Sustainability Reporting and Abnormal Operating Cash Flows of Multinational Corporations in Sub-Saharan Africa

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Abstract
The conventional annual report and accountsmay contain elements of earnings management (abnormal operating cash flows) which is often hidden and not easily discernible. Annual report and accountshas been criticized severally for lacking the capacity to present the genuine picture of an organization impacts on the operational environment and support strategic allocation of resources in in a dynamic environment. The paper, therefore, investigated the effect of sustainability reporting as a panacea for abnormal operating cash flows among multinational corporations in Sub-Saharan Africa. Adopting the ex-post facto research design, all the 48 multinational companies in the sub-Saharan African countries constituted the study’s population. Purposive sampling technique was used by selecting 5 multinational companies from each of the 10 countries based on data availability. The data for the period 2010-2019 were derived from the published annual financial reports of the sampled multinational companies and the sustainability reports in line with the Global Reporting Initiatives (GRI). The study revealed that sustainability reporting had joint significant impact on abnormal operating cash flows of multinational corporations in Sub-Saharan Africa, (Adj. R² = 0.37, W(6, 444) = 517.44, P<.05) establishing the fact that sustainability reporting exerted significant influence on the abnormal operating cash flows of the earnings management of multinational corporations in Sub-Sahara Africa. The paper provided evidence that the lag of abnormal operating cash flows, environmental sustainability reporting and corporate governance sustainability reporting’s association with abnormal operating cash flows was positive, while social sustainability reporting and economic sustainability reporting were negatively linked to abnormal operating cash flows. The study recommended that management of multinational corporations in sub-Saharan African should ensure strict compliance with sustainability reporting in all its ramifications so as to improve their earnings quality and de-emphasize earnings management practices.

Keywords: Abnormal operating cash flows, corporate governance reporting, earnings management, economic reporting, environmental reporting, social reporting and sustainability reporting.

1. Introduction
In recent time, scholars, analysts, regulators, shareholders (existing and potential), and market participants have shifted attention to the quality of information disseminated to the public and earnings management practices among corporate entities. The renewed interests may not be unconnected with large scale fraud foisted on the investment world by renowned organizations such as Enron, Parmalat and Maxwel (Hussain, Akbar, Khan, Akbar, Panait, & Voica, 2020).

For multiple reasons, managers do engage in earnings management to cover up the actual economic fundamentals of the corporate entities involved (Mason, & Morton, 2020; Hussain, et al., 2020). It is a decoy; make belief and smokescreen piece of information intentionally prepared to mislead the users of accounting
information. Earnings management puts the firm’s image into disrepute, encourages misapplication of scarce resources, shores up her cost of capital, and generates avoidable litigations (Setiawan & Hermawan, 2018; Oraby, 2017). Additionally, the company’s capacity to access finance is curtailed while the public confidence is swayed off from her accounting figures, among others.

The emergence of Sarbanes–Oxley Act of 2002 in the U.S.A coupled with a litany of other legislations across the world and increased societal pressure for more information are the immediate reactions to stem the menace of earnings management. The advent of sustainability reporting is one of such measures meant to boost the quality of information being signaled to the public and support long term decision making.

Many benefits have been ascribed to sustainability reporting in the literature. It has been submitted that sustainability reporting reduces information asymmetry, lowers agency costs, conforms to social norms, ensures employee participation, and protects stakeholders’ interests (Hu & Loh, 2018; De Villiers & Maques, 2016; Orlitzky & Swanson, 2012; Becchetti, Di Giacomo, & Pinnacchio, 2008).

The conventional accounting system lacks the capacity to present the genuine picture of an organization impacts on the operational environment and support strategic allocation of resources in a dynamic environment. Sustainability reporting signals the firm’s ethical commitment to sustainable economic development in the long run, reduces pressure from the stakeholders and supports the firm in in achieving its long term business performance goals ((Hahn & Kuhnen, 2013; Schaltegger, Etxeberria & Ortas, 2017; Waddock & Graves, 1997).

Abnormal cash flow, as a sub element of real earnings management, can be described as an estimate from the actual operating cash flow, a difference from normal cash flow from operations from the actual value of cash flow from operations. Abnormal cash flow is often generated through granting of discounts to boost earnings (sales volume) in the current year (Dechow et al., 2011; Roychowdhury, 2006). While the sales volume grows considerable, the undeserved discount granted coupled with lenient credit terms results in lower CFO level in financial statements. This phenomenon ends up hurting the firm’s value.

Researchers have compartmentalized earnings management into two basic forms: real earnings management and accrual facilitated earnings management considering their features (Ho, Liao, & Taylor, 2015; Braam, Nandy, Weitzel, & Lodh, 2015). Real earnings management occurs where managers deliberately manipulate normal business activities such as over production, granting of undeserved credit discounts or misuse of discretionary expenses. Whereas accrual based earnings management is centered on deliberate choice of accounting principles or techniques that best serve the interest of the managers with respect to earnings (Yun, Ryu, & Ji, 2019; Zang, 2012; Healy & Wahlen, 1999; Dechow, Sloan, & Sweeney, 1995). The major difference between the two types of earnings management is their impact on the cash flow. Ultimately, accrual based earnings management does not affect cash flow but real earnings management affects the firm’s value and cash flow (Mellado-Cid, Jory, & Ngo, 2018).

Many Studies have been conducted on sustainability reporting and real earnings management in the developed countries (Gonçalves, Gaio, & Ferro, 2021; Shirabe & Nakano, 2019; Yoon, Kim & Lee, 2019; Ji, Oh, Yoon, & An, 2019; Cho & Chun, 2015). However, there is dearth of empirical evidence on the relationship between sustainability reporting and real earnings management domesticated in Sub Saharan Africa.

The rationale underlying this study is that sound corporate governance, environmental, economic, environmental, and social sustainability reporting practices can result into less abnormal operating cash flows in earnings quality of multinational corporations in Sub-Saharan Africa.

2. Literature and Theoretical Review

2.1 Conceptual review

2.1.1 Abnormal Operating Cash Flows

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Abnormal operating cash flow can be described as an estimate from the actual operating cash flow, a difference from normal operating cash flows from the actual value of operating cash flow. Abnormal operating cash flow is a direct fall out of granting undeserved discounts to boost earnings (sales volume) in the current year (Andreas, 2017; Dechow, Ge, & Schrand, 2010; Roychowdhury, 2006). While the sales volume grows considerable, the discount granted coupled with lenient credit terms results in lower cash flow level in the financial statements.

Decisions on discretionary expenditures involving cash have effect on abnormal operating cash flows. Deliberate reduction in discretionary expenditures has a positive effective on abnormal operating cash flows while increase in discretionary expenditures creates negative relationship in the short run (Roychowdhury, 2006). Similarly, intentional overproduction of goods and services flattens fixed cost which results in reduction of total cost per unit. Meanwhile, increase in marginal cost of production not matched the same marginal increase in sales will harm operating cash flows (Roychowdhury, 2006).

2.1.2 Sustainability Reporting

The firm’s daily operational activities have multiple effects on the economy, environment and society. The conventional accounting system covers extensively the financial activities of the firm without commensurate attention to its foot prints on economy, environment and society. Sustainability reporting seeks to integrate the firm’s social, environmental and economic activities in a report (Elkington, 2004; GRI, 2011).

Sustainability reporting shares affinity with corporate social responsibility reporting which is predicated on legitimacy theory. Although the cardinal goal of the firm is to maximize the wealth of the shareholders, sustainability reporting showcases the efforts of the firm in ensuring that its decision making process encompasses economic, social, governance and environmental considerations. It shows the ethical commitment of the firm in aligning her values with societal expectations for mutual benefits and long term survival.

This section covers the theoretical review and the empirical review on sustainability reporting and earnings management. The stakeholders’ theory, signaling theory and legitimacy theory are considered theoretically relevant to this study. They are reviewed below.

2.2 Theoretical Review

2.2.1 Stakeholders' Theory

The predominant focus of businesses is to create value. The issue has always been who should be the beneficiary of the value created or who the businesses should be responsible to. Should it be for the providers of capital (shareholders) alone or to them as well as other stakeholders: government, society, and employees? Friedman (1970) offered a rational explanation in his Shareholder Theory. He posited that businesses should be responsible to the shareholders whom he regarded as the economic engine of the organization. He asserted that the goal of the firm should be maximization of returns (value) to the shareholders. According to him, it is the not the place of managers (as employees and agents) to decide which social initiatives the shareholders should be involved in.

Stakeholder theory championed by Freeman (1984) is diametrically opposed to Friedman’s (1970) doctrine of shareholders’ primacy. The use of the word “stakeholder” as part of academic lexicon owes its origin to a memo at the Stanford Research Institute (Stewart, Allen & Cavender, 1963).

The memo identifies shareholders as shareholders, employees, customers, suppliers, lenders and society, and opines that organization would cease to exist without their support. Managers (executives), on account of this, need to internalize the needs and concerns of the stakeholders in the formulation of corporate objectives to secure the long term goals of the economic entity.
Freeman (1984) further championed the stakeholder theory. He sees a stakeholder as “any group or individual who can affect or is affected by the achievement of the organization’s objectives”. The theory sets out to resolve three problems: value creation and trade, ethics of capitalism and managerial mindset (Freeman, 1984). Kroos and Schwab (1971) reckoned that long-term growth and prosperity of an enterprise rest on the ability to satisfy the highly divergent needs and wishes of its stakeholders. Quality earnings information and evidence of the firm’s environmental commitment to sustainable economic development are part of these needs and wishes.

2.2.2 Signaling Theory

Signalling theory explains how communication is achieved among actors amidst information asymmetry (Spence, 1973). The theory affirms that they are two actors: the signal sender and the signal receiver. The sender elects whether and how to send the signal while the receiver is left with the choice of how to interpret the signal (Etengu, Olweny & Oluoch, 2019). It throws light on the process through which the firm conveys its quality and potential information, and the outside actors access the underlying, often unobservable, attributes of the entity (Drover, Wood & Corbett, 2018). The theory postulates that the essence of the signals is to reduce information gaps or asymmetries between the two parties (Drover, Wood & Corbett, 2018; Saleh, Afiifa & Haniah, 2020). Spence (1973) sees signals as activities of people in a market which, planned or unplanned, alter the views or opinions of, or send information to, other people in the market.

Market efficiency holds that the investors are rational at given time and that the value of an entity’s stock mirrors and incorporates all the available information. Investors will ordinarily offer lower price for an entity’s share on the premise that managers have more facts on the company and its future prospects. Conversely, Connelly, Certo, Ireland and Reutzel (2011) posit that the company’s value is enhanced where the company voluntarily signals credible private information about herself. Omran and El-Galfy (2014) add that intentional disclosure is a crucial condition for successful competition for risk capital in the market.

Management deploys earnings management to place information on their performance before market participants (Sun & Rath, 2008) while sustainability disclosures is employed to signal management’s efforts in controlling the environmental and social concerns within the firm (Gray, 2005)

2.2.3 Legitimacy Theory

The fulcrum of legitimacy theory is the idea that the actions or activities of an entity are in agreement with the society’s system of beliefs, values, norms and definitions (Suchman, 1995). He describes legitimacy in three forms: cognitive, moral, and pragmatic and pins successful activities of business organizations on the extent of the managers’ ability to handle various legitimation threats and challenges.

The theory assumes that the business and society have a social contract between business and society which defines the survival and growth of the business (Shocker & Sethi, 1973). Its observance empowers the business with the legitimate use of resources provided by the society (Dowling & Pfeffer, 1975; Deegan, 2002). Non-adherence to the social contract upsets organizational legitimacy and spells doom for the continued existence of the business (Lindblom, 1993; Enerson & Adegbie, 2021). To ward off the wrath of the society, management is not expected be involved in earnings management and is also under obligation to disclose the firm’s footprint on the environment beyond statutory requirements.

2.3 Empirical Review

On the face of it, earnings management in a set of financial statements is hidden and not easily discernible. On account of this, Roychowdhury (2006) advocated for an empirical model with the capacity to extricate the manipulated aspect of earnings from total earnings. Scholars have developed many models for this purpose depending on their understanding of issues involved and biases. Cohen, Dey, and Lys (2008) pointed out the preference for real earnings management among managers across the world largely due to its fairly lower legal
cost as well as accountability when compared to accrual earnings management. Besides, auditors’ tests and regulators’ scrutiny may detect real manipulations of earnings especially where managers endeavor to make full disclosures of the firms’ business activities ((Kim, Lisic, & Pevzner, 2010; Cohen et al. 2008).

The attractiveness of real earnings management has been associated with certain scenarios such as where a CEO had an unusual influence on the company, a corporation had just recapitalized, and a firm who had initiated a process to access investment from the market (Cohen & Zarowin, 2010; Ji, 2018; Yun et al., 2019). However, real earnings management is not attractive to corporations in quest of mutual development in comparison to others (Ji & An, 2019).

Cho and Chun, (2015) set out to investigate the form of association between real earnings management and adherence to corporate social responsibility among Korean companies. Working on 1432 firm year observations among quoted Korean corporations, the analyzed results indicated that the association between the dependent and explanatory variables was significantly negative. In addition, controlling effect of corporate governance on the variables was brought to the fore.

Hamid (2017) conducted a research on how real earnings management could be influenced by adoption of integrated reporting. The study was domesticated in South Africa. Secondary data were derived from sampled 802 observations from quoted companies on the Stock Exchange in Johannesburg. Findings partly revealed that abnormal cash flows were not significantly affected by integrated reporting following its implementation. However, Hamid (2017)’s conclusion was at variance with the earlier position of Barth, Cahan, Chen, and Venter (2015). They had inquired on what would be the economic consequences of integrated reporting quality on the cost of capital, expected cash flow, stock liquidity and firm value. One of the outcomes of their study was that the firm value propelled by cash flow impact was positively associated to integrate reporting.

Al-Haddad and Whittington (2019) ridding on the back of the Jordanian Corporate Governance Code examined its consequences on the two traditional forms of earnings management. The study, analyzed with regression models, premised on selected 108 listed companies in Amman Stock Exchange from 2010 to 2014. The results came out in contradictory terms. In the first place, corporate governance related with earnings management in a positive manner. This means that corporate governance did not dissuade management of earnings. Both managerial ownership and institutional ownership, however, did not encourage sharp practices. Conversely, the presence of large shareholders and independent directors escalated earnings management. Furthermore, CEO-duality was found to be a causative factor for real earnings management in particular while the influence of foreign ownership was insignificant.

Following the publication of the guideline on integrated reporting by the International Integrated Reporting Council in 2013, Shirabe & Nakano (2019) investigated earnings management practices among firms that embraced integrated reporting voluntarily. Their results validated the idea that in integrated reporting would enhance information quality and support long term decision making.

In the same vein, Yoon, Kim & Lee (2019) in a Korean based study on socially conscious entities’ dispositions towards managing earnings noted that relationship between that the ESG score and abnormal cash flow was a positive one. The implication of this is that the financial reporting quality could still be inadequate in spite of active involvement in corporate social responsibility activities by firms.

In a related work in Korea, Ji, Oh, Yoon, & An (2019) explored the possible association between earnings management and sustainable practices among corporations. They disaggregated earnings management into two components: real earnings management and earnings management based on accruals. They premised their analysis of data on 1,418 years from 2015 to 2017 of quoted companies in Korea Capital Market. At a 5% significant level, they found that the relationship between sustainable practices and abnormal cash flow was
negative. Their findings were consistent with those who held the opinion that companies who subscribed to external ethics would be sound in internal ethics.

Huang, and Sun (2017) took a departure from prior studies which focused on the causes and aftermath of actual earnings management. They concentrated on how actual earnings and future value of the firm could be affected by the ability of the managers. The research work showed that managers imbued with much ability hardly involved themselves in real earnings management. Such managers did not only stop at this, they were equally preoccupied with how to minimize the influence of earnings management on the future value of their organizations.

Integrated Hamid (2017) and Shirabe and Nakano (2019) examined how integrated reporting would affect earnings management in South Africa and Japan respectively. Integrated reporting adopted in these studies does not share the same reporting guidelines with sustainability reporting considering its social, governance, economic, and environmental dimensions. Likewise, Cho and Chun (2015) looked at corporate social responsibility’s association with real earnings management while Al-Haddad and Whittington (2019) studied corporate governance’s relationship with earnings management. Both social responsibility reporting and corporate governance are basic elements of sustainability reporting but leave out other important areas like economic and environmental considerations. The observed gaps were duly covered in this study.

3.0 Methodology
This segment of the paper discusses the study’s methodology. Ex-post facto research design was adopted to explore how sustainability reporting can affect the discretionary accruals of earnings management of multinational companies of sub-Saharan Africa countries. This research design assumed that cause-effect relationships exist between the variables of sustainability reporting and abnormal operating cash flow of earnings management.

All the quoted multinational entities in sub-Saharan Africa countries of Zaire, Mauritius, Zimbabwe, United Republic of Tanzania, Burundi, Uganda, Kenya, Niger, Botswana, Somalia, Malawi, Ethiopia, Benin, South Africa, Angola, Togo, Cameroon, Liberia, Mauritania, Cote d’Ivoire, Guinea-Bissau, Sierra Leone, Zambia, Burkina Faso, Gambia, Central African Republic, Gabon, Chad, Nigeria, Guinea, Congo, Rwanda, Namibia, Ghana, Lesotho, Mozambique, Senegal, Madagascar, and Eritrea as at 31st December 2010 – 2019 constituted the study’s population. Data about the variables of the research work were derived from the audited financial statement of the sampled listed multinational companies in Sub-Saharan Africa countries.

The Purposive and judgmental sampling techniques were adopted for the work. These techniques were suitable for picking the listed multinational companies in sub-Saharan Africa countries firms which passed the following three criteria. The corporations picked were listed in stock exchanges whose financial records as well as sustainability reports which comply with the guidelines of Global Reporting Initiatives were audited under enabling statutes and readily available for review for the period under review (2010-2019).

Following the aforementioned benchmarks, fifty (50) multinational firms {five (5) multinational companies each from ten (10) countries} were selected from sub-Saharan Africa countries whose capital market was relatively developed or developing. The countries are Zimbabwe, Tanzania, Nigeria, Malawi, Kenya, Botswana, Zambia, Ghana, South Africa, and Mauritius.

We adopted content analysis to analyze the contents of the annual financial reports and accounts as well as the sustainability reports of the selected multinational companies. The Global Reporting Initiative (GRI) and the various Stock Exchanges of the selected multinational companies were adopted to access the degree of compliance of the firms to sustainability reporting disclosures. We adopted a scale with a range of 1 to 5 to measure the depth of compliance with required disclosures for sustainability reporting. The scale is calibrated as shown in the table below:
Table 3.1.1: Ranging of Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Content Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 point</td>
<td>No information is provided.</td>
</tr>
<tr>
<td>2 points</td>
<td>The information is briefly disclosed.</td>
</tr>
<tr>
<td>3 points</td>
<td>The information is partially disclosed.</td>
</tr>
<tr>
<td>4 points</td>
<td>The information reviewed is above average.</td>
</tr>
<tr>
<td>5 points</td>
<td>The information provided is full and corroborated.</td>
</tr>
</tbody>
</table>

Source: Researchers’ study, (2021)

With the scaling in Table 3.1.1 above, we computed the arithmetic mean of accumulated indicators for each sub-category and category to generate a final score for each sampled company. We consider this approach as appropriate since the same weight was assigned to information provided notwithstanding the total number of indicators under each aspect and category. Loh, Thomas, and Wang (2017) and Ching, GerabanToste (2017) used this approach in their earlier studies. Similarly, we measured abnormal operating cash flows with model employed by Huang and Sun, (2017), Ibrahim, Darus, Yusoff and Muhamad, (2015), and Roychowdhury (2006).

The study adopted the dynamic panel, using System Generalized Method of Moment (SGMM) estimation technique to account for the possibility of differences across countries and also to account for the possibility of endogeneity. In particular, the Sargan and Hansen tests were used to determine the validity of the instruments and the first and second order autoregressive were used to test for the possibility of auto correlated residuals.

The structural equation panel regression model is given as:

$$ABCFO_{it} = \beta_0 + \beta_1 ABCFO_{it-1} + \beta_2 ENVR_{it} + \beta_3 ECONR_{it} + \beta_4 SOCR_{it} + \beta_5 COGR_{it} + \varepsilon_{it}$$

Where:

- $ABCFO$ = Abnormal Operating Cash Flows
- $ENVR$ = Environmental Reporting
- $ECONR$ = Economic Reporting
- $SOCR$ = Social Reporting
- $COGR$ = Corporate Governance Reporting
- $\varepsilon_{it}$ = Error Term
- $\beta_0$ = intercept or the constant
- $\beta_2 - \beta_5$ = represent the coefficient of explanatory variables

The study expected a positive association between the measures of earnings management on sustainability reporting. The coefficients are: $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 > 0$.

4.0 Results

This section discusses the panel data regression results used to look at how sustainability reporting can affect discretionary accruals of earnings management of multinational corporations in Sub-Saharan Africa. The segment is organized as follows: sections 4.1 and 4.2 discuss the descriptive statistics and the link between the variables (dependent and independent). Section 4.3 is devoted to panel data regressions of System General Method (SGMM) and Section 4.4 discusses the discussion of findings.

4.1 Descriptive Statistics

Table 4.1 below shows the features of the descriptive statistics with respect to standard deviations, minimum, maximum and mean along the observation counts for the dependent and explanatory variables.
Table 4.1: Descriptive Statistics of Sustainability Reporting and Abnormal Operating Cash Flow

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
<th>Std. Dev.</th>
<th>Obs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCFO</td>
<td>-2.349</td>
<td>-0.121</td>
<td>1.122</td>
<td>0.713</td>
<td>500</td>
</tr>
<tr>
<td>ECONR</td>
<td>2.000</td>
<td>3.156</td>
<td>4.000</td>
<td>0.481</td>
<td>500</td>
</tr>
<tr>
<td>ENVR</td>
<td>1.000</td>
<td>3.073</td>
<td>5.000</td>
<td>1.324</td>
<td>500</td>
</tr>
<tr>
<td>SOCR</td>
<td>2.500</td>
<td>4.278</td>
<td>5.000</td>
<td>0.582</td>
<td>500</td>
</tr>
<tr>
<td>COGR</td>
<td>1.667</td>
<td>3.414</td>
<td>4.667</td>
<td>0.514</td>
<td>500</td>
</tr>
</tbody>
</table>

Source: Researchers’ computation, (2021)

Notes: Abnormal Operating Cash Flows (ABCFO) is the dependent variable, while the explanatory variables are Environmental Reporting (ENVR), Economic Reporting (ECONR), Social Reporting (SOCR) and Corporate Governance Reporting (COGR). All the values were calculated from the 500 firms-year observations for fifty multinational corporations in sub-Saharan Africa countries. EViews 10 was employed for the estimation.

Interpretation

From Table 4.1, ABCFO: The mean value and standard deviation of abnormal operating cash flows are -0.121 and 0.713 respectively. The mean value of 12.1%, suggest that on the abnormal operating cash flows of the selected multinational firms in sub-Saharan Africa countries is comparatively low. The standard deviation value is far from the mean, suggesting that the discretionary accruals are highly vulnerable to change over time. The minimum value of -2.349 and maximum value of 1.122 shows that multinational firms in sub-Saharan Africa countries have different levels of abnormal operating cash flows.

ECONR: Economic reporting features mean value and standard deviation of 3.156 and 0.481 in that order. On the average and placed on a scale of 5, sampled multinational corporations’ level of compliance with disclosure requirements of economic sustainability reporting as prescribed by GRI4 guidelines averaged 3.156. The standard deviation of 48.1% explains that the degree of variation in complying with disclosure requirements of economic sustainability reporting among the selected multinational firms in sub-Saharan Africa countries is moderately okay. The maximum value of 4 point and minimum value of 2 point indicate different levels of compliance with disclosure requirements on economic sustainability reporting among the sampled multinational entities.

ENVR: Environmental reporting features mean value and standard deviation of 3.073 and 1.324 in that order. On the average and placed on a scale of 5, sampled multinational corporations’ level of compliance with disclosure requirements of environmental sustainability reporting as prescribed by GRI4 guidelines averaged 3.073. The standard deviation, which is 132.4%, is considerably high. It shows the level of variation in complying with disclosure requirements of environmental sustainability reporting among the selected multinational corporations in sub-Saharan Africa. The maximum value of environmental disclosures is 5 point while the minimum value is 1 point showing different levels of compliance with disclosure requirements on sustainability reporting among the selected multinational corporations.

SOCR: Social reporting has a mean value of 4.278 while the standard deviation stands at 0.582. The level of observed social sustainability disclosure requirements among quoted multinational companies in accordance with GRI4 guidelines represents 4.278 on a scale of 5. The standard deviation of social sustainability reporting is 58.2%. This implies that among quoted multinational companies of sub-Saharan Africa countries, the extent of disparity in compliance with social sustainability reporting is quite okay. The level of social sustainability reporting varies across the selected multinational firms considering the maximum value and minimum value of 5 and 2.5 respectively.

COGR: Corporate governance sustainability reporting features mean value and standard deviation of 3.414 and 0.514 in that order. On the average and placed on a scale of 5, sampled multinational corporations’ compliance level of disclosures on corporate governance sustainability as prescribed by GRI4 guidelines averaged 3.156.
The standard deviation of 48.1% explains that the degree of variation in complying with disclosure requirements of economic sustainability reporting among the selected multinational firms in sub-Saharan Africa countries is moderately okay. The content of governance sustainability reporting varies across the sampled multinational firms in sub-Saharan Africa countries considering the maximum value and minimum value of 4.667 and 1.667 respectively.

Table 4.2: Correlation Matrix of Sustainability Reporting and Abnormal Operating Cash Flow

The table below highlights correlation coefficient of the variables:

<table>
<thead>
<tr>
<th>Variables</th>
<th>ABCFO</th>
<th>ECONR</th>
<th>ENVR</th>
<th>SOCR</th>
<th>COGR</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECONR</td>
<td>-0.005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.28</td>
</tr>
<tr>
<td>ENVR</td>
<td>-0.037</td>
<td>0.526</td>
<td>1</td>
<td></td>
<td></td>
<td>2.13</td>
</tr>
<tr>
<td>SOCR</td>
<td>-0.024</td>
<td>0.566</td>
<td>0.685</td>
<td>1</td>
<td></td>
<td>2.04</td>
</tr>
<tr>
<td>COGR</td>
<td>0.031</td>
<td>0.692</td>
<td>0.669</td>
<td>0.779</td>
<td>1</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Source: Researchers’ computation, (2021)

Notes: The table above highlights correlation coefficient of the variables. Abnormal Operating Cash Flows (ABCFO) is the dependent variable, while Environmental Reporting (ENVR), Economic Reporting (ECONR), Social Reporting (SOCR) and Corporate Governance Reporting (COGR) are the independent variables. The variance inflation factor in the table is designed to test for multicollinearity. Five hundred (500) firms-year observations for fifty multinational corporations in sub-Saharan Africa countries were used to calculate the values. EViews 10 was employed for the estimation.

Interpretation

To begin with, the model has no multicollinearity issue since each of the variance inflation factors for the explanatory variables is less than 10 as depicted in table 4.2.

From the results, it is evident that environmental sustainability reporting, social sustainability reporting, and economic sustainability reporting have negative association with discretionary accruals with correlation values of -0.037, -0.024, and -0.005 respectively. The implication is that increases in environmental sustainability reporting, social sustainability reporting, and economic sustainability reporting of the companies’ activities will result to decrease in abnormal operating cash flows. Meanwhile, corporate governance reporting does not dissuade abnormal operating cash flows.

4.3 Test of Hypotheses

Research Objective: evaluate the effect of sustainability reporting on abnormal operating cash flows of multinational corporations in Sub-Saharan Africa

Research Question: How does sustainability reporting affect abnormal operating cash flows of multinational corporations in Sub-Saharan Africa?

Research Hypothesis: Sustainability reporting does not have significant effect on abnormal operating cash flows of multinational corporations in Sub-Saharan Africa
Table 4.3.1 Sustainability Reporting and Abnormal Operating Cash Flows of Multinational Corporations in Sub-Saharan Africa

Dependent Variable: ABCFO

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coeff</th>
<th>S.E</th>
<th>Z-test</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. ABCFO</td>
<td>0.652</td>
<td>0.117</td>
<td>5.573</td>
<td>0.000</td>
</tr>
<tr>
<td>ECONR</td>
<td>-0.113</td>
<td>0.010</td>
<td>-11.300</td>
<td>0.000</td>
</tr>
<tr>
<td>ENVR</td>
<td>1.172</td>
<td>0.436</td>
<td>2.688</td>
<td>0.021</td>
</tr>
<tr>
<td>SOCR</td>
<td>-0.558</td>
<td>0.166</td>
<td>-3.361</td>
<td>0.002</td>
</tr>
<tr>
<td>COGR</td>
<td>0.283</td>
<td>1.304</td>
<td>0.217</td>
<td>0.828</td>
</tr>
<tr>
<td>Constant</td>
<td>0.830**</td>
<td>0.368</td>
<td>2.255</td>
<td>0.241</td>
</tr>
</tbody>
</table>

Observations 450
Adjusted R² 0.37
Number of group 50
Wald chi-square 517.44 (0.000)
AR1 test -4.87 (0.000)
AR2 test 1.38 (0.168)
Hansen test 1.07 (0.218)
Sargan test 1.88 (0.563)

Source: Researchers’ computation, (2021)

Notes: Table 4 reports System General Method of Moment (SGMM) regression results of the effects of sustainability reporting on discretionary accruals of multinational corporations in Sub-Saharan Africa. The dependent variable is Abnormal Operating Cash Flows (ABCFO). The regressors are Environmental Reporting (ENVR), Economic Reporting (ECONR), Social Reporting (SOCR) and Corporate Governance Reporting (COGR). *** Significant at 1%, ** Significant at 5%, * Significant at 10%.

ABCFOit = β0 + β1ABCFOit-1 + β2ENVRit + β3ECONRit + β4SOCRit + β5COGRit + εit
ABCFOit = 0.830 + 0.652ABCFOit-1 +1.172ENVRit – 0.113ECONRit -0.558SOCRit + 0.283COGRit

Interpretation

The System General Method of Moment was employed to ensure that post estimation tests parameters are appropriate for the investigation of the effect of sustainability reporting on discretionary accruals of multinational corporations in Sub-Saharan Africa. Ideally, four types of test are generally considered and they are as follows; first, the serial correlation of autoregressive order 1, with the null hypothesis that there is no serial correlation. Second, the serial correlation of autoregressive order 2, with the null of serial correlation. Third, the Hansen test of over-identifying restrictions with the null that the model specified has valid instrumentation. Lastly, the Sargan test that the specified variables are proper instruments, with the null that the model specified are proper instruments.

The serial correlation of autoregressive of order 1 with a statistic value of -4.87 is significant at 1 per cent. We accepted the alternate that there is serial correlation. This is in line with the SGMM that the AR1 should be significant and correlated. The AR2 with a statistic of 1.38 is not significant, and the alternative of no serial correlation was accepted. This is in conformity with the literature that the AR2 should be serial independence.

The Hansen test statistic of 1.07 is statistically insignificant, thus, the null that the model has valid instrumentation was not rejected, and therefore, the variables are valid instrumentation of the estimated model. The Sargan test is 1.88 with a value of probability of 56.3 per cent indicates the variables are proper instruments of the estimated model. From the post-estimation tests result reported above it shows that estimated model is efficiency and thus, inferences can be drawn from the result.

From the results in Table 43.1., it is noticeable that the lag of abnormal operating cash flows, environmental sustainability reporting and corporate governance sustainability reporting has positive relationship with
abnormal operating cash flows, while economic sustainability reporting and social reporting are negatively related to abnormal operating cash flows. In addition, it is evident that the lag of abnormal operating cash flows, and economic sustainability reporting, environmental sustainability reporting and social sustainability reporting has significant association with abnormal operating cash flows of selected multinational firms in sub-Saharan Africa countries (L:\ABCFO= 0.652, Z-test= 5.573, p < 0.05; ECONR= -0.113, Z-test= -11.300, p < 0.05; ENVR = 1.172, Z-test= 2.688, p < 0.05 and SOCR= -0.558, Z-test= -3.361, p < 0.05), respectively. This implies that the lag of abnormal operating cash flows, social sustainability reporting, environmental sustainability reporting and economic sustainability reporting were significant factors influencing changes in abnormal operating cash flows of selected multinational firms in sub-Saharan Africa countries.

Conversely, there is evidence that the corporate governance sustainability reporting does not have significant relationship with the abnormal operating cash flows of selected multinational firms in sub-Saharan African countries (COGR = 0.283, Z-test = 0.217, p > 0.05). The implication of this is that corporate governance sustainability reporting is not a significant factor influencing changes in abnormal operating cash flows of selected multinational firms in sub-Saharan African countries.

Concerning the magnitudes of the estimated parameters 1 unit increase in lag abnormal operating cash flows, environmental sustainability reporting and corporate governance sustainability reporting will lead to 0.652, 1.172 and 0.283 increase in abnormal operating cash flows respectively, while 1 unit increase in economic sustainability reporting and social sustainability reporting will lead to a fall of 0.113 and 0.558 in abnormal operating cash flows respectively.

The Adjusted $R^2$ which measures the proportion of the changes in the abnormal operating cash flows of multinational corporations in Sub-Saharan Africa countries due to changes in previous value of abnormal operating cash flows, environmental reporting, economic reporting, social reporting, and corporate governance reporting is 37%. This means that the independent variables in the model can explain 37% of the variance in abnormal operating cash flows of multinational corporations in Sub-Saharan Africa countries leaving 63% to other factors which were not included in the model.

The Wald Chi Square Statistic which stands at 517.44 as well as a probability value of 0.000 is significant at 1% level. The implication is that the null that sustainability reporting has no significant effect on abnormal operating cash flows of multinational corporations in Sub-Saharan Africa. On account of this, we rejected the null hypothesis and accepted the alternate hypothesis that sustainability reporting has significant effect on abnormal operating cash flows of the entities under review.

4.4 Discussion of Findings
The main goal of the paper is to account for how sustainability reporting affects abnormal operating cash flows of multinational corporations in Sub-Saharan Africa for the period of 2010-2019. The result of the study reveals that the lag of abnormal operating cash flows, corporate governance sustainability reporting and environmental sustainability reporting has positive relationship with discretionary accruals, while social sustainability reporting and economic sustainability reporting are negatively linked to abnormal operating cash flows. In addition, the result of the Wald Chi Square test suggests that the null hypothesis be rejected. Consequently, we accepted the alternate hypothesis which states that sustainability reporting has significant effect on abnormal operating cash flows of multinational corporations in Sub-Saharan Africa. The outcome of this study is in consonance with the earlier findings of the following earlier works: Ji, Oh, Yoon, and An (2019), Shirabe & Nakano (2019), and Cho and Chun, (2015). However, the research results of Yoon, Kim and Lee (2019) Hamid (2017) Cahan, Chen, and Venter (2015) do not agree with our findings. They concluded that that corporate social responsibility involvement by firms has positive association with earnings management. Their findings align to the assumption that sustainability reporting or corporate social responsibility reporting is a smokescreen to conceal unethical practices of managers.

5.0 Conclusion

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The focus of the study was to assess how the abnormal operating cash flows of earning management could be influenced by sustainability reporting among fifty (50) multinational corporations in Sub-Saharan Africa for the period 2010-2019. The preliminary results from the correlation test revealed that social sustainability reporting, environmental sustainability reporting and economic sustainability reporting have negative association with the abnormal operating cash flows while corporate governance sustainability reporting has positive association with the abnormal operating cash flows. The variance inflation factors revealed that all the explanatory variables were not related, providing evidence of non-collinearity.

The result of the study provides evidence that the lag of abnormal operating cash flows, environmental sustainability reporting and corporate governance sustainability reporting’s association with abnormal operating cash flows was positive, while social sustainability reporting and economic sustainability reporting are negatively linked to abnormal operating cash flows. In addition, the Wald Chi Square test rejects the null hypothesis. The alternate hypothesis that sustainability reporting has significant impact on abnormal operating cash flows of multinational corporations in Sub-Saharan Africa was, therefore, accepted.

This work, therefore, expands the existing body of literature in the league of researches on real earnings management by providing new empirical evidence about the relationship between sustainability reporting and abnormal operating cash flows among multinational corporations in Sub-Saharan Africa.

Management should work on corporate governance sustainability reporting and environmental sustainability reporting which featured positive association.

This study is domesticated in sub-Saharan Africa. Future studies should be extended to other continents.

References


Appendix: List of Selected Multinational Companies by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>Sefalana Holding, A-Cap Resources Limited, Funmart Botswana, Botswana Telecommunications, Chobe Holding</td>
</tr>
<tr>
<td>Ghana</td>
<td>Fanmilk Ghana, Guinness Ghana, Benson Oil Palm Ghana, Total Ghana, Unilever Ghana</td>
</tr>
<tr>
<td>Malawi</td>
<td>Ilovo Sugar, Blantyre Hotels Plc, Telekom Network, Sunbird Hotels and Resorts, Press Corporation</td>
</tr>
<tr>
<td>Mauritius</td>
<td>Lez Gas Industries, Livestock Feed Mauritius, Livestock Feed Mauritius, Ciel Textile, Dale Capital Group, ENL Land</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Cadbury Nigeria Plc, Lafarge Wapco Plc, Nestle Nigeria Plc, PZ Cussons Nigeria Plc, Unilever Nigeria Plc</td>
</tr>
<tr>
<td>South Africa</td>
<td>Accentuate, Panafican Resources Integrated, African Rainbow Minerals, Aspen Pharmcace Holdings, Distell Group</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Barrick Gold Corporation, Tatepa Plc, Tanzania Cigarette Plc, Tanga Cement, Tanzania Portland</td>
</tr>
<tr>
<td>Zambia</td>
<td>British American Tobacco Zambia Plc, Lafarge Zambia Plc, National Breweries Plc, First Quantum Minerals, Zambian Breweries Plc</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>British American Tobacco Zimbabwe, Lafarge Zimbabwe, Innscor Africa, PPC, African Distillers</td>
</tr>
</tbody>
</table>

Source: Researchers’ computation, (2021)