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Effect of Leverage on Social- Environmental Responsibilities Disclosures in Financial Reports of Kenyan Listed Firms

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ABSTRACT

The purpose of this study was to determine the effect leverage on social-environmental responsibilities disclosures in Annual financial reports of Kenyan listed firms. Descriptive research design was used and secondary data was collected from 2009 to 2018 annual reports of 45 companies listed prior to 2009. Content analysis was used to determine the quality of disclosure guided by Global Reporting Initiative index. Using random regression analysis the study showed that leverage were positively significant disclosure of social environmental responsibilities information on financial reports of Kenyan listed firms. This study deviates from previous studies done in Kenya by exploring one factor of leverage and extents the quality score from just 0 and 1 to 0 to 3 to measure quality. This study informs the need for companies in Kenya to voluntary disclose social environmental issues in their financial reports to attract capital providers and to contribute the understanding of determinant of leverage on SER in theory and practice from its findings.

Keywords: Financial reports, Social–environmental responsibilities, disclosures, legitimacy, stakeholders, leverage

INTRODUCTION

Increase in public awareness and media coverage of social environmental issues have compelled firms to enhance the scope and intensity of corporate social environmental disclosures (Chiu & Wang, 2014).Firms are increasingly being held answerable for their actions that affect the society, the community and environment (Majeed, Aziz & Saleem, 2015). These firms are compelled to be responsible for social and environmental matters and commit to address issues such as damage of the environment, care for the surrounding community, fair treatment of work force, and safety of products.

A focus on social environment responsibilities ensures proper management and monitoring of social and environmental issues consequently leading to a healthy relationship with stakeholders that guarantee sustainability. To be accountable and transparent, firms report these responsibilities in their annual financial reports which is more accessible to wider array of existing and potential investors as well as other interested users. The concept of social responsibility and reporting has been accepted, adopted and promoted by many governments, corporations, consumers and non-governmental organizations who have embraced social and environmental activities as an important component in annual financial reports (Leite & Padgett, 2011).

In Social environmental literature, there is wide believe that Social environmental responsibilities (SER) disclosure in annual reports shows a commitment by business towards the development of a social-environmentally responsible corporate sector (Lone, Ali & Khan, 2016). The incentives to disclose SER issues, stems from the fact that firms need to be ethical, accountable, transparent, be seen as legitimate, for marketing, improve public image, influence perception, respond to pressure from consumers both local and international, to keep up with competition, as an industry norm, comply with requirements by lenders both

local and international, and distract attention (Bhattacharyya, 2014).

Social environmental responsibilities disclosures cover information on community, environment, employees, and consumer or product safety information. According to Rover, Murcia and Murcia (2015) community information mainly involve firm's philanthropy, sponsoring community sports, recreational facilities. Environmental information covers effects of companies operations to the environment, prevention and repair of environmental damage, costs and compliance. Employee's information covers issues on work safety, benefits and other employment information, while consumer and product information include product innovation, consumer safety and market information.

Corporate social reporting and disclosures became main areas of debate in the academic literature in the 1970s, 1990s and 2000s (Mahmoud, 2009). It became less prominent in the 1980s and early 1990s (Deegan, 2002), (Gray, 2000) but from mid 1990s experienced major growth in research (Deegan, 2002), which has continued to the present with growing number of studies in developing countries including Kenya being seen. The interest by researchers in this area stems from the fact that SER reporting is voluntary, therefore does not follow any prescribed format or standard. Increased attention in social environmental disclosure literature has led to researchers in analyzing what, how firms report and quality of these reports (Odera, Scott & Gow, 2016) as well as analysing the extent of SER disclosures and factors that contribute to the extent at which firms reach in disclosing SER information. In Kenya, SER disclosure has become part of annual financial reports for companies (Kalunda, 2012).The number of companies reporting social-environmental reporting has been growing over the years Odhiambo, (2015).

Companies with high leverage have a possibility of wealth transfer from debt holders to stock holders which increases agency costs and by increasing disclosure, information asymmetry reduces consequently reducing this agency costs, conflict between managers and owners and prevent wealth transfer (Ortas, Alvrarez & Etxeberria, 2015). Firms disclose more to satisfy creditors (Reverte, 2009) to understand firm's risks related to SE concerns. On the contrary, Syed and Butt (2017) suggest that high levered may have cash flow constraints to commit to SER activities.

Stake holders who include lenders, may exert pressure to companies to provide information on their activities that address social-environmental responsibilities concerns to measure social and environmental risks. The need for additional information in annual reports arise due to inherent limitations of accounting data to provide adequate information to fully help users better understand a firm. Managers have access to superior information, and are always at discretion in determining what voluntary information to avail to users and to what extent, in pursuit of their own interests (Nyabuti, 2016) which may create an adverse selection problem. Without adequate information, lenders may not be in a position to accurately determine, evaluate and place a value of their decisions. When companies' ?nancial performance is not good, managers may choose to withhold some information (Ortas et al., 2015) but when a firm withholds information, lenders may avoid advancing credit to the firm because they will view non- disclosure with suspicion hence risky.

This study draws an inspiration from the fact that most of the studies relating to factors influencing SER, have been done in developed world and but also rapidly growing in developing world. Minimal research work seems to have been done in Kenya especially on the factors that influence SER disclosure and Kalunda (2012) suggested that various dimensions of social reporting among Kenyan firms, especially on the factors determining ways in which corporations disclose their corporate social information should be studied, a gap which this study intends to fill. This study specializes on the effect of the specific factor of leverage on the level of social environmental disclosure, which is a departure from a study done by Wachira, (2017) in Kenya which generally considers many factors under one study. Content analysis of this study also considers quality of the contents and the period covered in extended to 10 years.

Objectives of the study

The objective of the study then, was to determine how leverage influence the extent of Social-environmental responsibilities disclosures in financial reports of Kenyan listed firms.

Theoretical Framework

Legitimacy theory, stakeholders' theory and agency theory provide important theoretical framework in social environmental responsibilities literature. Whereas legitimacy theory and stakeholders provide more perspective of relationship between organization and society, agency theory reviews the relationship between owners (principal) and managers (agents).Legitimacy and stakeholders' theory is guided by the assumption that organization is influenced by society in which it operates and also organization has an influence on society(Bhattacharyya, 2014). This is important in guiding debt holders because they can be able to analyze the risks associated with the interdependency between organization and society. These relationship between organization and society ensures survival that lead to growth that is attractive to lenders and can also be uncertain.

Legitimacy theory as a concept based on organization legitimacy (Guthrie, Cuganesan & Ward, 2006). Suchman (1995) views legitimacy as a generalized perception that a company is expected to act in proper, desirable, acceptable, and appropriate way within social system of norms and values. It assumes that an organization and the society are bound by a social contract, therefore organizations will continually attempt to operate within the beliefs, norms, values of the surrounding societies and will be allowed to operate to a level that meet society's expectation (Deegan, 2000). To fulfil their social contracts, development, implementation and reporting SER disclosures is crucial in recognizing company's objectives and survival of the business (Burlea & Popa, 2013) and in order for organization's operations be recognized as transparent and legitimate, SER disclosure are believed to change society's perceptions (Dyduch & Krasodomska, 2017).

Creditors affect and are affected by organization actions and achievements. According to Freeman and Reed (1983) a stakeholder as identifiable individuals or group that affect or are affected by organization's achievement of its objective and which the organization depends on, for continued survival. Being socially responsible by a company is vital in enhancing reputation and maintaining sustainable relationship with creditors by engaging in and disclosing social responsibility activities, as a way of managing stakeholders' relationship (Roberts, 1992). Stakeholders need to be informed about some aspects of an organization and as Gray, Owen and Adams (1996) put it, information disclosure can be employed to manage stakeholders in order have their approval and support or to reduce their disapproval and opposition.

An agency relationship give rise to information asymmetry and since SER disclosure is voluntary, there is a higher chance that managers who are agents will withhold information which increase information asymmetry. According to Klerk, Villiers and Staden (2015) agency problem influence the decision by managers to provide higher level of voluntary information, than those disclosures mandated by law. Jensen and Meckling (1976) argue that there are incentives by an organization to disclose credible information about how it operates to some outside parties even with absence of regulation to prevent increase in costs associated with non- disclosure. Deegan (2000) also argue absence of information will make other parties that include the creditors to assume that managers are acting and operating for their own benefit, instead of maximizing firms' value.

LITERATURE REVIEW

Most studies such as this utilizes annual financial reports as a source of SER information as indicated by

Dyduch & Krasodomska, (2017). Kanakriyah, (2016) posits that annual reports are also very useful source of information. Its a means of communication and is accessible to wider audience, because its main corporate communication tool for investors, its consistent, formal, highly sought by pressure groups, not subject to journalistic distortion like other media (Dyduch & Krasodomska, 2017).

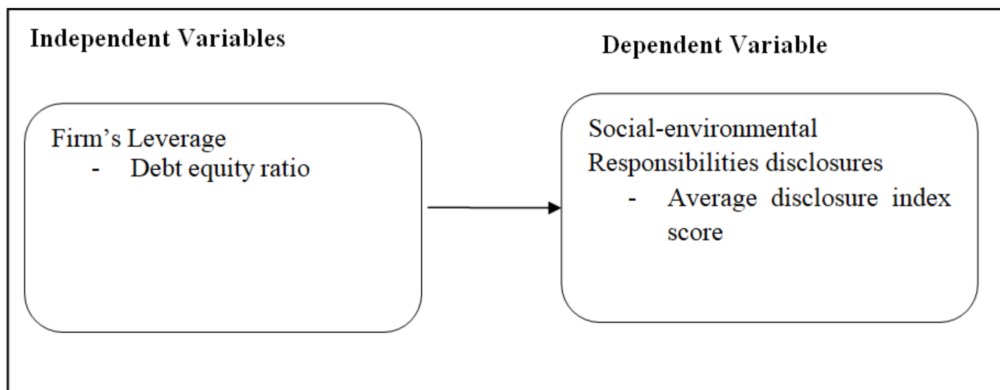
Creditors can decide to deny loans to firms, they can also recall loans and decline extension of credit due to lack of enough information or actions of managers which may trigger suspicion to the lenders. In response managers are forced to reveal more information to accommodate credit or sto encourage them not to take such actions that may be detrimental to the survival of the organization. According to Huang and Kung (2010) when activities of the firm impact negatively on the environment a firm may face penalties, fines or other outcomes that may undermine the rights and interests of creditors. They also argued that to protect their interest creditors will demand more information from the firm to access firms' current status that enable them gauge their risk level in order to determine the course of action to follow. Extreme case of non-compliance of environmental requirements or laws by firm may lead to extreme actions by authorities that include suspension or cancellation of operating license that will affect firms' operations consequently affecting its performance leading to low or no cash flows. A firm therefore may not be in a position to meet its obligation during the time the licenses are in suspension and even on lifting of suspensions creditors will take drastic actions to protect their interest.

In order for creditors to obtain more information, it will be forced to pay more to obtain that information if they feel that managers are withholding some information from them. This information asymmetry increases agency cost. More information disclosed reduces information asymmetry consequently reducing agency cost and cost of capital (Reverte, 2009). Ortas et al. (2015) also stated that due to conflict stemming from leverage where there is a possibility of wealth transfer from debt holders to stock holders, which is detrimental to creditors. To avert these transfers, creditors ask for increased level of disclosures to reduce information asymmetry and with high level of leverage firms disclose more information to communicate future performance. On the contrary, Bruns (2017) predicted that financial leverage is negatively related to CSR disclosure because of stakeholder salience and the level of obligation to repay debts reduces cash flow available for CSR activities. Firms with very close relationship with creditors may not necessarily disclose information in financial reports to please creditors but can be able to communicate creditors concerns through other means.

Previous research on the relationship between leverage and social environmental disclosure on financial reports have not reached a consensus. Ortas et al. (2015) in their study showed leverage is significant in determining the level of disclosure and the higher the leverage the greater the disclosure of environmental information. The study by Huang and Kung (2010)showed there was a positive and significant relationship between leverage and environmental disclosure with Barako (2007) study yielding a significant and positive association between level of leverage and extent of voluntary disclosure. On the contrary, Nawaiseh (2015) study indicated that leverage had a negative significant impact on corporate social responsibility disclosure which was also concluded by the study done by Syed and Butt (2017). The studies by Dyduch and Krasodomska (2017), Bouten et al. (2012) and Rahman et al. (2011) showed that leverage had an insignificant influence social environmental disclosure. Based on these studies the hypothesis is proposed as follows:

H_1: Firm's Leverage has a significant influence on the extent of Social- environmental responsibilities disclosures in financial reports in Kenyan listed firms.

Conceptual framework



METHODOLOGY

This research adopted a descriptive research design. According to Cooper and Schindler (2014) descriptive study involve describing a phenomena or characteristics of the subject population, estimating the proportions of this population with these characteristics and discovering of associations among different variables. The target population was 48 listed firms prior to 2009 for uniformity and comparability since annual reports of these 48 companies had annual reports for years 2009 to 2018. Other 18 firms had been listed after 2009. Out of the 48 companies, 45 companies were successfully analyzed as summarized in table 1 and the remaining 3 did not have all or most of the 10 annual reports in their websites.

The dependent variable is measured by level of social environmental responsibility disclosure. To determine the disclosure level and quality of disclosed items of these companies between 2009 and 2018, disclosure index listed in table 2was used to determine the score of disclosed information from the annual financial statements and reports of each of the 45 companies for the period under review. 39 items in disclosure index were developed using global reporting initiative (GRI) guidelines and based on review of items used by Bhattacharyya (2014), Ho and Taylor (2007) and Rover et al. (2015). GRI aims to set a standard for a common global Sustainability Reporting Framework which arose as a result of multi-stakeholder collaboration. According to Li (2008) the guideline is suitable for sustainability reporting which has been adopted by many companies in annual financial reports. For the purpose of this study the items listed related to with social and environmental matters was adopted as listed in table 2 under environment, employee, society and consumer themes.

To score level and quality of disclosure of each of the items listed the study used the four ratings guided by study by Ying (2008), Dyduch and Krasodomska (2017) and Bhattachryya (2014) as follows;

1. Items in the Index not disclosed
2. Items mentioned in general terms or short mention or items not related to the firm
3. Items mentioned either; Detailed narratives relating to company policies and actions or numeric data or measurement without explanation related to the company
4. Detailed narratives specific to the firm with numeric measurements. Which detail action and quantified impact

The distribution of39 disclosure items classified into themes of environment, employee, society and consumer are shown in table 3. Leverage, the independent variable was determined from value of debt over value of equity in statement of financial positions of listed firms.

This study utilized secondary data from financial reports for Kenyan listed firms for each year from 2009 to 2018, for each of the 45 listed Kenyan firms. This gave rise to a panel data. Each disclosed item related to

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SER disclosures on the annual financial reports for each of the45 listed firms from 2009 to 2018 was examined and compared to predetermine disclosure index and scored according to detail of disclosure. The relationship between dependent variable (SERD) and independent variables will expressed in panel data model as follows;

SERDit = β0+ β1LEV1it+εit Where;

$SERD_{it}$ = (dependent variable) Social- environmental responsibilities disclosure (SERD) for 45 listed firms from 2009 to 2018.

LEV_{it} = (Independent variable) Leverage for 45 Kenyan listed firms from 2009 to 2018

DATA ANALYSIS AND RESULTS

Descriptive analysis

Social-Environmental Responsibility Disclosure

22 out of the 45 firms showed a positive trend in SER disclosure over the 10 years shown on figure 1, which could be attributed to some firms having an elaborate system of addressing society concerns through dedicated departments or registered foundations hence able to identify new social environmental needs and prepare better and elaborate information.18 firms showed even or steady trend throughout the 10 years, perhaps due the fact that these firms supported and adopted specific social environmental projects that they concentrate on over a period of time, which makes it easier for budgeting and management. Five firms showed declining trend of SER disclosure for the 10 years, with their financial performance also reducing and having poor financial performance which indication of financial distress hence have reduced financial support to social environmental concerns.

The average level of social-environmental responsibilities disclosures among Kenyan listed firms as shown in table 4 was 23.66 out of possible 117 which represents 20.22%. The standard deviation was 12.36%an indication of high dispersion of SER disclosure among Kenyan listed firms. In general SER disclosure level among Kenyan listed firms is relatively low which could be due to firms only sponsoring few social environmental activities which have more impact in their view on the community and environment, rather than selecting many activities that may be of less impact and costly. 59.83% was the highest score achieved was which is equivalent to a score of 70 out of total of 117 and the lowest score was 1.71% equivalent to score of 2 out of 117 which explains the high standard deviation or large dispersion from the mean. Despite the average being relatively low, some firms disclose substantial amount of information while other disclose very minimal information. As also shown on table 4, firms in telecommunication and technology sector achieved the highest score of 39.9% while firms in Automotive and accessories sector returned an average level of 5.38% of level of social environmental responsibilities disclosure.

The scoring of disclosed items was done by allocating a score of '0' for non-disclosure and 1, 2 and 3 depending on the detail of the SER information disclosed in financial reports of Kenyan listed firms. As shown on table 5most items disclosed had a rating of 2 and 3 with an average quality rating of 2.305 against a maximum of 3, suggesting good quality of disclosed SER information. Disclosed items for firms in telecommunication and technology, energy and petroleum, manufacturing, investment and commercial and services scored a rating above 2.305 as shown on table 4, an indication that majority of disclosed items among Kenyan listed firms are provided with a substantial amount of detail.

General market trend and product information featured more prominently in the customer theme which important for survival of the firms as it ensures that customer is well informed to enhance customer retention. Community activities involving support for children education and youth development, community investments, food, health and home programs were well covered in financial reports of the listed companies while in environmental theme, conservation of flora and fauna featured prominently. This suggest that firms undertake activities that have more impact on the community to alleviate suffering and poverty among the population in Kenya and contributing towards government objective of achieving 10% forest cover to maintain water towers that consequently impact on the general livelihood of the public. Staff training relatively featured in financial reports showing commitment by firms to develop a well informed and trained work force. In general, as shown on table 6 society issues was mostly disclosed with an average score of 36.6%, consumer issues 35.21% and employee 17.41%. Despite fauna and flora activities featuring frequently, other environmental issues were poorly disclosed with level 11.51% being achieved.

Leverage

Leverage is independent variable for this study which influence social environmental responsibilities disclosures in financial reports of Kenyan listed firms. As shown on table 7, average leverage measured by debt equity ratio was 2.24 with a standard deviation of 2.46. Maximum debt equity ratio was 15.47 times over equity from firm 12 in the banking sector while the lowest was -6.36 from a firm with negative equity position. This indicates that on average many listed firms depend on debt over equity for financing. The negative ratio indicate that some firms have negative equity due to cumulative losses incurred over the years exceeding the share capital and other reserves.

Banking sector recorded the highest ratio of 5.7882 times of debt over equity. Banks depend on customer deposits to finance their loan portfolio to customers and use equity to finance capital expenditure such as system upgrades, branch expansions and modernization. High leverage was also recorded by firms in insurance sector with a debt equity ratio of 3.3221. Other sectors that depend more of debt than equity include automobile and accessories, construction and allied, energy and petroleum and manufacturing with debt equity ratio more than one while commercial and services, investment, telecommunication and technology sectors depend more of equity than debt with debt equity ratio less than one.

Regression analysis and correlation analysis

The objective of this study was to determine how leverage influence social environmental responsibilities disclosure in financial reports of Kenyan listed companies. Random effect model was appropriate to estimate the model. The constant is 0.188 is significant with p= 0.000 at 0.05 significant level while leverage has positive coefficient of 0.0062 and p-value of 0.024 meaning that leverage is positively significant in determining the level of SER disclosures. This indicates that firms that disclose more are likely to attract more lenders and negotiate longer credit terms with suppliers due to its reputation. This supported the results of the studies conducted by Barako (2007), Huang and Kung (2010) and Ortaz et al (2015) hence this study rejectsH_0null hypothesis and accepts H_1alternative hypothesis that firm's Leverage has significant influence on the extent of Social- environmental responsibilities disclosures in financial reports in Kenyan listed firms.

Using the result of the fixed effect estimator above the relationship between Social environmental responsibilities disclosures and leverage can be summarized in the following model;

$$SERD_{it} = 0.18822 + 0.00626 LEV_{it} + \varepsilon_{it}$$

Where,

$SERD_{it}$ = (dependent) Social- environmental responsibilities disclosure for 45 firms from 2009 to 2018

LEV_{it} = (Independent) Leverage for 45 Kenyan listed firms from 2009 to 2018.

The correlation analysis indicated a positive but significant relationship between leverage and social environmental disclosure variable (rho=0.1507, p= 0.0013) indicating that with more information to the public a company is viewed to be more accountable and transparent hence attract more lenders.

	SERD	Leverage
SERD	1.0000	
Leverage	0.1507* 0.0013	1.0000

DISCUSSION AND CONCLUSION

The aim of this study was to determine the effect of leverage on social environmental responsibilities disclosures in financial reports of Kenyan listed firms. Social environmental responsibilities disclosure level averaged 20.22% of total achievable score of 117 for 39 items in disclosure index, with 53.55% of observations scoring below 20% and 40% of observations scoring between 20% and 40% suggesting that in general there is low disclosure level among Kenyan listed firms. Society and consumer issues were mostly disclosed probably due to its positive effect on the business performance as it has a direct impact on livelihood and well-being of existing and potential customers who are part of the larger community. Except for information on activities on conservation of flora and fauna, environmental information was least disclosed indicating that many firms have not embraced other environmental issues which may be costly to the firms since many require a lot of changes in their operations and building designs to more environmentally friendly.

Firms that are more customers oriented in banking, commercial, insurance, investment and telecommunication sectors are more and larger than those that their operations are more likely to impact negatively on the environment in agricultural, automobile, construction, energy and manufacturing sectors. Customer oriented firms concentrate on disclosing more on social wellbeing and less on environment. In Kenya, environmental disclosure is low even with firms which have activities that have more impact on the environment with most disclosing more of social and customer issues as opposed to disclosing more environmental related information. Investing more on social and consumer activities will improve their reputation and image that lead to better business performance as a result of increased customer base. Kenyan listed firms with higher leverage are likely to disclose more information than less levered firms because creditors may require more information to be able to measure risk related to social and environmental issues. Firms therefore may be compelled to disclose more to attract lenders for financing who will also view firms that disclose information as less risky since they are seen to be more accountable and responsible.

Random effect estimator was used to fit the regression model for the panel data obtained, and 2.27% of variation on social environmental responsibilities disclosure is explained by firm's leverage and 97.73% is explained by other factors which may be reduced by considering additional measurable factors that may be significant such as size of the firm, profitability, liquidity and corporate governance factors. Other factors may not be measurable. The result also showed that leverage has positive and significant effect on social environmental responsibilities disclosure. More levered firms give more information to creditors. Creditors

are more comfortable with firms that give more information because they view these companies as more transparent and accountable hence less risky.

SER disclosure is a reflection or a report of the commitment of companies towards the environment and the society. Engaging in social environmental responsibility activities and reporting it, improve reputation which will attract more investors, customers, highly qualified work force and lenders. It also reduces cost of obtaining information by potential investors and lenders. Some listed firms have formed foundation that address social environmental activities and have tried to implement sustainable reporting policy based on GRI guidelines hence these firms have more elaborate SER reports than those without the foundations. Kenyan listed firms should therefore be encouraged to develop dedicated units or departments that deal with social and environmental issues.

SER disclosures is becoming an integral part of reporting for many firms not only in Kenya but in the world at large. Since it is voluntary, different companies report different things and the formats are so varied. A standardized way of reporting voluntary information can be adopted through a development of a guideline that will make easier for users to read.

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Table 1: Distribution of firms per sector

Sector	**No. of Companies listed prior to 2009**	**No. of companies Successfully studied**	**% Studied**
Agricultural	6	5	83%
Automobile & Accessories	1	1	100%
Banking	10	10	100%
Commercial	9	8	89%
Construction	5	5	100%
Energy and Petroleum	4	4	100%
Insurance	3	3	100%
Investment	2	2	100%
Manufacturing	7	6	86%
Telecommunication	1	1	100%
Total	**48**	**45**	**94%**

Source: NSE handbook

Table 2: Disclosure index adopted from GRI Guidelines

ITEM		**Details on the score sheet**
GRI guidelines		**To be scored 0, 1, 2 and 3 based on scoring guidelines.**
ENVIRONMENTAL		
Energy	1	Contribution to new sources of energy, Renewable energy, use ofwaste material for energy production.

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		Participateand support reduction of energy consumption,energy conservation and efficientuse in business operation
Water	3	Participate and support water usage efficient water usage, watersaving strategies, water harvesting.
Biodiversity	4	Activities on conservation of flora and fauna as well as wild life.
Emissions	5	Information about the sources, types and remedy procedures ofemissions, emission of greenhouse gases.
Effluents and waste	6	Discussion on the amount, types of wastes and methods of wastemanagement, cleaning
Products and services	7	Environmental impact of product and services.
	8	Development and use of ecological products: recycling andpackaging.
Compliance	9	Compliance to legal requirements, fines/ lawsuits/noncomplianceincidences
	10	Environmental audits
	11	Carbon credits and certifications.
Overall Environmental statements	12	Company's statement of a corporate commitment of environmentalprotection, incorporating of environmental concerns into business decisions
	13	Environmental partnerships
	14	Environmental awards
	15	Environmental risk management
	16	Environmental education and research.
EMPLOYEE		
Employment	17	Number of employees and geographical or regional distribution
	18	Turnover of workforce, disciplinary and dismissals
Labour management relations	19	Employee wellbeing and benefits concerning education for children,health care of self and family, wellness campaigns, disability or retirement.
	20	Staff share of company profits, share ownership schemes
	21	Staff recreational facilities, sports and cultural programs
	22	Code of conduct, core values and Ethics
	23	Relationship with labor unions
Occupational health and safety	24	Employee occupational health and safety information
Training and education	25	Employee's training and education
Diversity and equal opportunities	26	Employee diversity – gender balance and minority in the organization
Labour practices grievances practices	27	Policies and procedures dealing with human right issues
	28	Policies and programs addressing workplace harassment and discrimination and staff grievances, views and feedbacks
SOCIETY		
Community	29	Activities relating to education of children and youth development
	30	Community based investments and including community trainings and mentorship
	31	Safety. Food, health and home programs
	32	Sports and culture participation and sponsorships

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	33	Development of recreational facilities.
Grievance mechanisms for impacts on society	34	Statements on ways of addressing society concerns
CONSUMER		
Consumer health and safety	35	Customer satisfaction, quality, safety, health
Market communication	36	Product innovations and research
	37	General market trends and product information
Customer privacy	38	Statements of consumer privacy.
Compliance	39	Statements on regulations, penalties, fines, corruption and frauds.

Table 3: Distribution of items per theme

Theme	No of disclosure items	Distribution	Maximum achievable score per year per company	Minimum achievable score per year per company
Environment	16	41%	48	0
Employee	12	31%	36	0
Society	6	15%	18	0
Consumer	5	13%	15	0
Total	**39**	**100%**	**117**	**0**
Observation	**450**		**450**	
Maximum	**17,550**		**52650**	**0**

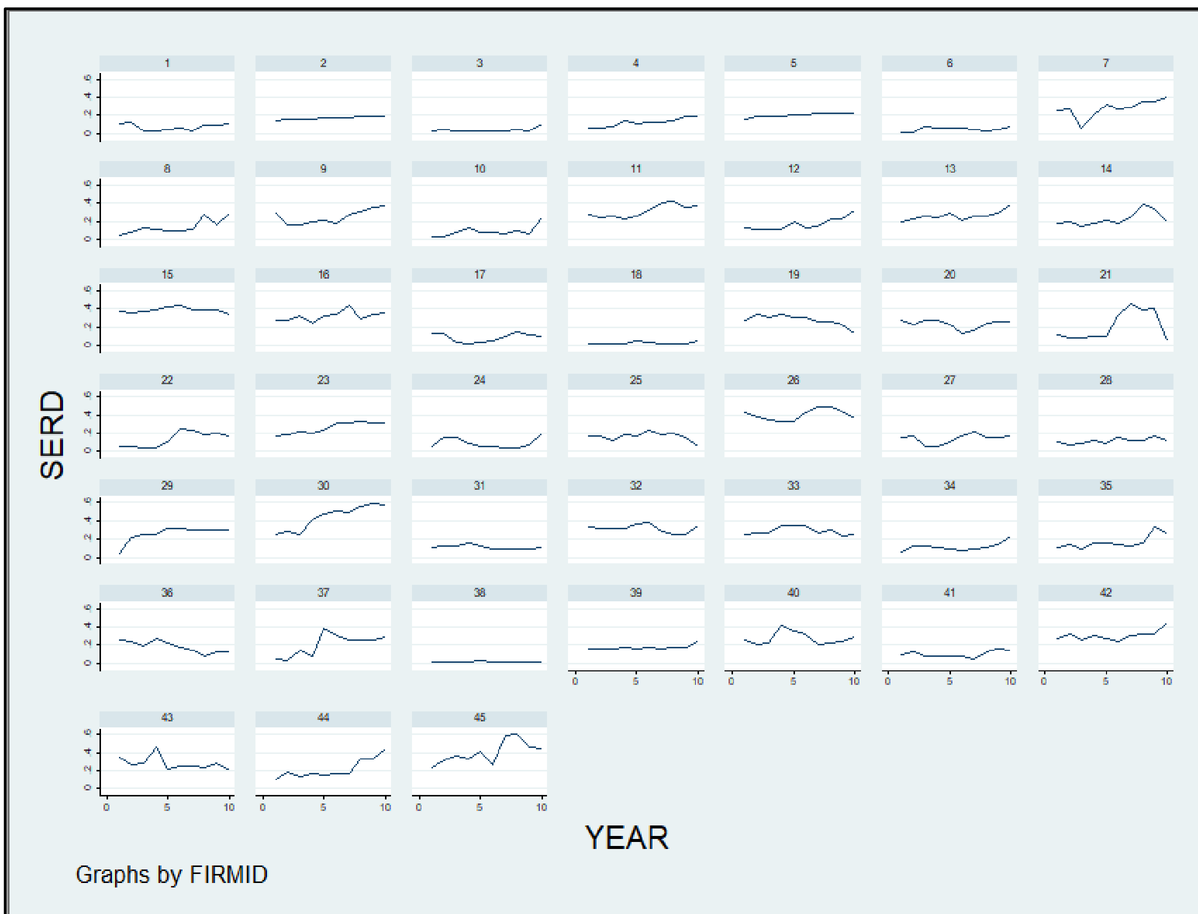

Figure 1: Trend plots for SER Disclosure

Table 4: Distribution of SER Disclosure

Sector	Mean	Min	Max	Std Dev	Disclose items Quality score
Agricultural	0.1218	0.02564	0.23077	0.0699	2.249
Automobile & Accessories	0.0538	0.01709	0.08547	0.02419	2.032
Banking	0.2436	0.02564	0.44444	0.10913	2.22
Commercial & Services	0.1661	0.01709	0.46154	0.11543	2.362
Construction	0.2168	0.05128	0.49573	0.12029	2.297
Energy & Petroleum	0.2897	0.09402	0.59829	0.13966	2.421
Insurance	0.1541	0.05983	0.33333	0.0685	2.217
Investment	0.1107	0.01709	0.38462	0.12766	2.313
Manufacturing	0.2246	0.04274	0.46154	0.09629	2.35
Telecommunication	0.3991	0.23077	0.59829	0.1234	2.445
Average	**0.2022**	**0.01709**	**0.59829**	**0.12367**	**2.305**

N=450, n=45, T=10

Table 5: Frequency of scoring ratings

Scores	Frequency	Total scores
3	1700	5100
2	2628	5256
1	292	292
Total disclosed	4620	10648
Maximum	17550	52650
Observations		450
% score		0.2022
Average score for items disclosed		2.305

Table 6: Performance of SERD themes

Theme	Average SERD score	No. of items
Environmental	0.1151	16
Employee	0.1741	12
Society	0.3660	6
Consumer	0.3521	5
Average	**0.2022**	**39**

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Table 7: Sector-wise distribution of leverage

Sector	Mean	Min	Max	Std Dev
Agricultural	0.3887	0.1302	0.8308	0.1393
Automobile & Accessories	1.773	1.4549	1.9968	0.1872
Banking	5.7882	3.4007	15.4709	1.7389
Commercial & Services	0.7657	-6.3586	4.2661	1.6707
Construction &Allied	1.3832	0.3652	4.3325	0.8628
Energy & Petroleum	1.9303	0.7153	4.2432	0.9934
Insurance	3.3221	0.5635	6.3573	2.1274
Investment	0.4638	0.0402	0.8918	0.2661
Manufacturing	1.1649	-2.0939	5.9427	1.5673
Telecom & Technology	0.5648	0.3513	0.7925	0.1481
Average	**2.2402**	**-6.3586**	**15.4709**	**2.4596**
N=450, n=45, T=10				

Table 8: Random effect estimator

```
Random-effects GLS regression                   Number of obs      =       450
Group variable: FIRMID                          Number of groups   =        45

R-sq:  within  = 0.0093                         Obs per group: min =        10
       between = 0.0283                                        avg =      10.0
       overall = 0.0227                                        max =        10

                                                Wald chi2(1)       =      5.11
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0238

                                (Std. Err. adjusted for 45 clusters in FIRMID)
------------------------------------------------------------------------------
             |               Robust
        SERD |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         LEV |   .0062589   .0027692     2.26   0.024     .0008314    .0116864
       _cons |     .18822    .016723    11.26   0.000     .1554435    .2209965
-------------+----------------------------------------------------------------
     sigma_u |  .10332842
     sigma_e |  .06883658
         rho |  .69261096   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```