The Journal of Accounting and Management

Environmental Accounting Adoption and Disclosure: Zimbabwe Stock Exchange Listed Companies

Ivonne Ndlovu[1], Shewangu Dzomira[2]

Abstract: The concern for the environment and environmental accounting is becoming increasingly important around the world. Thus the concept of environmental accounting urges corporations to be more accountable and transparent on the impact made on the environment. The main purpose of the study was to ascertain the level of adoption and disclosure of environmental information among companies listed on the Zimbabwe Stock Exchange. Twenty companies from the high and medium environmental impact sectors were sampled from the sixty five companies listed on the Zimbabwe Stock Exchange using purposive sampling technique. Qualitative content analysis through QDA Miner software analytical tool was used to analyze the secondary data in the form of annual reports. The themes that were used to analyze environmental disclosure are environmental policy, environmental impact, environmental infrastructure, strategic goals and environmental policy implementation. The findings show that companies in medium impact sectors are disposed to disclose environmental information as much as the companies in the high impact sector although that is contradictory to the legitimacy theory. Thus the study recommends that companies listed on the Zimbabwe Stock exchange adopt and disclose environmental information in their annual reports.

Keywords: environmental accounting; environmental disclosure; Zimbabwe Stock Exchange

JELL Classification: M41

1. Introduction

Environment awareness and preservation is a growing phenomenon around the world and the adoption of environmental accounting and disclosure is increasingly becoming important. A number of studies have reviewed this phenomenon from different dimensions. Environmental disclosure remains a voluntary exercise in Zimbabwe. However there are countries in the world which have taken a proactive action to make environmental disclosure mandatory. Vazakidis, Stavropoulos and Galani (2013) highlights that France became the first country in the world to regulate that environmental disclosure as mandatory, followed by United Kingdom in 2007, Denmark in 2008, Sweden in 2009 and Spain in 2012. The failure to have a mandatory regulation for environmental disclosure may have an effect in the adoption of this concept by companies listed in the Zimbabwe Stock Exchange.

There seem to be a relationship between environmental regulations and environmental accounting and disclosure whose indicators are environmental accounting compulsory standards, management

[1] Lecturer PhD, Department of Accounting, Solusi University, Zimbabwe, Address: Solusi University, P.O. Solusi, Bulawayo, Zimbabwe, E-mail: shewangu@yahoo.com.
[2] Senior Lecturer PhD, Department of Accounting & Information Systems, Great Zimbabwe University, Zimbabwe, Address: P.O Box 1235, Masvingo, Zimbabwe, Corresponding author: shewangu@yahoo.com.

practices and environmental performance (Muza & Magadi, 2014; Ioannou & Serafeim, 2014). Firms in countries with constraining regulations regarding environmental disclosure can therefore be expected to comply more closely with environmental requirements of IFRS than firms domiciled in countries with less cons training regulations. Furthermore, financial reporting can also be influenced by the voluntary disclosure practices that prevailed in a given country prior to IFRS adoption (Barbu, Dumonitier, Feleaga & Feleaga, 2014). The institutional theory advocates that the adoption of environmental accounting and disclosure is pressured by externalities. In the same line of thought because of the sensitivity and the growing awareness of environmental disclosure Zimbabwe set up an Environmental Accounting Agency (EMA) which is a statutory body responsible for ensuring the sustainable management of natural resources and protection of the environment, the prevention of pollution and environmental degradation, the preparation of Environmental Plans for the management and protection of the environment. It is established under the Environmental Management Act (Chapter 20:27) and operationalized on the 17^{th} of March 2003 through SI 103 of 2003.

Firm size is operationalized using a number of measures. Vazakidis et al. (2013) highlighted that firm size can be operationalized using measures such as turnover, sales, revenue, total assets, number of employees as well as share prize. This study used prize average share price as a measure of the firm size. The stakeholder theory and the legitimacy theory provide arguments for the positive association of environmental disclosure with firm size and industry type (Barbu et al 2014). Larger firms, with long traditions of providing extensive information on environmental issues, are believed to be likely complying more closely with environmental requirements than are smaller firms. To substantiate this point Ebiringa et al.(2013) confirms that there is a positive relation between environmental disclosure and firm size because of: (1) large firms are more willing to disclose information to reduce their political costs, (2) owing to more developed internal reporting system, the costs associated with a higher disclosure level are lower for large firms, (3) small firms are more likely to hide crucial information because of their competitive disadvantage within their industry and (4) larger companies have more shareholders who might be interested in social and environmental disclosure. Juhmani (2014) adds that firm size is one of the factors that affect adoption of environmental accounting and disclosure under legitimacy theory.

More so, industry type or sector has been established in many studies as having an influence on environmental disclosure. Vazakidis et al. (2013) put forward that different companies have different characteristics which may relate to risks to society, potential growth, employment opportunities, competition and government interference. A number of studies have consented that companies from environmental sensitive industries tend to disclose more information than companies from non-sensitive industries (Vazakidis et al. 2013; Magara et al. 2015; Tze, Huey Han, Siew & Boon. 2016). In addition Ortiz & Marín (2014) asserts that the industry in which the firm operates has traditionally been an important determinant of the level of corporate responsibility reporting, because there are sectors that have greater influence on society or the environment, (for example the energy or the natural resources industry) than others. The assumption of this assertion is that normally due to higher population propensity companies in sensitive industries are the subject of environmental regulations and stakeholders' expectations are also very high in terms of environmental disclosure. Industry sector has been categorized in different studies as follows: high profile and low profile companies (Suttipun & Stanton 2012); environmentally sensitive industries and less environmentally sensitive industries (Tze et al. 2016) and high impact sectors, medium impact sectors and low impact sectors (Behram 2015). This study will adopt Behram (2015) categorization: *high impact sector* companies such as chemicals and pharmaceuticals, forestry and paper, mining and metals; *medium impact sector* companies such as electronic and electrical equipment, hotels, catering and facilities management, public transport; *low impact sector* companies such as information technology, support services, telecoms etc.

2. Theoretical Framework

A theoretical framework is a concept or concepts on which a conceptual framework is built on. Several theories have been put forward as to why a company may decide to act responsibly. These theories are viewed by many as environmental accounting researchers as the appropriate theories to understand social and environmental accounting and reporting practices (Ayoib, Nosakhare & Chijoke, 2015 & Mobus, 2005). Based on a review of literature pertaining to different theories on social and environmental accounting the conceptual framework is built upon the legitimacy theory, institutional theory and stakeholders' theory.

Firstly, the legitimacy theory provides a view that the interrelationship between an organization and the related social expectations is simply a fact of social life (Ayoib et al. 2015). The theory simply states that organizations seek to operate within parameters that are acceptable by in the society. However, Mobus (2015) argues that different forms of legitimacy pertain to different external audiences. Other legitimacy theory researchers reasoned that non-disclosure of environmental liabilities would attract negative media attention and as a result negative media coverage would hurt financial performance (Tang & Fiedler, 2005). Furthermore, Schippper (as cited in Fontana, D'Amico, Coluccia & Solimene, 2015) posits that legitimacy theory also suggests that big firms must satisfy the social expectations of a large range of stakeholders, therefore, for this reason; they need to produce more information. The bottom line is that the legitimacy theory incorporates the idea of behavior change because what can be considered as acceptable today in a society may change overtime and the firm must be prepared for variations in the environment but taking ethical issues into account (Jerry et al. 2015). Thus the firm is expected to operate within the parameters of the society in order to maintain peace.

Secondly, the institutional theory organizational behavior is conditioned by the expectations stemming from the institutional environment (Mobus, 2015). Institutional theory is concerned with examining and explaining how institutionalized norms and pressures affect social change among organizations. Ali and Rizwan (2013) said that institutional theory provides explanation for the adaptation of particular organizational practices from within a specific organizational field (as cited in Jerry et al. 2015). Since the firm operates within an environment it is paramount that it adapts to the needs of that environment which may even affect the organizational culture.

The theories discussed above are the underpinning theories of the study which also align to the observation made by Ali and Rizwan (2013) that the most widely used theories to explain companies, social reporting practice are legitimacy theory, stakeholder's theory and institutional theory (as cited in Jerry et al. 2015). Thus the outlined theories are appropriate for the environmental accounting and disclosure study

3. Environmental Accounting and Disclosure Background

Environmental disclosure can be traced back to the 1980s when some companies began to disclose little social and environmental information. Early studies that evidence the disclosure of environmental information are (Wiseman 1982; Gray et al., 1987; and Harte and Owen, 1991) as cited in Guo et al. (2011). During the infancy stage of environmental accounting and disclosure little environmental information was disclosed in about half a page in company's annual reports. Guo et al. (2011) reveals that during the inception of environmental disclosure the information relating to corporate environmental and social activities that was disclosed in annual reports usually revealed positive aspects while any negative or bad news were not reported. With the increasing concern of sustainability, the need to disclose even more detailed environmental activities has grown over the years.

The progress in the area of environmental accounting and disclosure is traced through a meta-analysis paper written by Murthy and Parisi (2013). During the late 1980s social accounting cultivated a growing concern on societal interest on company's accountability (Gray and Laughlin 2012). Thus companies were put to task for their conduct towards society which resulted in more environmental disclosure in issues that affected the society. In addition the Brundtland Commission in 1987 authenticated the disclosure of environmental activities in annual reports through the publication entitled 'Our Common Future' report on the global environment and development. Furthermore Murthy and Parisi (2013) study shows that in the 1990s there was the emergence of environmental accounting and assurance engagement issues became the prime focus of attention. In the early twentieth century there was a shift from the societal accounting literature towards an increasing involvement of companies in social and environmental disclosure which led to the Corporate Social Responsibility construct. Following the Corporate Social Responsibility construct John Elkington introduced Triple Bottom Line (TBL) in 1997 with aim of having business and investors measure performance against a new set of metrics capturing the economic, social and environmental value added (Burritt 2012). The TBL development was followed by People Planet Profit (3P) which then led to the development of Global Reporting Initiative (GRI) guidelines (first issue of the G3 framework 2000; G3.1 2006 and G4 2012) whose intention was to increase the volume and quality of disclosure about social and environmental performance (Burritt 2012; Boolaky 2011). The development in the area of sustainability reporting shows the necessity of the adoption of environmental disclosures in annual reports of companies in Zimbabwe.

4. Empirical Literature Review

Jerry et al (2015) carried a study with the purpose of exploring how environmental accounting disclosure is being practiced among Nigerian Quoted Firms. The underlying fact of the study was that disclosure of environmental information in financial reports was voluntary in Nigeria. The research was based on the assumption that companies disclose environmental information as a result of good industrial practice, pressure from environmental activists and advocates and relationships with parent compares since there is no standard to mandate disclosure. The findings of the research showed that accounting standards do not significantly influence environmental accounting disclosures and the non-existence of the standard leads to lack of uniformity in disclosure. Thus the absence of a mandatory regulation promotes inconsistency in disclosing environmental information among companies.

Dibia & Onwuchekwa (2015) carried out a study of the determinants of environmental disclosurses in

Nigeria with the aim of examining the effect of firm size, profit leverage and audit fim type on environmental disclosure. The study was based on the hypothesis that there is a positive relationship between environmental disclosure and firm size, profitability and auditor type. Authors for this study based their research methodology on empirical evidence such as that of Malaysia, Trotman & Bradley (1981) who used content analysis on a similar study and found out that that a positive relationship exist between firms' financial leverage and the extent of voluntary disclosure. However studies such as that of Chow & Wong-Boren (1987), Ahmed & Nicolls (1994) and Mohamed & Tamoi (2006) found no statistical relationship between financial leverage and voluntary disclosure. The study was based on the stakeholders' theory which provides rich insights into the factors that motivate managerial behaviour in relation to the social and environmental disclosure practices of organizations.

Dibia & Onwuchekwa (2015) study findings revealed that firm size impacts negatively and significantly on the decision to disclose environmental information by quoted companies and audit type also appeared to have a negative but insignificant impact on the decision to disclose environmental information by quotetd companies. Depsite the negative or insignaificant impact of the indipendent variables on environmental disclsoure the authors recommend that there is a need for corporate entities to improve theire nvironmental responsibility practices and disclose comprehensively their environmental risks, liabilities and impact on the environment.

The study by Otu (2015) aimed investigating the environmental, social and governance (ESG) practices of Nigerian quoted companies and discuss the need for integrated reporting (IR). The findings of the study revealed that, the level of ESG disclosure was 53%, this was made up environmental scores (7%), social scores (66%) and governance scores (81%). This showed that governance information was the most disclosed while environmental information was the least disclosed. Further findings also revealed that ESG disclosure practice was influenced by auditor type; but not by company size and profitability. Thus the characteristics of a company have a significant influence on the adoptability of environmental accounting and disclosure. The authors observe that there is a need to improve on ESG practices by integrating the financial and ESG elements to generate a single integrated report, which allows both the company and its stakeholders to make better-informed decisions.

5. Methodology

The researcher takes an interpretivism philosophical stance in this study. According to Thanh et al. (2015)the interpretive paradigm allows researchers to view the world through perceptions and experiences of the participants. Interpretive paradigm is purely based on the interpretation the researcher gives to a scenario in accordance with the researchers own set of meanings. Furthermore, Thanh et al. (2015) argues that although interpretive paradigm is not a dominant model of research it can accommodate multiple perspectives and versions of truth. This study explored annual reports of companies listed on the Zimbabwe Stock Exchange classified in the medium to high impact sectors so as to find out their environmental disclosure position. The selected companies are unique because they are highly able to cause environment contamination thus positioning them in a particular set of circumstances compared to other companies specifically in low impact sector. Therefore the interpretive paradigm philosophical stance is very appropriate for this research since the researcher intends to understand what environmental information companies disclose.

The research study adopted an exploratory design which is a good design useful to clarify the researcher's understanding of a problem. According to Saunders et al. (2007)an exploratory design is valuable for finding out what is happening and to seek to find new insights about a certain phenomenon. Thus the study sought to find out the level of environmental disclosure by companies listed in the Zimbabwe Stock Exchange which are categorized in the medium to high impact sector. The population of the study was constituted by 65 companies listed on the Zimbabwe Stock Exchange. From this population the researcher classified the companies according to their industrial sectors (high environmental impact sector and medium environmental impact sector). In a study conducted by Behram (2015) companies are sorted according to industrial sectors which are high impact sector, medium impact sector and low impact sector.

The researcher collected secondary data in form of annual reports so as to gather information regarding the environmental information disclosure of the companies listed on the Zimbabwe Stock Exchange which are categorized under high environmental impact sector and medium environmental sector. Annual reports were used in this study because they are an acceptable means of communication to stakeholders and a commonly used medium for social disclosure (Tilt, 1994; Lodhia, 2004 as cited in Nor et al. 2016). The study chose to focus at year 2015 because it was the latest source of information available when the study was commenced as there was a set-back of incompleteness and unavailability for the year 2016. For the purposes of this study qualitative content analysis was used to obtain data from published annual reports of 2015 of the selected companies. Qualitative content analysis is defined as a method for summarizing any form of content by counting various aspects of the content (Prasad 2008). QDA Miner is the qualitative data analysis which was used to analyze the data.

The measurement of environmental disclosure was adopted from Behram (2015). Using this technique environmental issues were identified and the environmental disclosure of each issue was analyzed using yes/no (or 1, 0) scoring methodology. Behram (2015), three out of five testable GRI themes of environmental disclosure were used for coding. These are: (1) environmental policy; (2) environmental impact; (3) environmental infrastructure; (4) strategic goals and (5) environmental policy implementation.

The sample of this study consisted of companies listed on the Zimbabwe Stock Exchange that are categorized under the medium to high impact sector. According to Behram (2015) the high impact sector include companies such as chemicals and pharmaceuticals, forestry and paper, mining and metals. Companies categorized in the high environmental impact sector were sampled because they are exposed to greater stakeholder pressure. Thus they are expected to be thorough in disclosing environmental information than companies categorized under low impact sector. Nor et al. (2016)also argues that companies in the high impact sector more activities that have a larger impact in the society hence the need to disclose more environmental information to the stakeholders. Out of a population of 65 companies listed on the Zimbabwe Stock Exchange 20 companies were sampled which are categorized under high environmental impact sector and medium environmental impact sector due to the availability of the annual reports used. The sample size was arrived at based on the availability of annual reports of companies that are categorized as high and medium environmental impact sectors.

6. Discussion of Findings

The data was analyzed using QDA Miner which is a qualitative data analysis softeware tool which is used to analyze qualitative data. To clearly follow the process used for analyzing data the guiding headings include: high impact and medium impact sampled companies; association of environmental disclosure with industry sector; association of environmental disclosure with the firm size; assessment of the overall corporate environmental disclosure; ascertain if environmental regulations influence the disclosure of environmental information on the company's annual reports.

High Impact and Medium Impact Sampled Companies

Due to availability of data, 20 of the companies' annual reports were analyzed which actually form the sample size. However, out of the population those annual reports in which there was no disclosure of at least one item were automatically excluded from the results. Thus 9 companies were analyzed which was the sampling frame generated from the population.

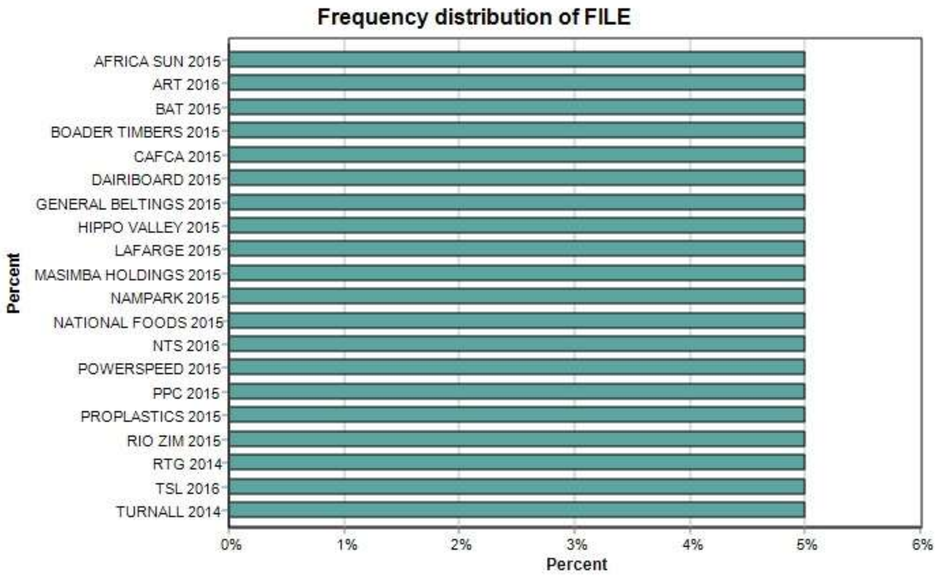

Figure 1. Companies from Purposive Sampling

The frequencies reported in percentage form represent the respective contributions of each of the selected companies in addressing the research objective. Figure 1 above shows that each of the companies contributes 5% in explaining environmental disclosure for high and medium environmental impact sectors in Zimbabwe. According to the delimitation of the study the researcher focused on latest annual reports. Figure 2 below categorizes all the selected companies according to their respective levels of impact.

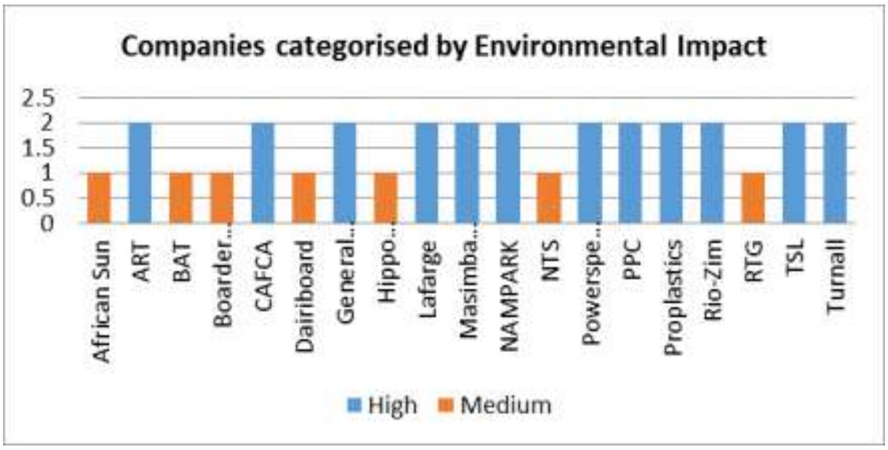

Figure 2. Sampled Companies Categorized

Assessment of the overall corporate environmental disclosure

The coding listing from Table 1 below shows environmental disclosure themes as outlined in the Global Reporting Initiative guidelines.

Table 1. Environmental Disclosure Code and Cases Frequencies

Category	Code	Count	% Codes	Cases	% Cases
Global Reporting Initiatives	Environmental Policy	9	25.70%	9	45.00%
Global Reporting Initiatives	Environmental Impact	7	20.00%	7	35.00%
Global Reporting Initiatives	Environmental Infrastructure	6	17.10%	6	30.00%
Global Reporting Initiatives	Strategic Goals	5	14.30%	5	25.00%
Global Reporting Initiatives	Environmental Policy Implementation	8	22.90%	8	40.00%

Source: Primary data (2017)

The relative frequencies of codes and cases shown in the Table 1 above are further graphically displayed in the figures 2 and 3 below.

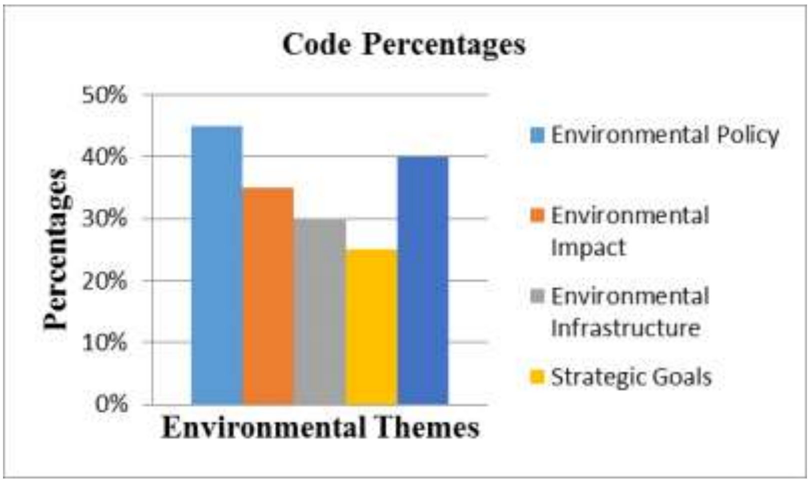

Figure 2. Overall Corporate Environmental Disclosure

Figure 2 above displays the percentage codes, which refer to the relative proportion of each environmental theme. Whilst Figure 3 below presents the percentage cases which refer to proportion of the number of annual reports which had environmental disclosure on each respective theme. For example Environmental Policy was disclosed in 9 out of 20 reports.

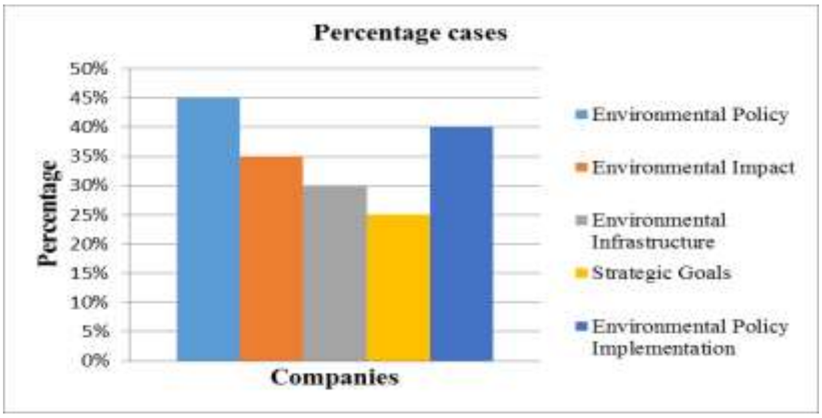

Figure 3. Overall Percentage Cases Disclosed

The code frequencies are giving the total of the frequencies of the codes in all the annual reports. It was found out that environmental policies had the highest code frequency of 25.70% (code count of 9) appearing in 9 cases. These results reflect that environmental policy is the most disclosed theme among the high impact and medium impact companies listed on the Zimbabwe Stock exchange. Strategic goals have the lowest code frequency of 14.30% each from 5 appearances which however is not a significant difference from the highest code frequency.

The researcher further presented a similarity matrix to explore the clustering patterns inherent in the data in Table 2 below.

Table 2. Case Similarity Matrix

	BAT 2015	BOADER TIMBERS 2015	CAFCA 2015	DAIRIBOARD 2015	HIPPO VALLEY 2015	LAFARGE 2015	PPC 2015	RIO ZIM 2015	TURNALL 2014
BAT 2015	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
BOADER TIMBERS 2015	0.5	1	0.8	0.5	0.5	0.8	0.5	0.7	0.5
CAFCA 2015	0.5	0.8	1	0.5	0.5	0.7	0.5	0.8	0.5
DAIRIBOARD 2015	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5
HIPPO VALLEY 2015	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5
LAFARGE 2015	0.5	0.8	0.7	0.5	0.5	1	0.5	0.6	0.5
PPC 2015	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5
RIO ZIM 2015	0.5	0.7	0.8	0.5	0.5	0.6	0.5	1	0.5
TURNALL 2014	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1

Source: Primary data (2017)

Graphical display – similarity index – dendrogram

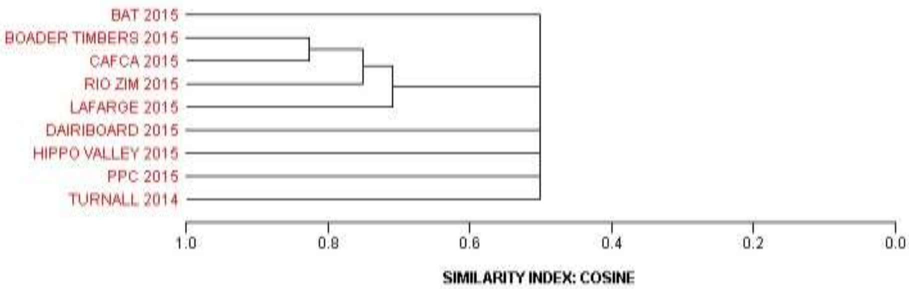

Figure 4. Environmental Disclosure Similarity Matrix

Table 2 and Fig 4 above illustrates clustering presented on companies; the distance matrix used for clustering consists of cosine coefficients calculated on the comparative frequency of the disclosure scores. The more analogous two cases will be in terms of the allotment of codes, the higher will be the magnitude of the coefficient. From the Dendrogram, Figure 4 and Table 2 above CAFCA and Boarder Timbers, only differ with 20% of the times. This implies that their corporate environmental disclosure policies are close to similar in the rest of the themes except on environmental impact. Similarly, CAFCA and RIOZIM have a correlation of 80% in which case they differ only on environmental infrastructure disclosure.

7. Conclusions and Implications

Environment awareness and preservation is a growing phenomenon around the world and the adoption of environmental accounting and disclosure is increasingly becoming important. Therefore this study sought to ascertain the level of environmental accounting adoption and disclosure in companies listed on the Zimbabwe Stock Exchange. The legitimacy theory, stakeholder theory and institutional theory were the theories discussed which underpin this study. According to the legitimate theory companies in high environmental impact sector are expected to disclose more environmental information compared to the medium and low environmental sectors because they have to persuade institutional pressure groups. It is noted in the study that Environmental Management Agency is an enforcing board which endeavors to encourage companies in Zimbabwe to disclosure environmental information in their annual reports. The establishment of Environmental Management Agency seems to have resulted in improved environmental disclosure. Despite the seemingly improvement companies in Zimbabwe still need to be encouraged to disclose more environmental information in order to improve their credibility to various stakeholders and also have a competitive advantage over other entities who do not disclose.

A number of recommendations can be drawn from this study. The study sought to ascertain the level of adoption and disclosure of environmental information in companies registered in the Zimbabwe Stock Exchange.

The study recommends that companies listed on the Zimbabwe Stock exchange adopt and disclose environmental information in their annual reports. Adopting this practice will assist companies in Zimbabwe gain better information, improve risk management, improve performance, save resources and money as well as improve stakeholder communication, accountability and transparency.

Further the study recommends that Environmental Management Agency should enforce the disclosure of environmental information in Zimbabwe through developing guidelines for disclosure that will be uniform across the country.

In order for companies to appreciate the benefits of adopting and disclosing environmental information, regulatory bodies in Zimbabwe such as the Environmental Management Agency should conduct workshops and seminars for companies in Zimbabwe in order to raise awareness.

References

Ayoib, C.; Nosakhare, P. O. & Chijoke, O. M. (2015). Environmental Accounting and Firm Profitability in Nigeria: Do Firm-Specific Effects Matter? *The IUP Journal of Accounting Research & Audit Practices*, Vol, XIV (2), pp. 42-55.

Ahmed, K. & Nicholls, D. (1994). The Impact of Non-Financial Company Characteristics on Mandatory Disclosure Compliance in Developing Countries: The Case of Bangladesh. *The International Journal of Accounting*, 29(1), pp. 62-77.

Barbu, E. M.; Dumontier, P.; Feleaga, N. & Feleaga, L. (2014). Mandatory Environmental Disclosures by Companies Complying with IASs/IFRSs: The Cases of France, Germany, and the UK. *The International Journal of Accounting*, 49(2), pp. 231-247.

Behram, N. K. (2015). A Cross-Sectoral Analysis of Environmental Disclosures in a Legitimacy Theory Context. *Journal of Management and Sustainability*, 5(1), pp. 20–37.

Boolaky, P.K. (2011). Global Reporting Initiatives (G3), Standard Disclosures for Human Resource Practices : Compliance and Determinants in The Financial Services Sector : Europe, Asia and Others. *Academy of Taiwan Business Management Review*, pp. 1–15.

Chow, C. W. & Wong-Boren, A. (1987). Voluntary Financial Disclosure by Mexican Corporations. *The Accounting Review*, 62(3), pp. 533-541.

Dibia, N.O. & Onwuchekwa, J. C. (2015). Determinants of environmental disclosures in Nigeria: A case study of oil and gas companies. *International Journal of Finance and Accounting*, 4(3), pp. 145–152.

Ebiringa, O.T. et al. (2013). Effect of firm size and profitability on corporate social disclosures: The Nigerian oil and gas sector in focus. *Bristish Journal of Economics, Management & Trade*, 3(4), pp. 563–574.

Fontana, S.; D'Amico, E.; Coluccia, D. & Solimene, S. (2015). Does environmental performance affect companies' environmental disclosure? *Measuring Business Excellence*. 19(3), pp. 42-57.

Gray, R. & Bebbington, J. (2000). Environmental accounting, managerialism and sustainability: Is the planet safe in the hands of business and accounting? *Advances in Environmental Accounting and Management*, 1, pp. 1–44.

Guo, M.; Zhao, X. & Lions, C. (2011). *What is the impact of industrial environmental events on the quality of environmental disclosure in corporate annual reports ?*

Ioannou, I. & Serafeim, G. (2014). The Consequences of Mandatory Corporate Sustainability Reporting: Evidence from Four Countries. *Http://Ssrn.Com/Abstract=1799589*, pp. 1–34.

Jerry, M.S.; Peter, T. & Bukar, M. (2015). Environmental Accounting Disclosure Practice of Nigerian Quoted Firms: A Case Study of Some Selected Quoted Consumer Goods Companies, 6(22), pp. 31–37.

Magara, R.; Aming'a, N. & Momanyi, E. (2015). Effect of Environmental Accounting on Company Financial Performance in Kisii County. *British Journal of Economics, Management & Trade*, 10(1), pp. 1–11. http://sciencedomain.org/abstract/10611.

Mobus, J. L. (2005). Mandatory environmental disclosures in a legitimacy theory context. *Accounting, Auditing & Accountability Journal*, *18*(4), pp. 492-517. http://doi.org/10.1108/09513570510609333.

Mohammed, Z. & Tamoi, J. (2006). Corporate Social Disclosure of Construction Companies in Malaysia, *Malaysian Accounting Review*, 5(1), pp. 85-114.

Murthy, V. & Parisi, C. (2013). *A meta-analysis of two decades of Sustainability Accounting*.

Muza, C. & Magadi, I. (2014). Environmental Management accounting implementation in Zimbabwe mining sector. *IOSR Journal of Business Management*, 16(9), pp. 82–92.

Nor, N.M. et al., 2016. The Effects of Environmental Disclosure on Financial Performance in Malaysia. *Procedia Economics and Finance*, 35 (October 2015), pp. 117–126. http://www.sciencedirect.com/science/article/pii/S22125671160.

Ortiz, E. & Marín, S. (2014). Global Reporting Initiative (GRI) as recognized guidelines for sustainability reporting by *Spanish companies on the IBEX 35 : with financial entities*, 10(5), pp. 855–872.

Otu Umoren, A. (2015). Environmental, Social and Governance Disclosures: A Call for Integrated Reporting in Nigeria. *Journal of Finance and Accounting*, 3(6), p. 227. http://www.sciencepublishinggroup.com/journal/paperinfo?journalid=171&doi=10.11648/j.jfa.20150306.19.

Prasad, B. D. (2008). *Content Analysis. Research methods for social work*, pp. 1–20.

Saunders, Philip, L. & Adrian, T. (2007). *Research Methods for Business Students, Fourth Edition* 4th ed., UK: Pentice Hall.

Suttipun, M. & Stanton, P. (2012). A study of environmental disclosures by Thai listed companies on websites. *Procedia Economics and Finance*, 2 (Af 2012), pp. 9–15. http://www.sciencedirect.com/science/article/pii/S2212567112000597.

Tang, O. & Fiedler, B. (2005). *Environmental Accounting – Disclosures of Environmental Liability and the Shipping Sector*. pp. 323–329.

Thanh, N. C.; Thi, T. & Thanh, L. (2015). The Interconnection Between Interpretivist Paradigm and Qualitative Methods in Education. *American Journal of Educational Science*, 1(2), pp. 24–27. http://www.aiscience.org/journal/ajes.

Trotman, K. T. & Bradley, G. W. (1981). Association between Social Responsibility Disclosure and Characteristics of Companies. *Accounting, Organisations and Society,* 6(4), pp. 355-362.

Tze, S.O., Huey, S.T., Han, H. G., Siew, B.T. et al., & Boon, H.T. (2016). The relationship between environmental disclosure and financial performance of public listed Companies in Malaysia.pdf. *International Business Management*, 10(4), pp. 461–467.

Vazakidis, A.; Stavropoulos, A. & Galani, D. (2013). Company Characteristics and Human Resource Disclosure in Greece. *Procedia Technology*, 8 (Haicta), pp. 112–121. http://dx.doi.org/10.1016/j.protcy.2013.11.016%5Cnhttp://linkinghub.elsevier.com/retrieve/pii/S2212017313000789.