IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Analysis of Sustainability Disclosures Using a Gri Based Evaluation Methodology

Bengü YARDIMCI [1]
Mustafa Gürol DURAK [2]

Received: 07.11.2022, Accepted: 28.12.2022
DOI Number: 10.5281/zenodo.7513578

Abstract

This study aims to analyze the level of sustainability disclosures published by Borsa Istanbul listed companies using a GRI (Global Reporting Initiative) -based evaluation methodology. This two-step methodology consists of a scoring tool and a Multi-Weighted Sustainability Disclosure Checklist (WSDC) that bases on the GRI standards, the previous literature, and the expertise of financial experts. Using a sample of 29 companies listed in the Borsa Istanbul Sustainability Index, an in-depth content analysis method is applied to reveal the extent to which Turkish companies disclose their sustainability-related information. The findings of the content analysis are interpreted in terms of each disclosure item and each company's score. Company scores indicate minor differences among the sustainability disclosures of the sample reports. The findings reveal a high level of compliance mainly in "manufacturing" companies. It is followed by "financial institutions," "transportation, telecommunication and storage," "wholesale and retail trade, hotels and restaurants," electricity, gas and water," and "technology," respectively. Financial institutions tend to disclose more economic information, manufacturing companies prefer to present more disclosures on environmental and social issues than companies in other sectors. The scores of disclosure items reveal that companies disclose more on environmental and economic rather than social disclosures. Economic disclosure of anti-competitive behavior, environmental disclosures of consumption of water sources, emissions, reduction of energy consumption, and the level of compliance with laws and regulations, social disclosures of employee training programs, and occupational health and safety receive high scores.

Key words: Sustainability Reporting, GRI, Disclosure Checklist

JEL Code: M140

[1] Assist Prof., Yaşar University, Turkey, bengu.yardimci@yasar.edu.tr, http://orcid.org/ 0000-0002-7123-8855
[2] Assist Prof., Yaşar University, Turkey, gurol.durak@yasar.edu.tr, http://orcid.org/0000-0002-7249-7533

1. Introduction

In recent years, the concepts of sustainability and sustainable development have become increasingly important among business managers, academics, and policymakers. Until the 1970s, company reports were including only the financial statements and financial performance indicators, however the need for non-financial information began to be debated with the changing conditions.

Although financial information of a business has crucial importance to various stakeholders in terms of business performance, it is the indicator of the status quo in the short run, without focusing on the long-term value of a company (PWC, 2007). As social and environmental conditions change, market conditions and the needs of the stakeholders have shown an alteration, too. Additionally, technological developments increased the awareness of the stakeholders about the events occurring every day in the world, thus leading to more conscious stakeholders requiring more information from businesses. These challenges guide companies to develop the reporting practices that they submit to their stakeholders.

In the early stages of non-financial reporting, some companies in the US and Western Europe adopted social reporting, which is expressed as identifying, measuring, monitoring, and reporting the social and economic impacts of an institution on society for managerial and accountability purposes. (Epstein et al., 1976; Kolk, 2005).

In the late 1980s and early 1990s, governments, and corporations, under pressure from non-governmental organizations (NGOs), showed great interest in non-financial disclosures, particularly on environmental issues such as natural disasters, ecological disasters, increased carbon emissions, and climate change (Kolk, 2005). In the 1990s, corporate social responsibility has become a necessity instead of a strategic choice. While being a concept that was solely handled by businesses in the early 1990s, it was on the agenda of organizations such as the United Nations, the World Bank, and communities of the European Union and the OECD in the late 1990s (Aslanertik, 2007). Sustainability reporting has emerged as an improved version of corporate social responsibility reporting, taking into account the triple performance criteria. In other words, sustainability reports include not only the issues outlined in corporate social responsibility reports but also the impact of environmental and social performance on the economic performance of enterprises. Elkington (1999) describes a form of sustainability accounting referred to as the triple bottom line (TBL), which aims to report on an organization's economic, social and environmental impacts (Gunawan et al., 2022). These impacts imply the "people", "planet", and "profit" aspects of TBL reporting (KPMG, 2013; Baron, 2014; Setiawan, 2016; Hossain, 2020; Thayaraj and Karunarathne, 2021). Names of reports used widely for sustainability initiatives include sustainability, sustainable development, corporate social responsibility, triple bottom line, and accountability reports (Roca and Searcy, 2012). Turkish companies generally tend to disclose their sustainability information under sustainability reports. However,

sustainability information is presented under the form of integrated reports, integrated annual reports, CSR reports, UN Global Compact Progress Reports, and annual reports. This study conducts the analysis under a general expression "sustainability reporting." Similarly, The International Survey of Corporate Sustainability Reporting released by KPMG in 2002 defines sustainability reporting as "reports that include quantitative and qualitative information on their financial/economic, social/ethical and environmental performance in a balanced way.

Sustainability reporting helps organizations to measure, understand and communicate economic, environmental, social, and governance performances as a result of their daily operations resulting from the strategic decisions they have made under their sustainability goals. Since sustainability issues have become increasingly significant among companies and stakeholders, the number of companies sharing sustainability initiatives through public reports has increased. KPMG's research on the Corporate Responsibility Reporting report conducted in 2017 reveals that 74% of N100 companies and 89% of G250 companies have adopted a guideline or framework for their reporting practices. GRI is the most widely adopted sustainability reporting framework presenting standards and disclosures, enabling organizations and their stakeholders to make better decisions based on important information (KPMG et al., 2016). Supporting this information, KPMG's survey found GRI as the most commonly applied framework (63% of the N100 and 75 % of the G250 companies adopted the GRI).

A growing body of literature has examined the level of sustainability information disclosure using various frameworks and evaluation systems. In the last two decades, consultancy firms and academicians have proposed several approaches for judging the information provided within the corporate non-financial reports under some scoring variants (Skouloudis et al., 2009). Such rating systems allow a relevant comparison by focusing on the breadth and depth of topics discussed and presenting a ranking of the evaluated reports to differentiate better reporters from others. Furthermore, some of the previous studies state the importance of considering sectoral differences of companies related to sustainability issues due to the discrepancies in their business models, inputs and outputs, and consumer base (Henriques and Sadorsky 1996; Azapagic, 2003; Chand and Fraser, 2006; Yadava and Sinha, 2015).

For businesses, sustainability refers to assessing economic expectations and making strategic plans considering the balance of environmental and social sensitivity (IISD, 1992; Van Marrewijk, 2003). Therefore, a company might take concrete steps toward sustainability by adopting the principles of transparency, justice, accountability, and responsibility as the basic principles of corporate governance. To gain legitimacy, companies need to disclose their social and environmental issues utilizing sustainability disclosures being a communication tool and business strategy. (Dowling and Pfeffer 1975; Gray et al. 1995). Since stakeholder engagement has vital importance in the process of managing

stakeholders' expectations (Unerman and Bennett, 2004), a corporate board should provide consultancy (Mintzberg, 1983), legitimacy (Selznick 1949) and act as a channel in internal and external relationships (Hillman and Dalziel, 2003).

This study aims to analyze the sustainability reporting practices of companies in the Borsa Istanbul Sustainability Index. In order to measure the sustainability disclosure levels of companies, a new evaluation tool was constructed based on Global Reporting Initiative (GRI) standards and expert opinions. Additionally, the sectoral differences are also taken into consideration while developing the evaluation tool. Doing so allows academicians and practitioners to utilize the system efficiently. In this context, this study extends the knowledge of current sustainability disclosure practices of listed companies in Türkiye as an emerging capital market currently developing a non-financial reporting system.

The rest of the article is structured as follows. Section two presents a brief overview of corporate sustainability reporting and scoring systems; section three describes the methodology used for this study. Section four explains the findings of the analysis of 29 companies' corporate sustainability disclosures, while the conclusion describes the main findings of the research. It provides the interpretation of the quantitative and qualitative results and the implication and contribution of this study.

2. Literature Review

Today, companies have changed their impact and responsibilities in society by going beyond merely producing goods and services. The concerns on issues such as pollution, climate change, human rights, social inequality, economic downturn, and injustice around the world also encourage the business world to develop its role in society in a more transparent, reliable, and responsive manner. In other words, stakeholders and investors attach great importance to reports that companies disclose transparently their activities related to the issues such as climate change, natural resource consumption, economy, collective contribution, social responsibility, and financial performance. Further, they make investment decisions by evaluating these disclosures (BSDC, 2017).

Corporate sustainability has been investigated by several theoretical frameworks, the most prominent of which are stakeholder theory, agency theory, legitimacy theory, and institutional theory. Agency theory is concerned with the conflict of interest that results from the contradiction between agents and principles. According to agency theory, a high level of disclosures may reduce agency costs (Jensen and Meckling, 1976). Additionally, since larger companies are subject to pressure from various groups in society (Schipper, 1981); and monitored by regulatory authorities (Firth, 1979), they are in a tendency to disclose more information (Cooke, 1989; Alsaeed, 2006). Stakeholder theory assumes that a business should take into account the needs of stakeholders to gain a competitive advantage in the industry, monitor changes in the operational environment, and create long-term value since they are the essential parts of the social system (Laan

Smithet al., 2005; Freeman, 1984; Deegan, 2002). The theory states that the role of management is not only to focus on maximizing capital and labor inputs for the benefit of shareholders but also to "manage simultaneous attention to the legitimate interests of all appropriate stakeholders (Donaldson and Preston 1995; Bradford et al., 2017)". It is, therefore, necessary to carry out activities for more stakeholder groups. Companies need to legitimize their actions for their stakeholders by considering morality and ethics (Donaldson and Preston 1995; Bradford et al., 2017). As Berman et al. (1999) mentioned, the way of in which companies manage their relationships with the stakeholders can affect their financial performances. According to legitimacy theory, since organizations are social structures that must be legitimate in society, the value system of an entity belonging to a society must be compatible with the value system of that society. Institutional Theory suggests that companies can also legitimate their activities by considering and incorporating established institutions, such as culture and social norms, values, and taken-for-granted assumptions (Muthuri and Gilbert 2011; Fernando and Lawrence, 2014; Alhazmi, 2017).

In the history of non-financial reporting, sustainability reports have taken place under different titles, such as social reports, environmental reports, and corporate social responsibility reports. Kolk (2005) described the social reporting period as first wave of non-financial reporting practices in the 1970s. The second wave of non-financial reporting emerged in the 1980s and 90s as environmental reports published by multinational corporations. After the mid-1990s, companies prepared annual reports involving more information on social, ethical, and environmental aspects of company operations. The concept of corporate social reporting has received attention from practitioners and academics. According to the European Commission, Corporate Social Responsibility is a concept that companies voluntarily integrate social and environmental issues into their operations and relationships with their stakeholders. Sustainability reporting has emerged in the form of improved corporate social responsibility reporting considering the concept of the "Triple Bottom Line." Sustainability Reporting has two main objectives. The first is to evaluate the economic, environmental, and social dimensions of activities in the organization, and the other is to share this progress with its stakeholders (Lozano and Huisingh, 2011). As sustainability reporting becomes ever more integral to global action on environmental and social problems, so do the policies, regulations, standards, and other instruments that require or encourage organizations to report (KPMG, 2016).

Scoring Non-financial Reports

Over the last two decades, variant scoring methodologies assessing the extent of economic, social, and environmental information in the reports of businesses have been proposed as a benchmark tool by academicians and consulting companies. These systems allow companies to get feedback on their reporting practices, compare against their peers, and improve their relationships with their stakeholders (Skouloudis et al., 2009). Researchers attempted to evaluate the

quality of sustainability reports by checking the presence of predetermined indicators and scoring them (Kolk, 2008). Wiseman (1982) analyzed the extent of environmental disclosures in the annual reports of the 26 largest US companies by developing an unweighted environmental disclosure index consisting of 18 topics within five categories. By assigning a score to each item ("3" for quantitative information, "2" for non-quantitative information, "1" for the presence of explanation, and "0" for no explanation), a total score is obtained (Clarkson, 2008; Morhardt, 2010). Similarly, Azzone and Manzini (1994) investigated the reports of 15 large corporations according to five different groups of environmental performance indicators allowing the ranking of the companies by creating an unweighted index.

The Pacific Sustainability Index (PSI) is an evaluation tool assessing environmental and social disclosures. However, this system does not measure the economic aspect of the disclosed information. Moreover, the scoring system of PSI is different from the other scoring methodologies. It gives a score of "1" when the organization's current performance is higher than the previously reported and provides no further information for first-time reporters (Skouloudis and Evangelinos, 2009). Morhardt et al. (2002) constructed a scoring tool by utilizing GRI 2000 reporting guidelines and ISO 14031 framework and examined the selected largest companies in various sectors worldwide. IISD, Deloitte Touche Tohmatsu International, and SustainAbility (1993) published the first of its series of benchmarking surveys based on environmental reports by ranking the reporting quality. Deloitte Touche Tohmatsu (2002) developed a sustainability reporting scorecard for companies in three major sectors comprised of 30 items with six categories changing score between "0" and "4" from no mention to best practice accompanied by specific guidance to users of the scoring tool (Skouloudis et al 2009; Morhardt, 2010).

Similar to international studies, there are also national-level studies analyzing sustainability report practices of individual countries. For example, Clausen et al. (2005) provided a ranking of sustainability reports as a follow-up of the former IÖW (Institute for Ecological Economy Research), and the analysis of environmental reports included data between 1994 and 2000 in Germany. The assessment tool consisted of 13 main weighted criteria with 48 items encapsulating environmental, social, and integrated requirements. The methodology assigns scores of "0" for no fulfillment of requirements, "1" for poor fulfillment of requirements, "3" for good fulfillment of requirements, and lastly "5" for exceptional fulfillment of requirements. Eventually, the obtained value was multiplied by the weighted factor resulting in the main score. Daub (2007) implemented the research project methodology of the Institute for Sustainable Management at the University of OAS in Aragan, Switzerland, which was conducted in 2003 in order to evaluate sustainability reporting practices in Swiss companies. This methodology is based on GRI guidelines and weighted performance indicators by multiplying with "2" and it assesses the disclosure's score giving "0" to "3" points representing no meaningful information and full

information, respectively. Clarkson et al. (2008) constructed an environmental disclosure index comprised of unweighted items, however 79 of these items are considered hard disclosures, while the remaining 16 are appointed as soft measures by the consultancy of an expert based on GRI guidelines. Skouloudis et al. (2009) developed an assessment methodology based on GRI guidelines which consisted of 141 topics scoring between a range of "0" to "4" points, and they sent the proposed tool to the Union of Environmental Scientists of Greece for consultation. Erin et al. (2021) investigated SDG reporting of Nigerian companies using survey and content analysis methods. They performed the content analysis using the PwC framework, Global Reporting Initiative (GRI) framework, and International Integrated Reporting Council (IIRC) framework to analyze the compliance level of SDG reporting. They detected poor corporate SDG reporting in Nigerian organizations due to a lack of regulatory framework and voluntary disclosure.

Habek and Wolniak (2015) assessed the quality of CSR reports in selected European Union member states by the predetermined 11 selected criteria. They examined the reporting quality by considering the relevance and credibility of the information and using a five-point scale between "0" and "4" for the evaluation process. Yadava and Sinha (2015) evaluated the reporting practices of Indian private and public sector companies based on GRI guidelines with a numerical score of "0" to "3" for the total 84 indicators. More recently, Singh et al. (2020) developed a sustainability disclosure index for SMEs (Small and Medium enterprises) in a four-stage process considering GRI G4 specific standard disclosures for India. The researchers conducted their study with corporate sustainability reporting experts and academicians studying in this field. Gunawan et al. (2022) analyzed the evolution of sustainability reporting practices in Indonesia and detected an increased sustainability reporting trend in Indonesia between 2006 and 2019.

Companies tend to present disclosures which are material to them (Dye and Sridhar, 1995). Therefore, the disclosure level may change due to industrial differences (Haniffa and Cooke, 2002). For instance, labor-intensive firms such as manufacturing companies are expected to disclose more information about employees. Firms operating in the chemical sector may prefer to present information regarding environmental issues. Service sector companies are expected to disclose information about social topics (Haniffa and Cooke, 2005). While mining companies have previously used environmental and social reporting as an essential tool in communicating company activities and policies, they have shifted their focus from solely environmental performance to comprehensive sustainability reports (Perez and Sanchez, 2009). Considering the sectoral differences, the material issues in the sustainability reports should also differ. For this reason, the evaluation methodology created in this study contributes to the literature and offers a system that sustainability practitioners can use.

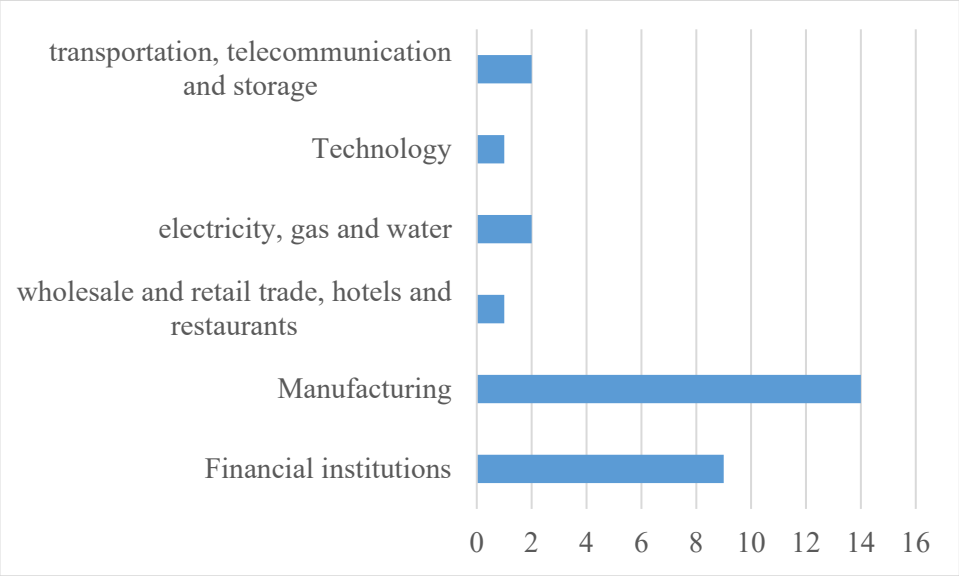
3. Methodology

The present study aims to analyze the nature and extent of Sustainability Disclosures of the companies and the extent to which these disclosures meet the needs of stakeholders. In this frame, this study develops a comprehensive (two-step) evaluation methodology based on the GRI framework and the previous research. This methodology consists of using a Multi-Weighted Sustainability Disclosure Checklist and a scoring tool.

3.1 Data Source and Sample

In Türkiye, companies publish non-financial reports under several titles; Sustainability Reports, CSR reports, UN Global Compact Progress Reports, annual reports, and integrated reports. For instance, some companies present their sustainability performances or activities in their annual reports, while others prefer to publish separate reports. Moreover, some useful websites very effectively release sustainability-related disclosures. On the other side, some companies that have experienced publishing sustainability reports for years tend to publish integrated reports. Daub (2007) confirmed this notion by stating that the statements regarding the quality or extent of sustainability disclosure of three sustainability dimensions can be made by considering all published information. This study includes 29 companies listed in Borsa Istanbul Sustainability Index for content analysis. Some of the analyzed companies prefer to disclose sustainability information through annual reports, annual integrated reports, and solely sustainability reports. Moreover, this research considers the sectoral differences between the companies during the content analysis. Graph 1 depicts the company distribution by sectors.

Graph 1. Company distribution by sector



Source: Authors' calculations

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Graph 1 depicts the six main sectors included in the study. The majority of the sample companies exist in the manufacturing and finance sectors.

3.2 Research Model for Compliance Level

Content analysis is the predominant method for the analysis of corporate narrative reporting (Merkl Davies et al., 2011). It has been widely used in corporate sustainability studies analyzing the disclosures of annual reports (Ingram and Frazier 1980; Unerman, 2000; Bradford et al, 2017). It is a research technique used to make reproducible and valid inferences from texts about contexts of use (Krippendorff 2004; Perez and Sanchez, 2009). Previous studies investigating social and environmental disclosures of corporations have applied this method in their studies (Grey et al., 1995; Haniffa and Cook, 2005; Searcy and Elkhawas, 2012; Kilic and Kuzey, 2018; Aslanertik and Bengu, 2022). Following previous research, this research investigates the sustainability disclosure practices of companies listed in the Borsa Istanbul Sustainability Index utilizing a comprehensive evaluation methodology. This two-step evaluation methodology evaluates sustainability information from two perspectives. First, company scores give information about the current practices of sustainability reporting considering the sectoral differences. Second, each disclosure item score reveals the concentration level on that specific disclosure. For this reason, this study aims to analyze the explanation level of each disclosure item and the compliance level of each company's sustainability reporting practices.

3.3 Developing an Evaluation System Using GRI Standards as Benchmark

A comprehensive evaluation methodology was designed using GRI subject-specific standards to measure sustainability disclosures on performance issues (economic, environmental, social). Some of the previous studies stated that the sustainability issues related to material topics for each company vary from industry to industry due to differences in their business models, inputs and outputs, and consumer base, and mentioned the importance of considering sectoral differences. (Henriques and Sadorsky 1996; Azapagic 2003; Chand and Fraser 2006; Yadava and Sinha, 2015;). Based on this notion, the current study has created a different list of disclosures for each sector.

The process of developing the comprehensive evaluation methodology includes the following steps:

1. The companies presenting sustainability disclosures were identified and categorized according to their sectors.
2. Material issues that exist in the sustainability reports of the sample companies were determined, individually. Afterward, a disclosure list was created, which includes the industry-specific material items disclosed jointly by all companies in the same sector (Table 1).

3. Following the recommendations of previous studies (Skouloudis and Evangelinos, 2009; Rouf, 2011; BSDC, 2017), all performance disclosures (economic, environmental and social) adopted from the GRI standards were sent to 41 experts (auditors, financial analysts, certified public accountants, and academicians) to weigh them according to their relative importance (Please see the survey on Appendix A)

4. Experts rated each performance indicator.

5. The level of sustainability disclosures was graded by checking whether the sample firms disclosed the industry-specific material items. For this purpose, utilizing previous scoring systems developed in the literature, a new numerical scoring tool was designed for each item of the Multi-Weighted Sustainability Disclosure Checklist (WSDC) by considering different disclosing manners of sample firms. Accordingly, this scoring tool is intrinsic to Türkiye's context. It is described and exemplified in the Table 3 Scoring tool for the items.

6. Content analysis was applied using the Multi-Weighted Sustainability Disclosure Checklist (WSDC) and the scoring tool four times by the researcher for the consistency of the results.

7. The explanation level of each disclosure item and the compliance extent of the company's sustainability reporting practices were evaluated by using WSDC.

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Table 1. Multi-Weighted Sustainability Disclosure Checklist

Multi-Weighted Sustainability Disclosure Checklist										
		Manufacturing Industry	**Electricity, gas and water**	**Construction and public works**	**Wholesale and retail trade, hotels**	**Transportation, telecommunication**	**Financial institutions**	**Technology**	Number of items under each disclosure	**Disclosure weights assigned by experts**
Disclosure No	**Economic Performance Disclosures / Expert's Topic Weight**	**40**	**40**	**38**	**44**	**42**	**51**	**47**		
1	Information to Economic Performance	+	+	+	+	+	+	+	4	4,34
2	Information on Market Presence	+	+	+	+		+		2	4,00
3	Information regarding Indirect Economic Effects	+	+	+	+	+	+	+	2	3,48
4	Disclosures on Procurement Practices	+	+	+	+	+	+	+	1	3,51
5	Information related to Anti-Corruption Asssessments	+	+	+	+	+	+	+	3	3,73
6	Disclosures regarding Anti-Competitive Behavior	+		+	+	+	+		1	3,63
	Number of material disclosures for each sector	6	5	6	6	5	6	4		
	Environmental Performance Disclosure / Expert's Topic Weight	**36**	**36**	**35**	**27**	**30**	**20**	**24**		
1	Information reflecting environmental sensitivity in the selection and usage of materials	+	+		+	+	+		3	4,10
2	Disclosures regarding the energy intensity and reduction of energy consumption	+	+	+	+	+	+	+	5	4,20
3	Information on sustainability and the consumption of water source	+	+	+	+	+	+	+	3	4,27
4	Information on conservation of biodiversity	+	+	+	+	+	+	+	5	4,02
5	Disclosures related to Emissions	+	+	+	+	+	+	+	7	3,95
6	Disclosures related to water effluents and discharges	+	+	+	+	+	+	+	5	4,17
7	Information on the level of compliance with laws and regulations	+	+	+	+	+	+	+	1	3,93
8	Information regarding the suppliers that were screened using environmental criteria	+	+	+	+	+	+	+	2	3,71
	Number of material disclosures for each sector	8	8	7	8	8	8	7		

	Social Performance Disclosure / Expert's Topic Weight	**24**	**24**	**27**	**29**	**28**	**29**	**29**		
1	Information related to organization's efforts to implement inclusive recruitment practices	+	+	+	+	+	+	+	3	4,29
2	Disclosures on minimum notice periods regarding operational changes	+	+		+	+	+		1	3,83
3	Occupational health and safety	+	+	+	+	+	+	+	4	4,37
4	Information on employee training programs	+	+	+	+	+	+	+	3	3,98
5	Disclosures on diversity of governance bodies and employees	+	+	+	+	+	+	+	2	3,76
6	Disclosures regarding the actions taken to prevent incidents of discrimination	+	+	+	+	+	+	+	1	4,02
7	Information on freedom of association and collective bargaining	+	+	+	+	+	+	+	1	3,76
8	Disclosures on child labors	+	+	+	+	+	+	+	1	4,41
9	Disclosures on forced and compulsory labor	+	+	+	+	+	+	+	1	4,24
10	Information on the number of trained security personnel	+	+	+		+	+		1	3,71
11	Disclosures on the rights indigenous people	+	+	+	+	+	+		1	3,73
12	Disclosures on human right assessments	+	+	+	+	+	+	+	3	4,32
13	Information on operations with local community engagement, impact assessments, and development programs	+	+	+	+	+	+		2	3,73
14	Disclosures on the suppliers that were screened using social criteria	+	+	+	+	+	+	+	2	3,24
15	Information reflecting the organization's participation in public policy development and lobbying	+		+	+	+	+	+	1	3,27
16	Disclosures on the incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of products and services	+			+	+	+	+	2	4,22
17	Disclosures on the information and labels respond to the impact of a product or service on sustainability	+		+	+	+	+		3	3,78
18	Disclosures on customer privacy policies	+			+	+	+		1	4,07
19	Disclosures regarding the organization's compliance with laws and regulations in the social and economic area	+	+		+	+	+		1	4,10
	Number of material disclosures for each sector	19	15	15	18	19	19	12		

Source: Authors' calculations

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Table 2. Sectoral topic weights given by experts to each performance indicator

Sectoral Weights of Each Performance Indicator

Sectors	ECONOMIC	ENVIRONMENT	SOCIAL	TOTAL SCORE
Manufacturing	40	36	24	100
Electricity, gas and water	40	36	24	100
Construction and public works	38	35	27	100
Wholesale and retail trade, hotels and restaurants	44	27	29	100
Transportation, telecommunication and storage	42	30	28	100
Financial institutions	51	20	29	100
Technology	47	24	29	100

Source: Authors' calculations

3.4 Scoring Tool

Academic researchers and consultancy firms have offered various methods for judging the disclosures of non-financial reports over the last two decades. A numerical scoring tool was constructed according to the frameworks of previous sustainability disclosure evaluation methodologies (Morhardt et al., 2002; Deloitte Touche Tohmatsu, 2002; Daub, 2007; Skouloudis et al., 2009; Yadava and Sinha, 2015). Each item of the Multi-Weighted Sustainability Disclosure Checklist received a score between "0" and "3". If a specific indicator was not provided in the disclosure, this item received a score of "0". If any title or any generic definition of that indicator took part in the report, a score of "1" was appointed. With the presence of extensive information more than only a sentence or a title including explanations, an item received a score of "2". Lastly, if the coverage was full and systematic, it received the maximum score of "3". Score 3 refers to meeting the GRI requirements completely. Scores were assigned as shown in Table 3.

Table 3. Scoring Tool for the Items

Score	Scoring Levels
0	No information is provided
1	Generic statements disclosed
2	The disclosure provides good information on the requirement
3	Full and systematic coverage is provided

Source: Authors' calculations

Expert Assessments

As previously mentioned, research investigating the level of corporate reporting disclosures and developing scoring tools based on the GRI framework proposes the engagement of stakeholder groups in the index construction process

(Skouloudis and Evangelinos, 2009; Rouf, 2011; BSDC, 2017). BSDC (2017) expresses that experts on sustainability, governance, finance areas need to work together to enable a company to disclose and report the potential impacts of sustainable issues such as climate change. However, despite the difficulties in involving such experts in a research project to give weights to each item and considering sectoral differences, some previous studies have appointed the same weights to all items (Haniffa and Cook, 2002; Yadava and Sinha, 2015). Nevertheless, some studies put more weight on quantitative disclosures or categorize the items as hard and soft disclosures (Wiseman, 1982; Clarkson et. al, 2008), while others use weighting factors by appointing them more points than others (Clausen et al., 2005; Daub, 2007).

For this purpose, a survey consisting of GRI performance indicators was sent to experts of finance. The survey consisted of two parts. The first part covers constant sum scaling which the respondents were asked to distribute a certain point among the items. The second part consists of a 0-5 Likert scale in which the indicators disclosed by companies were ranked by the expert its importance from"1 = least importance" to "5 = most important". The survey sent to experts can be found in Appendix A.

3.5 Applying the comprehensive evaluation methodology (Two-step evaluation methodology)

This study constructs a Multi-Weighted Sustainability Disclosure Checklist (WSDC). Table 1 presents all disclosures, disclosures material for each sector (depicted with the sign “+”), the number of sub-items under each disclosure, and disclosure weights assigned by experts. For this reason, WSDC consists of sector-specific and weighted disclosure items. The scoring process can be followed by tracking Table 4 and Figure 1. Step 1 includes the process of evaluating the weighted disclosure scores, while Step 2 focuses on considering the sectoral topic (economic, environmental, and social) weights assigned by experts. The calculation results of the sum of Step 1 and Step 2 give the company’s total scores.

Moreover, as mentioned, WSDC can be applied to reveal the companies’ tendencies on disclosure items. In other words, the explanation level of each disclosure item in WSDC may give information about which disclosures are material to explain and to what level they are disclosed. Table 1 presents the results of these calculation.

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Table 4 Two Steps Evaluation Methodology

	Step 1					
	Each Item's Score 0-3	1/ number of items under each disclosure	Unweighted Score of each disclosure	Disclosure weight assigned by Experts	1 / number of sector-specific material disclosures for each topic (economic, environmental, social)	**Step 1 weighted disclosure score**
Acronym:	A	b	c	d	e	**f**
Formula:	A	b	= sum (axb)	d	e	= (cxd)xe

	Step 2				
	Topic weight assigned by Experts (economic, environmental, social) weight	Total sectoral Topic Score (unweighted)	**Step 2 Total sectoral Topic Score (weighted)**	**Step 2 Topic Score**	**Total Score**
Acronym:	**G**	**h**	**i**	j	k
Formula:	G	=sum (f)	= h x g	= sum (i)	= sum (j)

Source: Authors' calculation

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Figure 1 Example for the Implemantation of the Two Steps Evaluation Methodology- Economic Performance Disclosures

		Topic: Economic Performance	Disclosure Score 0-3	# of dicsloures	Unweighted Score	Experts assessments disclosure weight	# of items (GRI standards)	Step 1 Standard Score	Experts assessments item (economic, environmental, social) weight	Total sectoral Topic Score (unweighted)	Step 2 Total sectoral Topic Score (weighted)
		Acronym:	a	b	c	d	e	f	g	h	i
		Formula:	a	b	= sum (axb)	d	e	= (cxd)/e	g	= sum (f)x g	
Item No		**Example for Mnufacturing Sector**							0,40	11,35	**4,54**
1	**GRI 201**	**Economic Performance**			3	4,34	6	2,17			
	D201-1	Direct economic value generated and distributed	3	=1/4							
	D201-2	Financial implications and other risks and opportunities due to climate change	3	=1/4							
	D201-3	Defined benefit plan obligations and other retirement plans	3	=1/4							
	D201-4	Financial assistance received from government	3	=1/4							
2	**GRI 202**	**Market Presence**			3	4,00	6	2,00			
	D202-1	Ratios of standard entry level wage by gender compared to local minimum wage	3	=1/2							
	D202-2	Proportion of senior management hired from the local community	3	=1/2							
3	**GRI 203**	**Indirect Economic Impacts**			3	3,48	6	1,74			
	D203-1	Infrastructure investments and services supported	3	=1/2							
	D203-2	Significant indirect economic impacts	3	=1/2							
4	**GRI 204**	**Procurement Practices**			3	3,51	6	1,76			
	D204-1	Proportion of spending on local suppliers	3	=1/1							
5	**GRI 205**	**Anti-corruption**			3	3,73	6	1,87			
	D205-1	Operations assessed for risks related to corruption	3	=1/3							
	D205-2	Communication and training about anti-corruption policies and procedures	3	=1/3							
	D205-3	Confirmed incidents of corruption and actions taken	3	=1/3							
6	**GRI 206**	**Anti-competitive Behavior**			3	3,63	6	1,82			
	D206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	3	=1/1							

Source: Authors' calculation

Figure 1 presents an example for the application of two-step methodology. It only shows the scoring steps of economic performance for one sample company.

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

4. Findings

This section presents the findings of the study under two-steps evaluation methodology using WSDC. The compliance levels of companies' sustainability disclosures and to what extent each disclosure items in WSDC are presented.

4.1 Company Sustainability Disclosures

This section provides the content analysis results and descriptive statistics of the sample companies' total disclosure scores. Table 5 provides the results from the descriptive statistics analysis of the scores of the sustainability disclosures.

Descriptive statistics for the total disclosure scores of companies have a mean of 534. A relatively high standard deviation of 212 reveals considerable variation in the disclosure scores of individual companies. Considering the mean scores for each disclosure performance, it can be claimed that the companies have a higher tendency towards reporting information regarding the economic performances. However, the standard deviations also show that the highest level of variation exists for representing the economic performances. Disclosures of environmental performance follows at the second order while the social performance disclosures has the lowest scores. Besides, firms in Turkey are newly presenting reports in which they share their sustainability information, so compliance levels can be expected to increase over time. Variations can be accepted until there is an improvement not only in the format but also in the content quality.

Table 5 Descriptive Statisitics Results in terms of Economic, Environmental, Social and Total Performance Disclosures Scores of Sample Companies

Descriptive Statistics	Economic Performance Scores	Environmental Performance Scores	Social Performance Scores	Total Scores
Mean	232	161	141	534
Std Dev.	131	82	76	212
Kurtosis	-0,6	-0,4	-0,6	0,3
Skewness	0,2	0,27	0,33	0,19
Range	504	323	289	964
Min.	0,0	0,000	0,000	76
Max.	504	323	289	1039
Number	29	29	29	29

Source: Authors' calculations

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

4.2 Company Scores in terms of Sectors

This subsection presents the company scores in terms of sectors. The manufacturing sector received the highest score with 1039 over 1104, which refers to a compliance level of 94%. Financial institutions had the highest score of 835 over 1076, which means a 78% compliance level of that company. The transportation, telecommunications, and storage sector ranked third among all sectors with a compliance percentage of 75%. The compliance levels of these two sectors are very close to each other. The list is followed by wholesale and retail trade, hotels and restaurants (56%), electricity, gas and water, and Technology (40%).

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Table 6 Company Scores Calculated over the Maximum Score a Company Can Receive

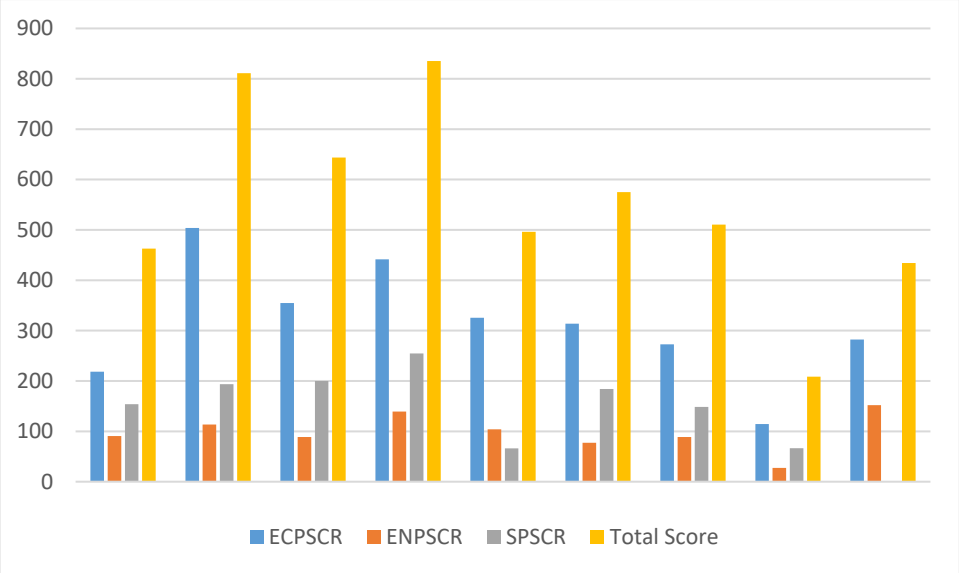
#	Sectors	ECPSCR	ENPSCR	SPSCR	Total Score	Max Total Score for each sector	% of Total Score over Max. Score for each sector
1	Financial institutions	218	91	154	463	1076	43%
2	Financial institutions	504	114	194	811	1076	75%
3	Financial institutions	355	89	200	644	1076	60%
4	**Financial institutions**	**441**	**139**	**254**	**835**	**1076**	**78%**
5	Financial institutions	326	104	66	496	1076	46%
6	Financial institutions	314	77	184	575	1076	53%
7	Financial institutions	273	89	149	510	1076	47%
8	Financial institutions	115	28	66	209	1076	19%
9	Financial institutions	282	152	0	434	1076	40%
10	Manufacturing	17	0	59	76	1104	7%
11	Manufacturing	330	198	92	621	1104	56%
12	Manufacturing	75	136	210	421	1104	38%
13	Manufacturing	130	192	44	366	1104	33%
14	Manufacturing	210	322	199	731	1104	66%
15	Manufacturing	296	253	140	689	1104	62%
16	**Manufacturing**	**427**	**323**	**289**	**1039**	**1104**	**94%**
17	Manufacturing	156	102	85	344	1104	31%
18	Manufacturing	130	231	84	445	1104	40%
19	Manufacturing	138	255	112	506	1104	46%
20	Manufacturing	105	206	61	372	1104	34%
21	Manufacturing	0	109	109	218	1104	20%
22	Manufacturing	96	105	148	349	1104	32%
23	Manufacturing	120	275	64	459	1104	42%
24	**wholesale and retail trade, hotels and restaurants**	**216**	**121**	**279**	**616**	**1110**	**56%**
25	**electricity, gas and water**	**252**	**261**	**123**	**636**	**1256**	**51%**
26	electricity, gas and water	201	182	97	480	1256	38%
27	Technology	254	188	175	617	1551	40%
28	**transportation, telecommunication and storage**	**434**	**184**	**264**	**882**	**1175**	**75%**
29	transportation, telecommunication and storage	327	149	177	652	1175	56%

Note: ECPSCR, ENPSCR, and SPSCR refers to Economic Performance Score, Environmental Performance Score, and Social Performance Score, respectively.

Source: Authors' calculations

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

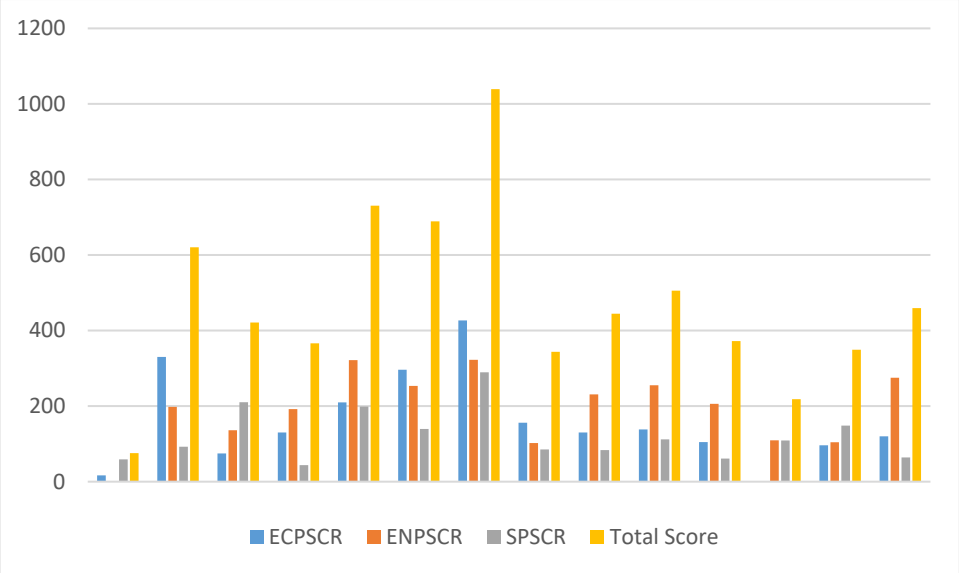
Graph 2. Compliance Level Scores of Financial Institutions



Source: Authors' calculations

Graph 2 shows the Company compliance level score based on the finance sector. Economic, Environmental, and Social Performance Scores (ECPSCR, ENPSCR, and SPSCR, respectively) in the finance sector exhibit a similar trend.

Graph 3. Compliance Level Scores of Manufacturing Companies

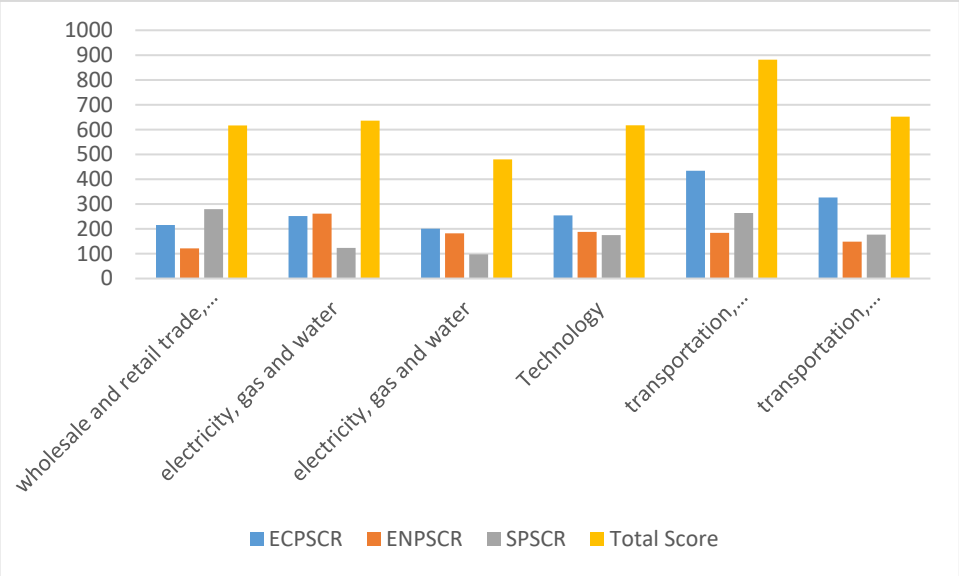


Source: Authors' calculations

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

As can be seen in Graph 3, the scores have different patterns in manufacturing companies. This result may be due to a variety of sub-sectors under manufacturing. The sub-sectors of sample companies in the manufacturing sector includes several different sectors. Thus, compliance levels of manufacturing companies do not follow a parallel trend.

Graph 4. Compliance Level Scores of Other Sector's Companies



Source: Authors' calculations

Graph 4 shows the scores of the "wholesale and retail trade, hotels and restaurants," "electricity, gas and water," "technology," and "transportation, telecommunication, and storage sectors." Since the percentage of companies in these sectors is relatively low, Graph 4 compares the remaining sectors in one graph. As observed in Graph 4 and Table 6, the "transportation, telecommunication, and storage sector" received the highest score 882 over 1175 (compliance of 75%) compared to others. The wholesale and retail trade, hotels, and restaurants sectors followed it by 616 over 1110 (compliance of 56%). Additionally, it was observed that two companies from Electricity, gas, and water sector and one company from Technology sector showed similar patterns.

4.3 Disclosure Item Scores

This subsection discusses the results of content analysis in terms of the relative importance of each disclosure item. Table 8 presents WSDC disclosure item scores for all sectors and each sector separately.

The descriptive statistics of the disclosure item scores are illustrated in Table 7. In addition, Table 8 is quite enlightening in terms of showing the weighted total scores of each disclosure item, taking into account their sectors. Descriptive statistics showed that the average score of the explanation items is 55. While explanations on indigenous people's rights received the lowest score, information on anti-corruption assessments reached the highest score 141.

Table 7 Descriptive Statistics for Disclosure Items

Descriptive Statistics	Weighted Total scores of each disclosure item
Mean	55,14
Std Dev.	38,63
Kurtosis	-0,82
Skewness	0,61
Range	137,1
Min.	4,40
Max.	141,5
Number	33

Source: Authors' calculations

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Table 8 WSDC Disclosure Items Scores

	WSDC Disclosure Items Scores	ALL SECTORS		Financial institutions		Manufacturing		wholesale and retail trade, hotels and restaurants		electricity, gas and water		transportation, telecommunication and storage		Technology	
Item No	ECONOMIC PERFORMANCE DISLCOSURES	Weigjhted Total Score	Rate %	Weigjhted Total Score	Rate %	Weigjhted Total Score	Rate %	Weigjhted Total Score	Rate %	Weigjhted Total Score	Rate %	Weigjhted Total Score	Rate %	Weigjhted Total Score	Rate %
1	Information to Economic Performance	120	32%	78	67%	43	24%	2	18%	5	20%	11	43%	2	18%
2	Information on Market Presence	38	11%	12	11%	12	7%	4	33%	4	17%	5	20%	4	33%
3	Information regarding Indirect Economic Effects	96	32%	52	55%	23	16%	3	29%	13	64%	14	70%	6	58%
4	Disclosures on Procurement Practices	91	30%	37	39%	53	36%	0	0%	0	0%	7	35%	0	0%
5	Information related to Anti-Corruption Asssessments	141	44%	88	88%	53	34%	2	21%	16	74%	14	62%	8	73%
6	Disclosures regarding Anti-Competitive Behavior	80	25%	60	61%	24	16%	7	61%	0	0%	16	73%	0	0%
1	Information reflecting environmental sensitivity in the selection and usage of materials	35	10%	7	6%	21	12%	0	0%	2	10%	2	9%	2	20%
2	Disclosures regarding the energy intensity and reduction of energy consumption	107	29%	37	32%	52	29%	0	0%	8	34%	8	31%	5	36%
3	Information on sustainability and the consumption of water source	117	32%	30	26%	73	41%	0	0%	6	22%	2	9%	3	27%
4	Information on conservation of biodiversity	24	7%	1	1%	18	11%	0	0%	3	13%	0	0%	0	0%
5	Disclosures related to Emissions	107	31%	39	36%	47	29%	4	35%	9	38%	8	35%	5	40%
6	Disclosures related to water effluents and discharges	90	25%	19	17%	47	27%	3	21%	4	17%	8	31%	3	24%
7	Information on the level of compliance with laws and regulations	111	32%	55	52%	37	22%	6	49%	12	53%	12	49%	7	56%
8	Information regarding the suppliers that were screened using environmental criteria	45	14%	8	8%	17	11%	5	46%	6	26%	5	23%	6	53%
1	Information related to organization's efforts to implement inclusive recruitment practices	65	17%	11	10%	32	18%	2	16%	5	20%	5	19%	2	12%
2	Disclosures on minimum notice periods regarding operational changes	35	10%	6	5%	17	11%	2	21%	1	5%	5	20%	1	11%
3	Occupational health and safety	67	18%	9	8%	34	18%	3	24%	5	18%	6	23%	1	6%
4	Information on employee training programs	66	19%	11	11%	31	18%	3	22%	7	28%	4	17%	4	29%
5	Disclosures on diversity of governance bodies and employees	51	16%	8	8%	21	13%	2	21%	6	28%	4	20%	4	31%
6	Disclosures regarding the actions taken to prevent incidents of discrimination	59	17%	13	12%	20	12%	3	22%	7	30%	5	21%	4	34%
7	Information on freedom of association and collective bargaining	35	11%	6	6%	14	9%	2	21%	1	5%	4	20%	1	10%
8	Disclosures on child labors	40	10%	5	5%	23	12%	3	25%	2	6%	3	12%	2	12%
9	Disclosures on forced and compulsory labor	36	10%	4	4%	21	12%	3	24%	2	6%	3	11%	2	12%
10	Information on the number of trained security personnel	12	4%	1	1%	9	6%	0	0%	0	0%	2	10%	0	0%
11	Disclosures on the rights indigenous people	4	1%	0	0%	4	3%	0	0%	0	0%	0	0%	0	0%
12	Disclosures on human right assessments	18	5%	2	2%	7	4%	2	16%	1	4%	0	0%	1	8%
13	Information on operations with local community engagement, impact assessments, and development programs	18	6%	4	4%	4	3%	1	10%	0	0%	3	15%	0	0%
14	Disclosures on the suppliers that were screened using social criteria	15	5%	1	2%	6	4%	2	18%	2	9%	2	9%	2	18%
15	Information reflecting the organization's participation in public policy development and lobbying	9	3%	2	2%	2	1%	0	0%	2	9%	2	9%	2	18%
16	Disclosures on the incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of products and services	28	8%	0	0%	18	10%	3	23%	0	0%	6	22%	0	0%
17	Disclosures on the information and labels respond to the impact of a product or service on sustainability	17	5%	4	4%	8	5%	2	14%	0	0%	0	0%	0	0%
18	Disclosures on customer privacy policies	26	7%	10	9%	5	3%	3	23%	0	0%	3	11%	0	0%
19	Disclosures regarding the organization's compliance with laws and regulations in the social and economic area	16	5%	2	2%	5	3%	3	23%	0	0%	5	22%	0	0%

Source: Authors' calculations

IJCEAS

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XII, Issue: 2, Year: 2022, pp.799-828

Table 8 presents the disclosure item's weighted total scores and percentage of actual scores in each sector. Percentage of scores in total for each item was calculated by dividing the weighted total score of a disclosure by the weighted-maximum total score that can be received. Information about anti-corruption assessments received the highest value by 44 % among the sectors. For instance, if a disclosure receives a weighted score of 120 over a maximum score of 378, the rate equals 32%.

Presenting the Sector Specific Disclosures

This section discusses the findings and comments on the disclosure items that exist in the WSDC from a sectoral perspective.

Economic Performance Disclosures

Table 8 presents that financial institutions prefer disclosing the economic, environmental, and social disclosures, respectively. The most disclosed items are information on economic performance, information regarding indirect economic effects, information related to anti-corruption assessments and disclosures regarding anti-competitive behavior. Economic performance indicators such as, information to economic performance, information regarding indirect economic effects, and disclosures regarding anti-competitive behavior existed among the first five highest scores in manufacturing sector. Companies in this sector considered the economic dimension as material to disclose. In remaining sectors, information regarding indirect economic effects received the highest scores. These results are quite similar to those of Gunawan et al. (2022). They reported that direct economic and indirect economic impacts were among the most disclosed economic indicators.

Environmental Performance Disclosures

As expected, manufacturing companies prefered to present more information on environmental issues. As can be seen in Table 6, the highest environmental score a company received is 323. The remaining sectors follow as electricity, gas, and water sector (max. environmental score of 261), technology (max. environmental score of 188), transportation, telecommunication and storage (max. environmental score of 184), finance sector (max. environmental score of 139), wholesale and retail trade, hotels and restaurants sector (max. environmental score of 121), respectively. Disclosure items of information on sustainability and the consumption of water sources, disclosures related to emissions, disclosures regarding the energy intensity and reduction of energy consumption, and information on the level of compliance with laws and regulations were disclosed as the most material information. Similarly, Gunawan et al. (2022) presented the energy consumption and water withdrawals among the most disclosed environmental disclosures.

Social Performance Disclosures:

Table 6 presents that manufacturing companies gave more importance to social disclosures than companies in other sectors. However, among the remaining sectors, finance sector, whole companies, and transportation companies received similar scores in terms of social performance. Generally, the companies tended to disclose the first ten items of social disclosures. These are recruitment practices, minimum notice periods, occupational health and safety, employee training programs, diversity of governance bodies and employees, incidents of discrimination, child labor, compulsory labor, and trained security personnel, which were explained more than other items among the social performance disclosures. These findings are also close the findings of Gunawan et al. (2022).
In summary, companies in all sectors needed to disclose especially economic indicators. As might be expected, manufacturing sector companies presented more environmental indicators. In addition, the results showed that manufacturing companies, wholesale, electricity, transportation, and technology companies give more importance to social indicators.

5. Conclusions

This study aims to explain the nature and level of sustainability disclosures of the companies and to what extent these disclosures meet the needs of stakeholders. In light of the goals identified, it developed a comprehensive evaluation methodology based on the GRI framework, previous research, and expert opinions. This methodology consists of a Multi-Weighted Sustainability Disclosure Checklist and a scoring tool. Sample reports of 29 companies from various sectors listed in the sustainability index of Borsa Istanbul are in the scope of the study.

The research results are presented for company scores and disclosure item scores. Finance sector disclosed economic and social information more than environmental performance. The manufacturing sector prefered to disclose economic, environmental, and social, respectively. Wholesale and retail trade, hotels, and restaurants primarily presented social disclosures, while the electricity, gas, and water sector explained more about economic performance. Technology and transportation, telecommunication, and storage sectors tended to disclose economic, social, and environmental performance, respectively. An economic disclosure of anti-competitive behavior, environmental disclosures of consumption of water sources, emissions, reduction of energy consumption, and the level of compliance with laws and regulations, social disclosures of employee training programs, and occupational health and safety received higher scores.

This study contributes to the sustainability reporting literature in several ways. Firstly, it aims to support the policymakers and regulators in highlighting the importance of sustainability reporting practices and puts forward the need for intensive initiatives to promote sustainability reporting. Secondly, it develops a

comprehensive evaluation methodology considering sectoral differences and consulting experts' opinions. Thirdly, previous research in the literature has primarily analyzed reporting practices using unweighted index and scoring tools. However, this study develops a weighted disclosure checklist in which the weights are appointed by 41 experts of financial auditors, financial analysts, certified public accountants, and academicians. This weighted GRI-based checklist, using experts' opinions and considering sectoral features provides a different approach for sustainability disclosure reporters. This study may also be interesting for investors. Sustainability reporting may guide investors in measuring the companies' non-financial disclosures through economic, environmental, and social activities in their investment decision processes.

The findings of this research are subject to some limitations that might open new opportunities for further study. Initially, this study is limited to the Turkish market. Second, the evaluation system utilized a limited number of experts participating in the survey. More experts from different countries might contribute to the study to generalize the methodology in the international arena. By this means, it will be possible to arrive at a consensus and conduct cross-cultural or comparative studies in different countries, as this would enrich the experience regarding corporate sustainability disclosure practices. Finally, given the scarcity of sample company disclosures, further research is recommended in this research area.

References

Alhazmi, A. (2017). Exploring the Factors and Effects of Corporate Social Responsibility Disclosure in Saudi Arabia. (Published Doctoral Dissertation). Nottingham Trent University. Nottingham.

Alsaeed, K. (2006). The association between firm-specific characteristics and disclosure: The case of Saudi Arabia. Managerial Auditing Journal, 21(5), 476-496.

Aslanertik, B. E. (2007). Kurumsal sosyal sorumluluk ve finansal performans. Izmir, Ayan Matbaacılık.

Aslanertik, B. E., and Yardımcı, B. (2022). The relationship between compliance level and value creation: evidence from integrated reports in Turkey. *Journal of Financial Reporting and Accounting*, (ahead-of-print).

Azapagic, A. (2003). Systems approach to corporate sustainability: a general management framework. Process Safety and Environmental Protection, 81(5), 303-316.

Azzone, G., and Manzini, R. (1994). Measuring strategic environmental performance. Business Strategy and the Environment, 3(1), 1-14.

Baron, R. (2014). The Evolution of Corporate Reporting for Integrated Performance. Background paper for the 30th Round Table on Sustainable Development. OECD.

Berman, S. L., Wicks, A. C., Kotha, S., and Jones, T. M. (1999). Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance. *Academy of Management journal*, *42*(5), 488-506.

Bradford, M., J.B. Earp, D.S. Showalter, and P.F. Williams. (2017). Corporate sustainability reporting and stakeholder concerns: Is there a disconnect? Accounting Horizons 31 (1): 83–102.

BSDC. 2017. Business Council for Sustainable Development Türkiye, Reporting Matters. http://www.skdturkiye.org/en/publication/reporting-matters-2017

Chand, M. and Fraser, S. (2006). The relationship between corporate social performance and corporate financial performance: Industry type as a boundary condition. The Business Review, 5(1), 240-245.

Clausen, J., Loew, T., and Westermann, U. (2005) Sustainability reporting in Germany: summary of the results and trends of the 2005 ranking. http://www.ranking- nachhaltigkeitsberichte.de. (Accessed 10.10 2017)

Clarkson, P. M., Li, Y., Richardson, G. D., and 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.

Cooke, T. E. (1989). Voluntary corporate disclosure by Swedish companies. Journal of International Financial Management & Accounting, 1(2), 171-195.

Daub, C. H. (2007). Assessing the quality of sustainability reporting: an alternative methodological approach. Journal of Cleaner Production, 15(1), 75-85.

Dowling, J. and Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *Pacific sociological review*, *18*(1), 122-136.

Dye, R. A., and Sridhar, S. S. (1995). Industry-wide disclosure dynamics. *Journal of Accounting research*, *33*(1), 157-174.

Epstein, M., Flamholtz, E., and McDonough, J.J. (1976). Corporate social accounting in the United States of America: state of the art and future prospects. Accounting, Organizations and Society, 1(1), 23-42.

Kolk, A. (2005). Sustainability reporting. VBA journal, 21(3), 34-42.

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures–a theoretical foundation. Accounting, Auditing & Accountability Journal, 15(3), 282-311.

Deloitte Touche Tohmatsu (2002) Deloitte Sustainability Reporting Scorecard. Deloitte Touche Tohmatsu Global Sustainability Group. http://www.deloitte.com/dtt/cda/doc/content/DTT_ERS_ FullScorecard_032106.pdf.

Donaldson, T. and Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review*, *20*(1), 65-91.

Elkington, J. and Rowlands, I. H. (1999). Cannibals with forks: the triple bottom line of 21st century business. Alternatives Journal, 25(4), 42.

Erin, O. A., Bamigboye, O. A. and Oyewo, B. (2022). Sustainable development goals (SDG) reporting: an analysis of disclosure. Journal of Accounting in Emerging Economies.

Fernando, S. and Lawrence, S. (2014). A theoretical framework for CSR practices: integrating legitimacy theory, stakeholder theory and institutional theory. Journal of Theoretical Accounting Research, 10(1), 149-178.

Firth, M. (1979). The impact of size, stock market listing, and auditors on voluntary disclosure in corporate annual reports. Accounting and Business research, 9(36), 273-280.

Freeman, C. (1984). Long waves in the world economy. F. Pinter.

Gray, R., Kouhy, R. and Lavers, S. (1995). Corporate Social and Environmental Reporting: A Review of the Literature and A longitudinal Study of UK Disclosure. Accountin, Auditing and Accountability Journal, 8(2), 47-77.

Gunawan, J., Permatasari, P. and Fauzi, H. (2022). The evolution of sustainability reporting practices in Indonesia. *Journal of Cleaner Production*, *358*, 131798.

Hąbek, P. and Wolniak, R. (2016). Assessing the quality of corporate social responsibility reports: the case of reporting practices in selected European Union member states. Quality & Quantity, 50(1), 399-420.

Haniffa, R. M. and Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. Journal of Accounting and Public Policy, 24(5), 391-430.

Henriques, I. and Sadorsky, P. (1996). The determinants of an environmentally responsive firm: an empirical approach. Journal of Environmental Economics and Management, 30(3), 381-395.

Hillman, A. J. and Dalziel, T. (2003). Boards of Directors and Firm Performance: Integrating Agency and Resource Dependence Perspectives. Academy of Management Review, 28(3), 383-396.

Hossain, D. A. (2020). Revisiting Sustainability Disclosure in Annual Reports and Websites: An Empirical Examination from the Banking Industry of Bangladesh. *International Journal of Science and Business*, *4*(8), 76-91.

Ingram, R. W. and Frazier, K. B. (1980). Environmental performance and corporate disclosure. *Journal of accounting research*, 614-622.

International Institute for Sustainable Development (IISD), 1992. Business Strategy for Sustainable Development: Leadership and Accountability for the '90s. IISD, Winnipeg, Canada. http://www.iisd.org/business/ pdf/business_strategy.pdf. (Accessed 4.12.2022).

IISD, Deloitte Touche Tohmatsu International and SustainAbility (1993) Coming Clean: Corporate Environmental Reporting Opening up for Sustainable Development. Winnipeg, Manitoba: International Institute for Sustainable Development. https://www.iisd.org/publications/coming-clean-corporate-environmental-reporting. (Accessed 4.12.2022).

Jensen, M. C. and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of financial economics, 3(4), 305-360.

Kılıç, M. and Kuzey, C. (2018). Determinants of forward-looking disclosures in integrated reporting. *Managerial Auditing Journal*.

Kolk, A. (2005). Sustainability reporting. VBA journal, 21(3), 34-42.

Kolk, A. (2008). "Sustainability, accountability and corporate governance: Exploring multinationals reporting practices", Business Strategy and the Environment, Vol. 17 No.1, pp.1- 15.

KPMG, GRI, UNEP. (2013). Centre for Corporate Governance in Africa. Carrots and Sticks – Sustainability reporting policies worldwide today's best practice, tomorrow's trends. (online). https://assets.kpmg.com/content/dam/kpmg/pdf/2016/03/Carrots-and-Sticks- 11-12-2015.pdf (Accessed 10.03.2018).

KPMG, GRI, UNEP. (2016). Centre for Corporate Governance in Africa.

Carrots and Sticks – Global trends in sustainability reporting regulation and policy. (online). https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/carrots-and-sticks- may-2016.pdf (Accessed 10.03.2018).

Krippendorff, K. (2004). Reliability in content analysis: Some common misconceptions and recommendations. *Human communication research*, *30*(3), 411-433.

Lozano, R. and Huisingh, D. (2011). Inter-linking issues and dimensions in sustainability reporting. Journal of Cleaner Production, 19(2), 99-107.

Merkl-Davies, D., Brennan, N. and Vourvachis, P. (2011, September). Text analysis methodologies in corporate narrative reporting research. In *23rd CSEAR International Colloquium* (pp. 1-45). St Andrews.

Mintzberg, H. (1983). The case for Corporate Social Responsibility. Journal of Business Strategy, 4(2), 3-15.

Morhardt, J.E., Baird, S. and Freeman, K., 2002. Scoring corporate environmental and sustainability reports using GRI 2000, ISO 14031 and other criteria. Corporate Social Responsibility and Environmental Management 9, 215–233.

Morhardt, J. E. (2010). Corporate social responsibility and sustainability reporting on the internet. *Business strategy and the environment*, *19*(7), 436-452.

Muthuri, J. N. and Gilbert, V. (2011). An institutional analysis of corporate social responsibility in Kenya. Journal of Business Ethics, 98(3), 467-483.

Perez, F. and Sanchez, L. E. (2009). Assessing the evolution of sustainability reporting in the mining sector. *Environmental management*, *43*(6), 949-961.

PWC. (2007). Corporate reporting – a time for reflection. https://www.pwc.com/gx/en/corporate-reporting-services/pdf/reflection.pdf (Accessed 4.12.2022).

Rouf, D. (2011). The Corporate Social Responsibility Disclosure: A Study of Listed Companies in Bangladesh. Business and Economics Research Journal, 2(3), 19-32.

Selznick, P. and Tennessee, V. (1949). TVA and the Grass Roots, University of California, Berkeley

Setiawan, A. (2016). Integrated reporting: are Indonesian companies ready to do it?. *Asian Journal of Accounting Research*, *1*(2), 62-70.

Schipper, K. (1981). Discussion of voluntary corporate disclosure: The case of interim reporting. Journal of Accounting Research, 85-88.

Searcy, C. and Elkhawas, D. (2012). Corporate sustainability ratings: an investigation into how corporations use the Dow Jones Sustainability Index. *Journal of Cleaner Production*, *35*, 79-92.

Skouloudis, A. and Evangelinos, K. I. (2009). Sustainability Reporting in Greece: Are We There Yet? Environmental Quality Management, 19(1), 43-60.

Singh, M. P., Chakraborty, A., Roy, M. and Tripathi, A. (2020). Developing SME sustainability disclosure index for Bombay Stock Exchange (BSE) listed manufacturing SMEs in India. *Environment, Development and Sustainability*, *23*(1), 399-422.

Thayaraj, M. S. and Karunarathne, W. V. A. D. (2021). The Impact of Sustainability Reporting on Firms' Financial Performance. *Journal of Business and Technology*, *5*(2).

Unerman, J. (2000). Methodological issues-Reflections on quantification in corporate social reporting content analysis. *Accounting, Auditing & Accountability Journal*.

Unerman, J. and Bennett, M. (2004). Increased Stakeholder Dialogue and the Internet: Towards Greater Corporate Accountability or Reinforcing Capitalist Hegemony? Accounting, Organizations and Society, 29(7), 685-707.

Yadava, R. N. and Sinha, B. (2015). Scoring sustainability reports using gri 2011 guidelines for assessing environmental, economic, and social dimensions of leading public and private Indian companies. Journal of business ethics, 138(3), 549-558.

Van der Laan Smith, J., Adhikari, A. and Tondkar, R. H. (2005). Exploring differences in social disclosures internationally: A stakeholder perspective. *Journal of accounting and public policy*, *24*(2), 123-151.

Van Marrewijk, M. 2003. "Concepts and Definitions ofCSR and Corporate Sustainability: Between Agency and Communion." Journal of Business Ethics 44 (2–3): 95–105.

Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, organizations and society*, *7*(1), 53-63.