

Corporate Environmental Disclosures in a Developing Country: An Investigation on Turkish Listed Companies

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Abstract

Environmental information disclosure has been received special attention from both academic researchers and companies due to the increasing awareness of environmental issues worldwide. However, there is little empirical evidence on the environmental information disclosure practices in the developing countries. In this context, this study contributes to the existing literature by investigating the status of the environmental disclosures of companies operating in a developing country, Turkey. Our sample consists of 62 non-financial firms listed on the BIST-100 index in the financial year 2011. The annual reports of sample firms for the years of 2010 and 2011 are analyzed through content analysis, which is widely used in the research of this topic. Although there is a decrease in the proportion of companies that disclosed environmental information from 2010 to 2011, we found that there is a significant increase in the level of environmental disclosure by Turkish listed companies. The results of the study also show that Turkish companies disclose mostly narrative information and the level of disclosure of environmental information varies across sectors.

Keywords: environmental disclosure, Turkey, annual reports, non-financial companies

1. Introduction

It won't be wrong to say that world economic and industrial development brings along negative environmental impacts such as climate change and global warming, natural disasters and pollution. These negative impacts generate an increasing awareness of environmental issues worldwide. As the major power of economic development, firms have been also seen as the main responsible of environmental problems and confronted great pressure by various stakeholders such as customers, governments and regulatory bodies, non-governmental organizations, local communities, investors, financial agencies and institutions, employees and society as a whole, to become more environmentally responsible by reducing negative impacts of their operations on the environment and to provide information about their environmental performance. In this context, besides maximizing shareholder value, firms are expected to operate in an environmentally friendly manner by minimizing environmental pollution, lowering the emissions of greenhouse gases, reducing carbon footprint, eliminating toxic wastes and increasing the use of alternative renewable energy and recycling (Da Silva & Aibar-Guzmán, 2010a; Suttipun & Stanton, 2012a, 2012b, 2012c; Belal, 2000; Jose & Lee, 2007; Wu et al., 2010; Pahuja, 2009; Iwata & Okada, 2011; Ribeiro & Aibar-Guzmán, 2010; Dixon et al., 2005).

In order to respond to these pressures, companies all over the world have begun to seek the ways of reducing their negative impacts on the environment and started voluntarily reporting their environmentally friendly activities and environmental performance (Da Silva & Aibar-Guzmán, 2010a, 2010b; Pahuja, 2009; Holland & Foo, 2003; Belal, 2000). These developments led to an increase in the number of companies engaged in reporting environmental information and so corporate environmental disclosures have increased both in terms of size and complexity, (Pahuja, 2009; Uwuiigbe, 2012; Niskanen & Nieminen, 2001; Kolk, 2003; Deegan & Gordon, 1996). Consequently, especially since 1990s, disclosure of corporate environmental information has been regarded as an important dimension of corporate disclosure, and thus corporate environmental disclosure has been attracted substantial growth attention from academic researchers (Bubna-Litic, 2008; Ahmad & Mousa, 2010; Holland & Foo, 2003; Deegan, 2002; Sen et al., 2011; Da Silva & Aibar-Guzmán, 2010b; Sahay, 2004; Saha & Akter, 2013). Despite a

growing body of literature on corporate environmental disclosure, many of the previous studies have focused on the developed countries; hence the literature has still provided little empirical evidence on the environmental disclosure practices of the developing countries (Saha & Akter, 2013; Belal, 2000; Tsang, 1998; Pahuja, 2009; Uwuigbe, 2012; Kolk et al., 2001). In the light of the related studies which documented that environmental disclosures vary across sectors, industries, companies and time; it is not a proper way to generalize the results of these studies to less developed countries (Gamble et al., 1995; Patten, 2002; Kolk, 2003; Wu et al., 2010; Brammer & Pavelin, 2008; Mukherjee et al., 2010; Tsang, 1998). Thus, this study primarily aims to investigate the status of the environmental disclosures of companies operating in a developing country, Turkey. The sample consists of 62 non-financial firms listed on the Borsa Istanbul 100 (BIST-100)–formerly named Istanbul Stock Exchange 100 (ISE-100)- index in the year of 2011. The data required for this study are retrieved from the annual reports of the companies by conducting content analysis. According to the results, there is a significant increase in the level of environmental disclosure by Turkish listed companies. Nonetheless, it is found that Turkish companies reported mostly narrative information. Finally, some variations in environmental information disclosures across different sectors are found.

The present study contributes to the existing literature related to the corporate environmental disclosure in several ways. First, by providing some insights from a developing country, Turkey, it extends the literature to the developing countries. Second, variations in environmental disclosures across different industries are also investigated. Finally, in Turkish context, there is a lack of knowledge on the areas such as the quality and determinants of environmental disclosures, the impact of corporate governance and firm characteristics on such disclosures. Once the state of environmental reporting in Turkey is determined, these issues can be easily investigated.

The rest of the paper is structured as follows. After this introduction, Section 2 reviews the related literature. Section 3 describes the research design, including sample selection and research method. The results of the study are presented and discussed in Section 4. Finally, section 5 provides the concluding remarks of the paper.

2. Literature Review

Prior empirical research on the corporate environmental disclosure can be categorized into five groups. The first group studies measure the volume of corporate environmental disclosure with some comparisons on countries, sectors or media. The second group studies focus on the quality of information disclosed. The third group investigates the determinants of the corporate environmental disclosure while fourth group deals with the relationship between environmental disclosure and corporate environmental or financial performance. Finally, the fifth group of studies analyzes the market reactions to corporate environmental disclosure (Andrikopoulos & Krikilani, 2013; Damak-Ayadi, 2010; Jose & Lee, 2007). This study fits into the first group. In this context, the studies that investigate the volume and status of corporate environmental disclosure mostly focus on the developed countries (Eljayash, 2012). The overall results of the studies investigate environmental disclosure in the developed countries can be summarized as follows:

- 1) There has been an increase in environmental disclosures of companies over time (Campbell, 2004; Gamble et al., 1995; Deegan & Gordon, 1996; Kolk, 2003; O'Dwyer, 2003; Brown & Deegan, 1998; Stanwick & Stanwick, 2006; Da Silva & Aibar-Guzmán, 2010b; Albertini, 2013; Deegan et al., 2002; Gray et al., 1995a).
- 2) The environmental information disclosed by the companies are mostly qualitative and positive (Gamble et al., 1995; Damak-Ayadi, 2010; Moneva & Llana, 2000; Deegan & Gordon, 1996; Hackston & Milne, 1996; Guthrie et al., 2008)
- 3) There are differences between countries, industries and companies in environmental disclosures (Holland & Foo, 2003; Brammer & Pavelin, 2006; Gamble et al., 1995; Brown & Deegan, 1998; Adams et al., 1998)

On the other hand, compared to the developed countries, there have been limited attempts to investigate the corporate environmental disclosure practices in the developing countries, especially in Turkey. In the developing countries context, Ahmad and Suleiman (2004), Sumiani et al. (2007) and Ahmad and Mohamad (2013) found that the extent of environmental disclosures made by Malaysian companies was low. Similar results were obtained by Perry and Teng (1999) for all public listed companies in Singapore, by Uwuigbe and Uadiale (2011) for the Nigerian listed brewery and building material companies and by Saha and Akter (2013) for the listed companies of Bangladesh.

In South African context, by examining the 1998 annual reports of the top 100 listed companies listed on the

Johannesburg Stock Exchange, De Villiers and Lubbe (2001) found that companies in energy intensive industries disclosed significantly more environmental information than other companies. In another study, De Villiers and Van Staden (2006) analyzed the average disclosures of the top-100 industrial companies and all the mining companies listed in South Africa by conducting content analysis of annual reports for the purpose of identifying the trends in environmental disclosure over time. The authors concluded that environmental disclosures in annual reports of South African companies decreased after an initial period of increase.

Chatterjee and Mir (2008) examined the status of environmental disclosure made by the top 45 Indian companies in terms of market capitalization. The authors conclude that most of the information disclosed by the sampled firms was narrative. Similarly, Sen et al. (2011) examined the nature and extent of the environmental disclosure practices of Indian core sector companies and found that information disclosed was more qualitative than quantitative and varied across industries as well as companies.

Suttipun and Stanton (2012c) investigated environmental disclosures on websites of 50 companies listed on the Stock Exchange of Thailand and found that 88 percent of sampled companies provided environmental information on their websites. The results of this study also indicate that there was a relationship between the amount of disclosed environmental information and type of industry and ownership. In another study, Suttipun and Stanton (2012a) analyzed the differences in environmental disclosure practices of 50 Thai listed firms between in annual reports and websites. The authors found that a greater number of companies provided more environmental information in their annual reports than on websites.

In Chinese context, Zeng et al. (2012) found that companies with better reputation are more likely to disclose environmental information and state-owned firms and firms that are belonging to environmentally sensitive industries engaged in environmental information disclosure.

Gao et al. (2005) analyzed the patterns and determinants of corporate social and environmental disclosure practices of 33 listed Hong Kong companies for the period of 1993 to 1997. According to their results, sampled firms increased their environmental disclosure activities from 1993 to 1997 and there was a positive relationship between firm size and the level of information disclosed. The authors also stated that type of industry had an impact on amount, content theme and location of disclosure.

More recently, Batra (2013) investigated the environmental management and disclosure practices of various companies in Singapore, Malaysia and India. The findings of the study revealed that the environmental disclosure in India was highest amongst three countries.

Finally; within the context of Turkey, Kavut (2010) examined the nature and extent of the environmental disclosures of companies listed on the BIST-100 index for the years of 2003 and 2004. The results of the study indicate that the volume of environmental disclosures and the number of companies engaged in environmental disclosure increased from 2003 to 2004. Similarly, Kaya and Varici (2008) found a significant increase in the level of environmental disclosures by the 100 Turkish which are included in Turkey's top 500 industrial companies according to the Istanbul Chamber of Industry's survey.

3. Research Design

3.1 Sample

The main purpose of this study is to analyze the state of environmental disclosures of Turkish companies, using a sample comprised of non-financial firms listed on the BIST-100 index in the financial year 2011. We chose a sample of the BIST-100 index firms for two reasons. First, BIST 100 index represents approximately 90% of the BIST market capitalization and results of the previous studies indicate that larger firms tend to disclose more environmental information (Cormier & Magnan, 2003; Deegan & Gordon, 1996). Second, these companies also represent a diverse range of industry sectors, including food and beverage, wood, paper and printing, metal products and machinery, electricity, wholesale and retail trade and telecommunications.

On the other hand, due to their limited effect on the environment (Da Silva & Aibar-Guzmán, 2010a), financial companies were excluded from the sample. After this elimination, the final sample consisted of 62 companies. We analyzed the environmental disclosures of the sample companies for the years 2010 and 2011, this results 124 firm-year observations. Companies in the sample were classified into 15 sectors by following Borsa Istanbul classification. Table 1 reports how the companies in our sample distribute among different sectors. According to the Table 1, chemical, petroleum and plastic sector, with 13 companies, has the highest percentage of companies within the sample (20.97%) and followed by the metal products and machinery sector (16.13%). On the other hand, with 1 company textile and leather and other services sectors have the smallest number of companies in the sample.

Table 1. Distribution of companies by sectors

Sector	Number of Companies	Percentage
Food and Beverage	4	6,45
Textile and Leather	1	1,61
Wood, Paper and Printing	5	8,06
Chemical, Petroleum and Plastic	13	20,97
Nonmetal Mineral Products	4	6,45
Basic Metal	5	8,06
Metal Products and Machinery	10	16,13
Other Manufacturing	2	3,23
Electricity	2	3,23
Transportation	2	3,23
Wholesale and Retail Trade	5	8,06
Telecommunications	2	3,23
Sports	4	6,45
Technology	2	3,23
Other Services	1	1,61
Total	62	100

3.2 Research Method

In order to achieve the purpose of measuring the extent of environmental information disclosed by sampled firms for the years of 2010 and 2011, content analysis technique was used as a research method. Abbott and Monsen (1979, p. 504) defined content analysis as: “*A technique for gathering data that consists of codifying qualitative information in anecdotal and literary form into categories in order to derive quantitative scales of varying levels of complexity.*” and this technique has been widely employed by previous studies with regard to environmental disclosure.

The literature reflects a debate on a number of dimensions of capturing data in voluntary disclosure via content analysis. There are two main issues which were emphasized by Campbell (2004): the unit of analysis and the selection of medium.

First, the selection of a unit of analysis represents one of the key requirements for the implementation of content analysis (Guthrie & Abeysekera, 2006; Gamerschlag et al., 2011). In this respect, Holsti (1969, p. 116) defined recording unit as “the specific segment of content that is characterized by placing it into a given category”. Campbell (2004) states that as the most commonly used recording units; number of words, number of sentences and number or proportion of pages are all capable of generating volumetric measures of disclosure volume. However, Gao et al. (2005) emphasize that among these measures, numbers of sentences and pages have some limitations with regard to the comparison of information disclosed with different fonts, page margins and pictures or graphs. Gao et al. (2005) also remarks the possible difficulty in categorizing the sentence or page due to the fact that one sentence or page may contain more than one category of information. On the other hand, number of words as a recording unit has the advantage of being categorized more easily (Damak-Ayadi, 2010) and needs less subjective judgment of the researcher (Gamerschlag et al., 2011). By these reasons, in line with Campbell (2004), Deegan and Gordon (1996), Eljayash, (2012), Suttipun and Stanton, (2012a, 2012b, 2012c) and Gao et al. (2005), this study uses number of words as the unit of analysis in order to measure the level of environmental disclosures of Turkish sampled firms.

The second issue in the environmental disclosure literature concerns which media should be used as a basis for data collection (Campbell, 2004). Although companies can use a variety of communication channels for disclosing environmental information such as brochures, press releases, separate environmental, social responsibility or sustainability reports and web pages, the majority of the studies on environmental disclosure have used annual reports as the main data source for several reasons. (Campbell, 2004; Tilt, 2001; Ashcroft, 2012; Gray et al., 1995b; Da Silva & Aibar-Guzmán, 2010a; Holland & Foo, 2003). First, Tilt (2001) states that annual reports are compulsory as they are required by legislation and so they are produced regularly especially by all listed companies and by these reasons making comparisons relatively easy. Certainly, because of these reasons the annual report also has a wide availability and is the most often used communication channel by the companies in

order to communicate with all stakeholders in a systematic manner (Hughes et al., 2001). In addition, the findings of the study by Tilt (1994) indicate that compared to all other disclosure formats, annual reports are considered as the most credible medium for environmental disclosures. For that reasons, in line with the majority of the literature, annual reports are selected as the source of environmental disclosure in this study.

In order to investigate the status of environmental disclosures of sampled Turkish companies, the all parts of the annual reports were analyzed based 8 main themes related to the environmental information which were determined through review of previous studies analyzing the extent of environmental disclosures. Table 2 reports these themes of disclosures examined for.

Table 2. Themes of the environmental disclosure

No	Themes
1	Environmental policy including environmental targets, management's environmental policy statement, company concern for the environmental issues
2	Environmental protection including activities, expenditures, tree plantation, land rehabilitation
3	Compliance with Environmental Management Standards and laws and regulations including certification and environmental effect assessment report
4	Air emission information
5	Energy including expenditure, savings and new sources
6	Waste management including recycling, water discharge and toxic waste
7	Awards
8	Other environmentally related information

Furthermore, the type of information related to the themes mentioned above was also analyzed by examining the form of disclosure. In this sense, in line with Guthrie et al. (2008), Da Silva Monteiro and Aibar-Guzmán (2010b), Sen et al. (2011), Belal (2000) and Stanwick and Stanwick (1998), the environmental information was classified into three categories: narrative (descriptive), non-financial (physical) and financial.

4. Results

Table 3 reports the number and percentage of sample companies in each sector disclosing at least one item of environmental information in 2010 and 2011. According to the Table 3 there is a decrease in the number of companies that disclosed environmental information in their annual reports from 2010 to 2011. However the proportion of companies that engaged in environmental disclosure is 95.16% in 2010 and 91.94% in 2011. These percentages imply that there are a high number of firms in our sample disclosed environmental information compared to the results of the studies such as Zeng et al. (2012), Eljayash, (2012), Da Silva Monteiro and Aibar-Guzmán, (2010b) and finally, in Turkish context, Kavut (2010).

On the other hand, Table 3 also shows the form of the environmental disclosures made by sample companies. According to the Table 3, despite high percentages of companies disclosing environmental information, most of the Turkish companies in our sample (93.55% in 2010 and 91.94% in 2011) disclose narrative information in their annual reports and it is followed by financial and non-financial information for the two years, respectively. It is not a surprising finding that companies in our sample mostly report narrative information when considered that Turkey is a developing country and this result is consistent with the findings of Moneva and Llena (2000), Ahmad and Suleiman (2004), Chatterjee and Mir (2008), Sen et al. (2011), Damak-Ayadi (2010) and Kavut (2010).

The analysis of the data in Table 3 also indicates that both the proportion of companies disclosed financial information (50.00% in 2010 and 56.45% in 2011) and the proportion of companies disclosed non-financial information (41.94% in 2010 and 45.16% in 2011) increased from 2010 to 2011. This result is also in similar with the findings of Chatterjee and Mir (2008) and Moneva and Llena (2000) and this increase in both financial and non-financial disclosure and can be interpreted as an improvement in the quality of environmental information disclosed by Turkish companies.

Table 3. Distribution of the disclosing companies by sectors and form of environmental disclosure

	Sample Size	Disclosing Companies			
		2010		2011	
		N	%	N	%
Panel A: Sectors					
Food and Beverage	4	4	100	4	100
Textile and Leather	1	1	100	0	0
Wood, Paper and Printing	5	4	80	3	60
Chemical, Petroleum and Plastic	13	13	100	13	100
Nonmetal Mineral Products	4	4	100	4	100
Basic Metal	5	5	100	5	100
Metal Products and Machinery	10	10	100	10	100
Other Manufacturing	2	2	100	2	100
Electricity	2	2	100	2	100
Transportation	2	2	100	2	100
Wholesale and Retail Trade	5	5	100	5	100
Telecommunications	2	2	100	2	100
Sports	4	2	50	2	50
Technology	2	2	100	2	100
Other Services	1	1	100	1	100
Total	62	59	95.16	57	91.94
Panel B: Form of Disclosures					
Narrative (Descriptive)	62	58	93.55	57	91.94
Non-financial (Physical)	62	26	41.94	28	45.16
Financial	62	31	50.00	35	56.45

Table 4 summarizes the descriptive statistics of word counts of environmental disclosure for each theme for the years of 2010 and 2011. First of all, however there is a decrease in the number of companies that disclosed environmental information, Table 4 depicts that except one theme, there is an increase in the mean of word counts for each theme of disclosure and so the mean of total environmental disclosure increased from 509.79 words in 2010 to 623.95 words in 2011. Based on these figures, it can be easily said that there is a significant increase in the volume of environmental disclosure by Turkish companies. This finding is in line with the results of Stanwick and Stanwick (1998), Da Silva Monteiro and Aibar-Guzmán (2010b), Gray et al. (1995a), Brammer and Pavelin (2006), Deegan and Gordon (1996), Kolk (2003), O'Dwyer (2003), Damak-Ayadi (2010), Da Silva Monteiro and Aibar-Guzmán (2010a), Eljayash (2012), and finally, in Turkish context, Kavut (2010).

Furthermore, Table 4 also shows that for both two years, the most common themes are environmental protection, environmental policy, energy and waste management, respectively. This result is in similar with the findings of Suttipun and Stanton (2012a) and Suttipun and Stanton (2012b) which reveal that the most disclosed environmental information themes by listed companies listed in Thailand are environmental spending, environmental policy and waste management. On the other hand, other environmentally related information, awards and air emission information are the least common themes of disclosure for both two years.

Table 4. Descriptive statistics for environmental disclosure by themes

Themes	2010				2011			
	Mean	S.D.	Min.	Max.	Mean	S.D.	Min.	Max.
Environmental policy	105.19	165.01	0.00	997.00	130.84	173.43	0.00	743.00
Environmental protection	147.76	187.10	0.00	752.00	176.71	283.00	0.00	1233.00
Compliance with Standards and Law	50.18	109.17	0.00	724.00	67.31	125.19	0.00	733.00
Air emission	22.48	59.48	0.00	331.00	31.48	88.02	0.00	503.00
Energy	96.74	183.30	0.00	908.00	125.61	245.39	0.00	1157.00
Waste management	64.08	126.08	0.00	689.00	71.94	143.24	0.00	819.00
Awards	14.10	42.21	0.00	212.00	14.19	39.02	0.00	242.00
Other	9.26	23.31	0.00	173.00	6.39	10.58	0.00	47.00
Total	509.79	617.96	0.00	2761.00	623.95	849.11	0.00	3854.00

Table 5 provides the descriptive statistics of word counts of environmental disclosure on the basis of the form of disclosure. In consisted with the findings of the Table 3, the Turkish companies in our sample disclosed environmental information mostly in the form of narrative both in 2010 and 2011. An interesting finding that the mean of word counts for financial information is higher than for the non-financial information. So it can be easily said that disclosure of monetary environmental information is more than physical information in annual reports of Turkish companies in our sample.

Table 5. Descriptive statistics for environmental disclosure by form of disclosure

Form of Disclosure	2010				2011			
	Mean	S.D.	Min.	Max.	Mean	S.D.	Min.	Max.
Narrative (Descriptive)	411.76	464.61	0.00	2006.00	527.31	691.30	0.00	3130.00
Non-financial (Physical)	19.44	68.44	0.00	524.00	21.87	54.73	0.00	348.00
Financial	78.60	155.14	0.00	747.00	74.77	158.54	0.00	756.00
Total	509.79	617.96	0.00	2761.00	623.95	849.11	0.00	3854.00

Table 6 reports the amount of environmental information disclosed by the companies in fifteen sectors. According to the Table 6, as can be expected, the level of disclosure of environmental disclosure varies across sector groups. This finding is also consistent with the results of the studies of Sen et al. (2011), Zeng et al. (2012), Gao et al. (2005), Holland and Foo (2003), Brammer and Pavelin (2006), Gamble et al. (1995), Brown and Deegan (1998), Adams et al. (1998), and finally, in Turkish context, Kavut (2010). As can be seen, on average, companies in the “electricity” sector provide the largest amount of environmental information measured in the number of words in both two years. Electricity sector is followed by the “food and beverage” sector in 2010 and by “telecommunications” sector in 2011. On the other hand, textile sector has the least disclosure in both two years.

Table 6. Descriptive statistics for environmental disclosure by sector groups

Sectors	2010				2011			
	Mean	S.D.	Min.	Max.	Mean	S.D.	Min.	Max.
Food and Beverage	1019.50	494.48	280.00	1318.00	673.00	476.83	101.00	1124.00
Textile and Leather	9.00	.	9.00	9.00	0.00	.	0.00	0.00
Wood, Paper and Printing	343.80	374.11	0.00	800.00	717.80	897.41	0.00	1912.00
Chemical, Petroleum and Plastic	614.62	779.81	49.00	2761.00	900.85	1128.81	43.00	3572.00
Nonmetal Mineral Products	462.25	362.18	65.00	930.00	527.25	454.42	64.00	1146.00
Basic Metal	369.00	424.37	9.00	1054.00	362.40	478.34	9.00	1196.00
Metal Products and Machinery	637.80	823.87	14.00	2753.00	782.80	1156.63	14.00	3854.00
Other Manufacturing	210.50	246.78	36.00	385.00	273.00	36.77	247.00	299.00
Electricity	1484.00	137.18	1387.00	1581.00	1928.50	927.02	1273.00	2584.00
Transportation	501.50	72.83	450.00	553.00	442.50	184.55	312.00	573.00

Wholesale and Retail Trade	210.80	242.30	37.00	636.00	207.80	156.83	41.00	431.00
Telecommunications	880.00	1035.20	148.00	1612.00	936.00	1176.63	104.00	1768.00
Sports	15.50	17.97	0.00	33.00	29.50	40.14	0.00	85.00
Technology	31.00	38.18	4.00	58.00	125.00	94.75	58.00	192.00
Other Services	409.00	.	409.00	409.00	377.00	.	377.00	377.00
Total	509.79	617.96	0.00	2761.00	623.95	849.11	0.00	3854.00

5. Conclusion

Increasing awareness of environmental issues such as air pollution, global warming, etc. have led to companies disclose information about the impacts of their activities on the environment. In this sense, corporate environmental disclosure has become a hot topic both in academic literature and in business world. However, there is surprisingly little empirical evidence on the environmental disclosure practices of companies in the developing countries, especially in Turkey. In this context, this study primarily aims to investigate the extent of environmental information disclosed by non-financial companies Turkish listed on the BIST-100 index in their annual reports for the years 2010 and 2011. Content analysis with word count was used as a research method. The findings of the study indicate that there is a significant increase in the volume of environmental information disclosed by the Turkish companies sampled. This result is in consistent with the majority of the studies that analyzes the status of environmental information in the developing countries.

Another consistent result with the findings of the previous studies is that Turkish companies in our sample disclosed environmental information mostly in the form of narrative. This result can be interpreted as the information disclosed by Turkish companies is poor in quality. However, the results of the study indicate that there is an increase both in the proportion of companies disclosed financial information and in the proportion of companies disclosed non-financial information and this increase may lead an improvement in the quality of information disclosed.

Our results also provide some empirical evidence that the extent of environmental information disclosed by sample companies varies across different sector groups. It was found that, on average, companies in the “electricity” sector provide the largest amount of environmental information, while “textile” sector has the least disclosure in both two years.

As most of the empirical studies, our study has some limitations which should be considered in analyzing these results. Especially, period of the study covers only two years and the annual reports of companies were used solely as the source of environmental disclosure. Despite these limitations, we believe that our study contributes to the existing literature by providing some insights from a developing country, Turkey. Also this study can be seen as a first step of future research which focuses on Turkish companies. In this sense, further studies may use longitudinal data in order to analyze the trend of environmental disclosure practices of Turkish companies and also could analyze the environmental disclosures of Turkish companies in other communication channels such as web sites or separate environmental, social responsibility or sustainability reports. Furthermore, the quality of the environmental information disclosed by Turkish companies could be investigated. Additionally, the relationship between firm characteristics such as firm age, size, and financial performance, and the quantity and quality of disclosed environmental information could be analyzed. Finally, the market reactions to the environmental disclosures or in other words, the impact of environmental disclosures on the decisions of Turkish investors could be explored.

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