

Industry differences in respect of corporate environmental reporting in South Africa: A research note

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Abstract

Previous research has revealed industry differences in respect of environmental reporting in South Africa. However, these studies concentrated on particular types of environmental reporting and therefore precluded many other types of environmental reporting in the annual reports surveyed. Past surveys also awarded equal credit to any reference to a particular type of environmental information, whether it comprised a single sentence or several pages.

The annual reports of the top 100 companies, in terms of market capitalisation, were analysed and a sentence count of environmental disclosure was done with the use of the Hackston & Milne (1996) methodology. The group of energy companies was defined as comprising companies in energy-intensive industries or companies that are producers of energy carriers. The survey revealed that these companies disclosed significantly more environmental information than other companies, in total and in each category

These findings are consistent with the notion of legitimacy, which holds that companies cannot prosper if their aims and methods are not perceived to be in line with that of society. For this reason, companies that have the most obvious environmental impact tend to disclose more environmental information than other companies in an effort to legitimise their aims and methods in the eyes of society.

Key words

Environmental reporting
Environmental disclosure
Environmental accounting

1 Introduction and statement of the problem

In a recent paper, De Villiers & Barnard (2000) investigated whether there are differences between industries in respect of corporate environmental disclosure or reporting in South Africa. They analysed annual reports in search of specified types of environmental information. Environmental reporting was disregarded if it was not of a specified type.

Hackston & Milne (1996) used, and comprehensively described, a method for analysing information contained in annual reports that includes all types of social disclosure. Environmental disclosure is one type of social disclosure. In the Hackston & Milne (1996) method, the number of social disclosures is measured in terms of the number of sentences used.

In this study, the Hackston & Milne (1996) method of annual report analysis is used to establish whether there are differences between industries in respect of the quantity of corporate environmental disclosure in South Africa.

2 Theoretical framework

During the past two or three decades, corporate environmental reporting has increasingly attracted the attention of researchers (for example, Ernst and Ernst 1972-1978; Rockness 1985; Harte and Owen 1991; Gray *et al* 1995; Mathews 1997). Environmental reporting can be regarded to be a subdivision of the larger area of social reporting. As in most other disciplines, there is considerable disagreement amongst academics on the theoretical underpinning of social and environmental reporting. In the context of this paper, social reporting is considered to be part of the information supplied to stakeholders in the broadest sense of the term.

One of the more popular theories used to explain environmental reporting and other forms of voluntary disclosure is the notion of legitimacy. This notion states that an organisation will be unable to thrive, and indeed even survive, if its aims and methods are not in line with that of society (Shocker & Sethi 1974). Adams *et al* (1998); Brown & Deegan (1998); Deegan & Gordon (1996); Lindblom (1994) and Patten (1992) are examples of environmental disclosure studies in the accounting literature that used a legitimacy framework.

Lindblom (1994) describes various strategies that corporations can use for environmental reporting in an attempt to legitimise their aims and methods in the eyes of society. Companies that have the most obvious environmental impact have more reason to attempt to legitimise their

environmental actions and will therefore be more inclined to use environmental disclosure.

The practice of environmental performance reporting appears to be increasing throughout the world (Gray *et al* 1995; Deegan and Gordon 1996; KPMG 1997). As an additional indication of its apparent importance, many reporting guidelines have been issued and many environmental reporting awards instituted worldwide (for example the ACCA award in the UK, WWF (SA) award in South Africa and Annual Report Awards Inc. in Australia). Examples of reporting guidelines include those of the Public Environmental Reporting Initiative (PERI 1994), Canadian Institute of Chartered Accountants (CICA 1993) and United Nations (1998).

3 Hypothesis development

Many studies, both local (De Villiers & Barnard 2000; De Villiers & Visser 1998; Doppegieter & De Villiers 1996) and international (Deegan & Rankin 1999; Tilt & Symes 1999; Hackston & Milne 1996; Gray *et al* 1995), have revealed that there are differences between industries in respect of environmental reporting.

Doppegieter & De Villiers (1996:37) found that organisations in the energy sector disclose environmental issues more comprehensively than the top companies in the overall South African economy. Although Doppegieter & De Villiers (1996) do not mention the notion of legitimacy, their finding is consistent with legitimacy theory. In other words, companies that have the most obvious environmental impact (energy companies) use environmental disclosure more often than other companies in an effort to legitimise their aims and methods.

The following hypothesis can therefore be stated for the study reported in this paper:

Companies in energy-intensive sectors and companies that produce energy carriers disclose a greater volume of environmental information in their annual reports than companies in other industry sectors.

4 Method and sample

The annual reports of South African companies were analysed by means of the method used by Hackston & Milne (1996). In this method, any information in an annual report that relates to the environment is counted in terms of the number of sentences used. The information is then classified in the following categories: monetary, non-monetary quantitative or declarative information as well as good news, bad news or neutral news. The perspective of the reporting company was used to

decide whether a particular statement constituted good, bad or neutral news (compare Hackston & Milne 1996).

The sample comprised the 1998 annual reports of the top 100 companies, in terms of market capitalisation, listed on the Johannesburg Stock Exchange (JSE) on 30 June 1998. For various reasons, the annual reports of thirteen of the top 100 companies could not be included in the sample. The sample therefore comprised 87 companies. The following reasons applied to the exclusion of the annual report of some companies:

- 7 companies were de-listed after 30 June;
- 3 companies were holding/subsidiary companies that had combined annual reports;
- 1 company was newly listed and did not produce a 1998 report; and
- attempts to obtain the annual report of two of the companies were not successful.

The 100 companies and their industry sectors are listed in appendix A.

The 87 companies included in the sample were split into an energy group and a non-energy group. The category "energy group" was defined as comprising companies that have operations of an energy-intensive nature and/or companies that produce energy carriers (such as coal) (compare Doppegieter & De Villiers 1996:30). Twenty companies were classified in the energy group, which represents the following industry sectors:

- Chemicals, oils and plastics (3 companies);
- metals and minerals (3);
- mining (7);
- mining financial (6); and
- steel and allied (1).

The non-energy group included 67 companies in the following sectors:

- Banks and financial services (11 companies);
- beverages, hotels and leisure (4);
- electronic and electrical (3);
- engineering (1);
- food (4);
- furniture, household and allied (3);
- industrial holding (12);
- insurance (12);
- media (6);
- motor (1);

- packaging and printing (1);
- pharmaceutical and medical (1);
- stores (6);
- development (1); and
- redevelopment (1).

5 Results and Comments

The results of the analysis are stated in table 1. The average number of sentences used per company, total number of sentences used and relevant standard deviations appear in column A. Column B reflects the results of a one-tailed ANOVA that compares the group of energy companies with the group of non-energy companies.

Table 1: Environmental reporting in the 1998 annual reports of the top 100 (in terms of market capitalisation) listed companies measured in terms of the average number of sentences used per company

Column A: Average number of sentences used per company (total number of sentences in brackets) [standard deviation in squared brackets]

	Energy group* 20 companies	Non-energy 67 companies	Average 87 companies
Monetary	5.7 (113)	0.1 (4)	1.3(117)
• Good news	5.6 (112)[4.8]	0.1 (4) [1.4]	1.3(116)[5]
• Bad news	0.0 (0) [-]	0.0(0) [-]	0.0(0) [-]
• Neutral news	0.1 (1) [-]	0.0(0) [-]	0.0(1) [-]
Non-monetary quantitative	1.8 (35)	0.1 (6)	0.5(41)
• Good news	1.5 (30) [2.8]	0.1 (6) [1]	0.4(36) [2.5]
• Bad news	0.3 (5) [0.5]	0.0(0) [-]	0.1(5) [0.5]
• Neutral news	0.0 (0) [-]	0.0(0) [-]	0.0(0) [-]
Declarative	21.0 (420)	1.2 (82)	5.8(502)
• Good news	20.3 (405)[24]	1.1 (76)[3.7]	5.5(481)[19]
• Bad news	0.4 (7) [1]	0.0(0) [-]	0.1(7) [1]
• Neutral news	0.4 (8) [1.5]	0.1 (6) [1]	0.2(14) [1.3]
TOTAL	28.4 (568)[29]	1.4 (92)[3.1]	7.6 (660)[18]
Good news	27.4 (547)	1.3 (86)	7.3 (633)
Bad news	0.6 (12)	- (0)	0.1 (12)
Neutral news	0.5 (9)	0.1 (6)	0.2 (15)
TOTAL	28.4 (568)	1.4 (92)	7.6 (660)

* The group of energy companies was defined as comprising companies that have energy-intensive operations and/or are producers of energy carriers.

Column B: Comparison of the extent of environmental reporting by companies in energy-intensive industries* versus other companies ANOVA between subjects compared

	df	Mean Square	F Value	Probability (one-tailed)
Monetary				
• Good news	1	472.77	64.14	<.0001
• Bad news	1	-	-	-
• Neutral news	1	0.04	3.45	0.0335
Non-monetary quantitative				
• Good news	1	30.64	20.27	<.0001
• Bad news	1	0.96	14.23	0.0002
• Neutral news	1	-	-	-
Declarative				
• Good news	1	5628.14	42.26	<.0001
• Bad news	1	1.89	12.78	0.0003
• Neutral news	1	1.48	3.68	0.0292
TOTAL	1	1250.07	57.22	<.0001

* The group of energy companies was defined as including companies that have energy-intensive operations and/or are producers of energy carriers.

The companies in the energy group have a higher average of environmental disclosure in every category, except for the two categories in which neither group disclosed information. Every comparison indicates a statistically significant difference at the 5% level, except in respect of the two categories in which neither group of companies disclosed information. Comparisons in respect of two categories only, namely neutral monetary news and neutral declarative news were not significant at the 1% level. Differences in respect of all the other comparisons, including the comparison in respect of the total of disclosure, were statistically significant at the 1% level.

6 Conclusions

A sentence count of environmental reporting in the 1998 annual reports of the top 100 (in terms of market capitalisation) listed companies in South Africa reveals that companies in energy-intensive industries disclose significantly more environmental information than the other top 100 companies in all categories of reporting. The group of energy companies comprises companies in energy-intensive industries or companies that are producers of energy carriers, such as coal. The conclusion to be drawn is that differences in the extent of environmental

reporting in the 1998 annual reports of companies in South Africa are industry-related. This finding is consistent with the notion of legitimacy. In this case, companies that have an obvious environmental impact use environmental disclosure more often than other companies to legitimise their aims and methods in the eyes of society.

These findings, namely that the particular industry has a marked influence on the tendency of companies to disclose environmental information, considered in conjunction with other local and international findings (see hypothesis development section for references), provides sufficient evidence to generalise the findings to other years and to other countries.

APPENDIX A

COMPANIES INCLUDED IN THE SURVEY

Name	Industry	Co	Energy	Monetary			Non-monetary			Declarative			Total
				G	B	N	G	B	N	G	B	N	
ABI	Beverages, Hotels & Leisure	1	0							1			1
ABSA	Financial	2	0				1			1			2
Adcock	Pharmaceutical & Medical	3	0							2			2
African Harvest	Redevelopment	5	0										0
African Life	Insurance	6	0										0
Afrox	Engineering	7	0										0
AMB Holdings	Financial	8	0										0
Barlows	Industrial Holding	15	0							1			1
Bevcon	Beverages, Hotels & Leisure	16	0										0
Bidvest	Industrial Holding	17	0							1			1
BOE	Financial	19	0										0
Cadbury	Food	20	0							4	3		7
Schweppes													
Capital Alliance	Insurance	21	0										0
CG Smith	Industrial Holding	22	0							6			6
CG Smith Foods	Food	23	0							1			1
Coronation	Financial	24	0										0
CTP Holdings	Media	25	0										0
Datatec	Electronics & Electrical	26	0										0
Didata	Electronics & Electrical	28	0										0
Edgars	Stores	30	0							2			2
Educor	Media	31	0										0
Ellerines	Furniture, Household & Allied	32	0							4	1		5
Fedsure	Insurance	33	0										0
Firstrand	Financial	34	0										0
Forbes	Insurance	35	0										0
Foschini	Stores	36	0										0
Gensec	Financial	38	0										0
HCI	Insurance	41	0										0
Imperial	Industrial Holding	42	0										0
Investec	Financial	45	0										0
JD Group	Furniture, Household & Allied	47	0										0
Johnnic	Industrial Holding	48	0							1			1
Liberty	Insurance	49	0										0
Liberty Investors	Insurance	50	0										0
Lonrho	Industrial Holding	51	0	3						10	1		14
M-Cell	Development	52	0										0
Mega	Media	53	0										0
Metro	Stores	54	0										0
Metropolitan	Insurance	55	0										0
MIH	Media	56	0										0
Mutual & Federal	Insurance	58	0										0
Nampak	Packaging & Printing	59	0				3			3			6
Nedcor	Financial	60	0										0
Omni Media	Media	61	0										0
Pepkor	Stores	62	0										0
PQ Holdings	Electronics & Electrical	64	0										0
Primedia	Media	65	0										0
Profurn	Furniture, Household & Allied	66	0										0
Real Africa Holdings	Industrial Holding	67	0										0
Rebhold	Beverages, Hotels & Leisure	68	0										0
Rembrandt Holdings	Industrial Holding	69	0							2			2
Remgro	Industrial Holding	70	0				1			6			7
Richemont	Industrial Holding	71	0										0
RMB Holdings	Insurance	72	0										0

Name	Industry	Co	Energy	Monetary			Non-monetary			Declarative			Total
				G	B	N	G	B	N	G	B	N	
SAB	Beverages, Hotels & Leisure	73	0	1						4			5
Safren	Industrial Holding	74	0				1			6	1		8
Sage	Insurance	75	0										0
Santam	Insurance	77	0										0
Shoprite	Stores	79	0										0
Stanbic	Financial	80	0							1			1
Supergroup	Motor	81	0										0
Tegkor	Industrial Holding	82	0							2			2
Theta	Financial	83	0										0
Tiger Oats	Food	84	0							2			2
Tongaat	Food	85	0							16			16
Trencor	Financial	86	0										0
Woolies	Stores	87	0										0
AECI	Chemicals, Oils and Plastics	4	1	3		1	10	1		16	3		34
Amcoal	Mining	9	1	6			1	2		22			31
Amgold	Mining Financial	10	1										0
Amplats	Metals & Minerals	11	1	17						69	1	4	91
Anamint	Mining	12	1										0
Anglo American Corp	Mining Financial	13	1							3			3
Anglogold	Mining	14	1	12			4	1		26			43
Billiton	Mining Financial	18	1	1				1		26			28
De Beers	Mining	27	1				1			38			39
Driefontein	Mining	29	1	11						7			18
Gencor	Mining Financial	37	1										0
GFSA	Mining Financial	39	1	3						1			4
Gold Fields	Mining	40	1	12						4			16
Implats	Metals & Minerals	43	1	14						12			26
Ingwe	Mining	44	1	11			4			87	2	3	107
ISCOR	Steel & Allied	46	1	10			1			9		1	21
Minorco	Mining Financial	57	1										0
Polifin	Chemicals, Oils and Plastics	63	1				3	1		12			16
Samancor	Metals & Minerals	76	1	7			1			30	1		39
Sasol	Chemicals, Oils and Plastics	78	1	5			4			43			52
Reason excluded													
Anglo American Investment Corp.	Delisted	88											
Charter	Delisted	89											
F.I.T.	Two companies' annual reports combined	90											
Investec Holdings	Annual report not available	91											
JCI	Delisted	92											
Libhold	Three companies' annual reports combined	93											
Liberty Strategic Investments	Three companies' annual reports combined	94											
NBS Boland	Delisted	95											
Norwich	Delisted	96											
Orion	Delisted	97											
Orion Holdings	Delisted	98											
Peregrin	Newly listed, first annual; report 1999	99											
Real Africa Investments	Two companies' annual reports combined	100											

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