and Policy Journal*, *10*(1), 62–96. https://doi.org/10.1108/SAMPJ-05-2018-0125

Tumwebaze, Z., Bananuka, J., Kaawaase, T. K., Bonareri, C. T., & Mutesasira, F. (2022). Audit committee effectiveness, internal audit function and sustainability reporting practices. *Asian Journal of Accounting Research*, *7*(2), 163–181. https://doi.org/10.1108/AJAR-03-2021-0036

Ul Abideen, Z., & Fuling, H. (2024). Non-financial sustainability reporting and firm reputation. Evidence from Chinese listed companies. *International Journal of Emerging Markets*. https://doi.org/10.1108/IJOEM-08-2023-1319

Zahid, M., & Ghazali, Z. (2015). Corporate sustainability practices among Malaysian REITs and property listed companies. *World Journal of Science, Technology and Sustainable Development*, *12*(2), 100–118. https://doi.org/10.1108/wjstsd-02-2015-0008

Appendix 1

SUSTAINABILITY DISCLOSURE INDEX ITEMS	MAP TO GRI
A1 – GOVERNANCE STRUCTURE AND MANAGEMENT SYSTEMS	
Existence of the committees of the high governance body that are responsible for impacts on environment, economy and people.	**GRI 2.9**
Approach to stakeholder engagement	**GRI 2.29**
Implementation of externally developed economic, environmental and social charters/principles/ initiatives which organisation subscribes/ endorses	**GRI 2.23**
Executive compensation is linked to sustainability performance.	**GRI 2.19**
Existence of explanation for data measurement techniques and the bases of calculations, including assumptions adopted in the compilation of sustainability information in the report.	**GRI 3.1.**
Indicate whether the chair of the highest governance body is also an executive officer.	**GRI 2.11**
State the number, gender, expertise of members of the highest governance body, such as the board of directors that are independent and/or non-executive members.	**GRI 2.9c**
Processes in place for the highest governance body to ensure conflicts of interest are avoided.	**GRI 2.15**
Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	**GRI 2.18**
Description of the role of highest governance body in sustainability reporting	**GRI 2.14**
Statement on sustainable development strategy	**GRI 2.22**
Reporting on the collective knowledge of the highest governance body	**GRI 2.17**
A2 – CREDIBILITY	
Adoption of GRI sustainability reporting guidelines	
Independent verifications/audits on sustainability systems/performances, including external awards/ certifications for good sustainability practices.	**GRI 2.5**
Participation in industry-specific associations/initiatives to improve sustainability practices	**GRI 2.28**
Compliance with Laws and Regulations	**GRI 2.27**
A3 – ECONOMIC PERFORMANCE INDICATORS	
Economic Performance	**GRI 201**
Direct Economic Value	
Financial Implications and Other Risks and Opportunities due to Climate Change	
Defined benefit plan obligations and other retirement plans	
Financial assistance received from government	
Market Presence	**GRI 202**
Financial assistance received from other organization	
Proportion of senior management hired from the local community	
Indirect Economic Impacts	**GRI 203**
Infrastructure investments and services supported	
Significant indirect economic impacts	
Procurement Practices	**GRI 204**
Percentage of the procurement budget and proportion of spending on local suppliers	
Anti-Corruption	**GRI 205**
Number or percentage of operations assessed for risks related to corruption	
Communication and Training about anti-corruption policies and procedures	
Confirmed incidents of corruption and actions taken	
Anti-Competetive Behavior	**GRI 206**

Number of legal actions for anti-competetive behavior, anti-trust and monopoly decisions	
Tax	**GRI 207**
Description of approach to tax	
Description of tax governance, control and risk management	
Description of stakeholder engagement and management of concerns related to tax	
Description of country by country reporting	
A3 – ENVIRONMENTAL PERFORMANCE INDICATORS	
Materials	**GRI 301**
Materials used	
Recycled Input Materials used	
Reclaimed Products and their packaging materials	
Energy	**GRI 302**
Energy consumption within the organization	
Energy consumption outside the organization	
Energy intensity	
Reduction of energy consumption	
Reduction in energy requirements of products and services	
Water and Effluents	**GRI 303**
Interactions with water as a shared resource	
Management of water discharge-related impacts	
Water Withdrawal	
Water Discharge	
Water Consump.	
Bidiversity	**GRI 304**
Operatiol sites owned, leased, managed in protected areas	
Significant impacts of activities, products and services on biodiversity	
Size and location of habitats protected or restored	
IUNC red list species and national conservation list species with habitats	
Emmisions	**GRI 305**
Scope 1 GHG emissions	
Scope 2 GHG emissions	
Scope 3 GHG emissions	
GHG emissions intensity	
Reduction of GHG emissions	
Emissions of ozone-deplating substances	
Nitrogen oxides, sulfur oxides other significant air emissions	
Effluents and Waste	**GRI 306**
Waste generation and significant waste-related impacts	
Management of significant waste-related impacts	
Waste generated	
Waste diverted from disposal	
Waste directed to disposal	
Supplier Env. Assessment	**GRI 307**
Percentage of new suppliers that were screened using environmental criteria	
Negative environmental impacts in the supply chain and actions taken	

A3 – SOCIAL PERFORMANCE INDICATORS-LABOR	
Employment	**GRI 401**
New employee hires and employee turnover	
Benefits provided to full-time employees	
Parental leave	
Labor	**GRI 402**
Minimum notice periods regarding operational change	
Occupational Health/Safety	**GRI 403**
Occupational health and safety management system	
Hazard identification, risk assessment and incident investigation	
Occupational health services	
Worker participation, consultation and communication on occupational health and safety	
Worker training on occupational health and safety	
Promotion of worker health	
Prevention and mitigation of occupational health ans safety impacts	
Workers covered by an occupational health and safety management system	
Work related injuries	
Work related III health	
A3 – SOCIAL PERFORMANCE INDICATORS-HUMAN RIGHTS	
Training Occupation	**GRI 404**
Average hours of training per year/employee	
Programs for upgrading employee skills and transition assistance programs	
Percentage of employees receiving regular performance and career development reviews	
Divesity-Equal Opporrtunity	**GRI 405**
Diversity of governance bodies and employees	
Ration of basic salary and remuneration of man/woman	
Non Discrimination	**GRI 406**
Incidents of discrimination and corrective actions	
Collective Bargaining	**GRI 407**
Operations and suppliers in which the right to freedom of association and collective bargaining	
Child Labor	**GRI 408**
Operations and suppliers at significant risks for incidents of child labor	
Forced/Compulsory Labor	**GRI 409**
Operations and suppliers at significant risks for incidents of forced or compulsory labor	
Security Practice	**GRI 410**
Security personal trained in human rights policy and procedures	
Rights of Indigenous People	**GRI 411**
Incidents of violations involving rights of indigenous people	
A3 – SOCIAL PERFORMANCE INDICATORS-SOCIETY	
Labor Commitments	**GRI 413**
Operations with local community engagement	
Operations with significant actual and potential negative impacts on local community	
Public Policy	**GRI 415**
Political contributions	
A3 – SOCIAL PERFORMANCE INDICATORS-PRODUCT/SERVICE	

Supplier Social Assessment	**GRI 414**
Supplier social assessment	
New suppliers that were screened using social criteria	
Negative social impacts in the supply chain	
Customer Health/Safety	**GRI 416**
Assessment of the health and safety impacts of product and service	
Incidents of non-compliance concerning the health and safety impacts	
Marketing/Labeling	**GRI 417**
Requirements for product and service information and labeling	
Incidents of non-compliance concerning the product and service information and labeling	
Incidents of non-compliance concerning marketing communications	
Customer/Policy	**GRI 418**
Substantiated complaints concerning breaches of customer privacy	
A4 – SPENDING ON SUSTAINABILITY	
Summary of dollar savings arising from sustainability initiatives to the company	
Amount spent on donations, community investments, technologies, R&D and/or innovations to enhance sustainability.	
A5 – VISION AND STRATEGY	
CEO statement on sustainability performance in letter to shareholders and/or stakeholders.	
A statement of corporate sustainability policy, values and principles, codes of conduct.	
A statement about formal management systems regarding risk and performance in sustainability	
A statement that the firm undertakes periodic reviews and evaluations of its sustainable performances.	
A statement of measurable goals in terms of future sustainability performance	
A statement about specific sustainability innovations and/or new technologies	
Explanation of whether and how the precautionary approach or principle on sustainability issues is addressed by the organization	
A6 – SUSTAINABLITY INITIATIVES	
Internal sustainability awards	
Internal sustainability performance audits	
Internal certification of sustainability programs	
A7 – DISCLOSURE ON MANAGEMENT APPROACH – ECONOMIC	
Economic Performance	**GRI 201**
Market Presence	**GRI 202**
Indirect Economic Impacts	**GRI203**
Procurement Practices	**GRI 204**
Anti-Corruption	**GRI 205**
Anti-Competetive Behavior	**GRI 206**
Tax	**GRI 207**
A7 – DISCLOSURE ON MANAGEMENT APPROACH – ENV	
Materials	**GRI 301**
Energy	**GRI 302**
Water and Effluents	**GRI 303**
Bidiversity	**GRI 304**
Emmisions	**GRI305**
Effluents and Waste	**GRI 306**

Supplier Env. Assessment	**GRI 308**
A7 – DISCLOSURE ON MANAGEMENT APPROACH – SOCIAL-LABOR	
Employment	**GRI 401**
Labor	**GRI 402**
Occupational Health/Safety	**GRI 403**
Training Occupation	**GRI 404**
Divesity-Equal Opporrtunity	**GRI 405**
A7 – DISCLOSURE ON MANAGEMENT APPROACH – SOCIAL-HUMAN RIGHTS	
Non Discrimination	**GRI 406**
Collective Bargaining	**GRI 407**
Child Labor	**GRI 408**
Forced/Compulsory Labor	**GRI 409**
Security Practice	**GRI 410**
Rights of Indigenous People	**GRI 411**
A7 – DISCLOSURE ON MANAGEMENT APPROACH – SOCIAL-SOCIETY	
Labor Commitments	**GRI 413**
Public Policy	**GRI 415**
A7 – DISCLOSURE ON MANAGEMENT APPROACH – SOCIAL-PRODUCT/SERVICE	
Supplier Social Assessment	**GRI 414**
Customer Health/Safety	**GRI 416**
Marketing/Labeling	**GRI 417**
Customer/Policy	**GRI 418**