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Determinants of quality of assurance on sustainability reports in Sub-Saharan Africa: case of listed companies in Kenya, Nigeria, and Botswana

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due to reference is made in the thesis itself.

Njeri Christine Gatakaa

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ABSTRACT

In recent times, it is evident that consumer and investor needs are constantly evolving, so has the facts stakeholders consider essential for decision-making. Conventionally, financial data was essential in making decisions but presently, it is not adequate for company analysis and valuation thus, the rise in demand for non-financial (social and environmental) which is relevant in evaluation of risks and opportunities. The major drivers being investor pressure, regulation and stock exchange requirements. In response to this kind of pressure, companies seek assurance services for additional credibility and validity on the information included in their sustainability reports. Thus, this research wanted to ascertain the quality of assurance on SRs and to understand what the determinants of quality are. The study also sought the perspective of industry players on the barriers of quality assurance. Using a sample of 34 companies, 18 companies in Kenya, 9 in Nigeria, and 7 in Botswana for the period 2013 to 2017, the study findings indicate that the quality of assurance is relatively low in Sub-Saharan Africa. An evaluative framework was used to measure quality of assurance and Botswana ranked highest followed by Kenya and Nigeria. Industry sector and company profitability were the two significant variables determining the quality of assurance. From the primary data, independence of assurer, profession of assurer and the assurance engagement lead in determinants of quality of assurance on sustainability reporting. The overall findings indicate that there is a need for proper guidelines for sustainability reporting essentially improving on the quality of assurance as the assurance process can be comparable and take into consideration the material aspects in SR.

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LIST OF ABBREVIATIONS

AA1000 AS:	Accountability 1000 Assurance Standard
CSR	Corporate Sustainability Reporting
CS	Corporate Sustainability
FEE	Federation des Experts Comptables Européens
GRI	Global Reporting Initiative
G3	Sustainability Reporting Guidelines Version 3.0
IAASB	International Auditing and Assurance Standard Board
IIRC	International Integrated Reporting Council
IFAC	International Federation of Accountants
ISA	International Standard on Auditing
ISAE 3000	International Standard on Assurance Engagement 3000
ISEA	The Institute of Social and Ethical Accountability
QA	Quality of Assurance
SRA	Sustainability Reporting Assurance
SR	Sustainability Reporting
SRs	Sustainability Reports
SSE	Sustainable Securities Exchange initiative

CHAPTER ONE:

INTRODUCTION

1.1 Background of the Study

Sustainability Reporting (hereafter SR) is the reporting of social performance and environmental performance in addition to the financial performance by companies. SR is considered a multifaceted subject, interpreted differently and goes by various names among researchers. Such names include corporate social reporting (CSR), integrated reporting (IR) corporate environmental reporting (CER), just to mention a few (Deegan, Cooper & Shelly, 2006; Higgins & Walker, 2012). In this study, the term SR was used in representing both stand-alone reports as well as integrated reports. Sustainability reporting (SR) is on an increasing rate becoming an area of concern to the different stakeholders and institutions globally consequently, moving into mainstream corporate agenda. The number of corporations publishing their social performance and environmental performance globally has been on the rise (KPMG, 2015, 2017; Perez & Sanchez, 2009; Mori Junior, Best & Cotter, 2013). However, the credibility of these reports is in question; hence, the assurance process of sustainability reports has grown with the same intensity globally. This is in response to the ever-growing stakeholders' or shareholders' demand for credibility, validity, precision and reliability of the data disclosed in SRs, (O'Dwyer & Owen, 2005; KPMG, 2015; Ramus & Montiel, 2005; Kolk, 2010; Dando & Swift, 2003). Several companies are investing in assurance services for their SRs and the number has grown exponentially from 2005 with assurance of SR information being an accepted standard practice among the G250 and N100 (KPMG, 2017).

Assurance rates among G250 companies has grown steadily from 30% in 2015 to 67% in 2017 and N100 from 33% in 2005 to 45% in 2017 (KPMG, 2017). In order to meet stakeholders' need for transparency along with reliability of information in print in the sustainability reports, a number of corporations are willingly including assurance in their SR to perk up trustworthiness and dependability (Ramus & Montiel, 2005; Laufer, 2003; Moneva, Archel & Correa, 2006). Notably companies assuring their SRs realize improved stakeholders' assurance in the trust and dependability of the sustainability data disclosed, enhancing their corporate repute, improving

stakeholder communication, improved company cohesion, reduced risk and augmented value as well as superior board and management of engagement (Vanstraelen & Chua, 2009; Pflugrath, Roebuck, & , 2011; Reimsbach, Hahn & Gurturk, 2017; GRI, 2013).

Studies by Hodge, Subramaniam and Stewart, (2009) show that investors that tend to believe assured SR more compared to SRs that are not assured. Pflugrath et al., (2011) observed a positive effect on deliberate assurance of SRs driving up their trustworthiness along with reliability. Both studies were carried out in Australia, UK, and USA. Alon and Vidovic (2015) found out high performing companies have a high likelihood of obtaining assurance services on their SRs. Moroney, Windsor, and Aw (2012), explained the quality of deliberate SRs was elevated once it was assured. Perego and Kolk (2010) established that the need for assurance was superior in states where sustainability reporting was backed by legal, market, and institutional systems.

Notwithstanding the diverse assurance benefits, companies get to realize, preceding studies do highlight some issues in today's practices that may devalue assurance. Majorly, the voluntary scope of assurance means that assurance may possibly be used for legitimization purposes to portray credibility and trustworthiness of the non-financial information disclosed as demanded by stakeholders (Manetti & Toccafondi, 2012; Gillet, 2012; Park & Brorson, 2005). Further, several studies carried out by O'Dwyer and Owen, (2007), Deegan et al., (2006), Dando and Swift, (2003) indicate that during the assurance process, a company's management has some level of control. Further, the assurance process tends to attend to the requirements of management overlooking the needs of stakeholders. Bepari and Mollik (2016) posit that assurance cannot be an accountability enabler since the process focuses getting hold of data and analysis and internal systems. Further, they argue that there is little stakeholder involvement in the assurance process and assuror's failure or reluctance to communicate the assurance reports to the stakeholders.

Researchers expect that assurance of SRs will increase the social and environmental responsibility of corporations (Loannou & Serafeim, 2011). Assurance process on these reports

has been considered a valuable tool in providing credibility essentially contributing towards companies' internal processes. However, to date the quality aspect of the assurance has been under a lot of scrutiny due to the voluntary nature that surrounds sustainability reporting and in addition, it is not obligatory to disclose or assure SR disclosures. Moreover, no standard framework of reporting and assurance exist is there for comparability reasons. This research study thus, follows the suggestion of Kolk and Perego (2010) to study the quality of assurance of SRs, Correspondingly, the research responds to Cohen and Simnett (2015) suggestion calling for further research on quality of assurance.

The objective of this research was twofold. First, the research sought to understand the quality of assurance on SRs in Sub- Saharan Africa focusing on listed companies in Kenya, Nigeria, and Botswana. Secondly, the research also sought to establish the determinants of quality of assurance on SRs in these countries. Kenya, Nigeria, and Botswana were selected on the basis that they are among the top six leading stock exchanges in the Sub-Saharan Africa by market capitalization with Botswana ranking second with a market capitalization of $ 39.261 billion, Nigeria ranked third with a market cap of $33.757 billion (African Business Central, 2017). Kenya ranked fourth with a market cap of $23.537 billion. In addition, they joined the Sustainable Stock Exchanges initiative (SSE) within the period under study (Kenya - 10 March 2015, Nigeria- 31 Oct 2013, and Botswana- 20 Jul 2016) (sseinitiative.org, 2018).The study considered both integrated annual reports and stand-alone SRs. Assurance market has no standard dictating the required qualifications of the assurance providers. Prior research has shown that there are variations when it comes to the quality of assurance on SRs. Given the diverse qualifications of these assurance providers and their skilled abilities regarding sustainability, assurance provided, vary significantly in practice (Manetti & Becatti, 2009; KPMG, 2013; Deegan et al., 2006). Variation in the quality of assurance maybe brought about by many factors. O'Dwyer and Owen (2005) draw attention to the different frameworks, methodologies, and scopes employed by diverse assurance providers bring about the variation in quality. In addition, accountants in the field of SR take on a limited approach thus providing low levels of assurance as compared to consultants in the field of SR employ an evaluative approach, which results in high levels of assurance.

Research indicates that there are several determinants of quality. Because of the dissimilarity in assurance performance amongst providers of assurance, (Mock, Strohm, & Swartz, 2007) raised several concerns in literature of assurance regarding to the degree at which the quality of assurance is compromised. Perego (2009) instituted that the audit firms (Big-4) provided high quality assurance. Hodge et al. (2009) finds diminutive facts that indicate auditors boast of additional reliability compared to other assurance providers. Studies by Fernandez-Feijoo et al. (2012) indicate that auditors compared to consultants offer high levels of quality assurance. The variables representing determinants of quality evolve around listed companies, the company size, and the Big4 auditors indicating a relationship with the quality of assurance on SRs. Hasan et al. (2003) analyzed the diverse forms of assurance statements in relation to the level of assurance distinct in assurance reports and the resulting opinion of the viewers. An observation made by the research during this study is that most of the assurance statements, the auditors gave limited level of assurance framed in more of a negative sense. Another finding of variables linked to quality of assurance of SR is the industry sector, size, and leverage. Romero et al. (2010) study of Spanish companies reviewing assurance reports, established that bigger and listed companies had elevated levels of quality assurance reports. Further, assurance reports issued by accountants seemed of superior quality in contrast to those issued by non-accountants. Maury (2000) indicates independence of the assurance providers is essential as a determinant of quality as it keeps away from the management control dilemma.

For the reason that there is a limited literature concerning quality assurance on sustainability reporting, the research aimed at filling the gap, building on the literature on sustainability assurance. This research aimed at providing experiential verification relating to the determinants of assurance quality. The research examined the quality of assurance using: company ownership, industry sector, and size (nSize). These indicators enabled the researcher assess what determines of quality of assurance. The evaluative framework (appendix I) helped in the analysis by understanding what constitutes high or low assurance quality in the countries under study (Kenya, Nigeria, and Botswana).

1.2 Statement of the Problem

Globally, the acceptance of SR has been rising because of stakeholder's call for more transparency on both environmental and social matters. The development of a variety of reporting and assurance standards and frameworks in the last two decades serves as evidence on this rising popularity of SR and quality of assurance. Some of the standards and frameworks include (but not limited to) ISAE 3000, AA1000AS, IIRC, FEE and GRI standards. Despite these developments, the quality of assurance on SRs is still not clear-cut due to the lack of an independent framework in place for comparability reasons, which results in significant disparity in the assurance (Deegan et. al, 2006a; Adams & Evans 2004). In addition, the fact that SR largely remains voluntary in nature brings about another challenge of the reporting guidelines and standards employed during the process resulting to considerable variations in methodologies and the standards (Deegan et.al. 2006a). There is also limited risk that the assurance given in SR by auditors may be misleading to the readers (Deegan et.al. 2006a) Sustainability reporting in Kenya, Nigeria, and Botswana largely remains voluntary in nature and studies on the subject matter in these countries largely remain limited.

In several studies, variance in the quality of assurance provided has been evaluating assurance services offered by audit firms (Big-4) and consultants in the field of SR. This research focused on assurance offered by the Big 4 audit firms based in Kenya, Nigeria, and Botswana as these they have scale economies and have the ability to spend in novel technologies. Moreover, they have a reputation to uphold and considering these aspects, the audit firms have a low likelihood to act opportunistically or shortsightedly. Thus, these audit firms dole out as efficient supervisory systems than the smaller audit firms (Watts & Zimmerman 1986; DeAngelo 1981). Furthermore, the Big 4 audit firms are less likely to fall prey to fee reliance (Craswell et al. 2002). The research explored the quality of assurance on SRs (inclusive of integrated reports) explaining quality of assurance, determinants of quality assurance and further, exploring the perceptions of industry players on barriers hindering the adoption of quality assurance.

1.3 Research Objectives

1.3.1 General Objective

The study sought to establish the determinants of quality of assurance on sustainability reports.

1.3.2 Specific Objectives

The study seeks to address the following objectives:

1. To determine the quality of assurance on sustainability reports in listed companies in Kenya, Nigeria, and Botswana.
2. To establish the determinants of quality of assurance on sustainability reports in listed companies in Kenya, Nigeria, and Botswana.
3. To obtain the perspectives of industry players on quality of assurance on sustainability reports in listed companies in Kenya, Nigeria, and Botswana.

1.4 Research Questions

1) What is the extent of quality of assurance on SRs in Kenya, Nigeria, and Botswana?
2) What are the factors determining the quality of assurance on SRs in Kenya, Nigeria, and Botswana?
3) What are perspectives of industry players on quality of assurance on SRs in listed companies in Kenya, Nigeria, and Botswana?

1.5 Scope of the Study

The study sought to establish the determinants of quality of assurance on listed companies in Kenya, Nigeria, and Botswana Securities Exchanges over a period of five years, 2013 to 2017.

1.6 Significance of the Study

This study is useful to:

1.6.1 Investors

The study examined the determinants of quality of assurance in listed companies in Kenya, Nigeria, and Botswana. With the current trends and emerging issues regarding climate change, several individual and corporate investors are looking for socially responsible investments and

are in quest for reliable non-financial information (Herda, Taylor & Winterbotham, 2014). These findings will help future investors in making decisions as to whether they should invest in a particular company. The study also examined the perception of industry players on quality of assurance on non-financial reports and these findings will provide investors with increased confidence in the quality of sustainability performance data disclosed.

1.6.2 Researchers and Scholars

The study examined extent of quality of assurance on SRs in Kenya, Nigeria, and Botswana. A multiple regression was used in the examination of factors that determine quality of assurance bridging inconsistencies in research. In addition, the study sought to build up to the existing body of knowledge where limited research carried out in relation to quality of assurance in Sub-Saharan Africa. Further, the study sought the views of industry players in an attempt understand to the quality of assurance of SRs.

1.6.3 Policy makers and Regulators

Through the assessment of factors that determine the quality of assurance on SRs in Kenya, Nigeria, and Botswana, policy makers and industry regulators such as the Capital Markets Authority (CMA) on the best practices that ought to be adopted and implemented to drive up quality sustainability reporting essentially achieving high quality assurance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section seeks to understand historical framework of the study findings on the quality of assurance of SRs. This chapter starts with a theoretical review that helps inform the variables and the relationship between these variables. Subsequently, an empirical review of literature on the determinants of quality of assurance, which highlights the inconsistencies in literature, is included. A discussion on the uptake of SR in Kenya, Nigeria, and Botswana and a conceptual framework for the study.

2.2 Theoretical Framework

There are numerous theories proposed in literature that have guided the study of the quality of assurance on SR, including stakeholder theory, legitimacy theory, and institutional theory. The theories are necessary in this research since they explain the behavior of business in relations to the ever-changing social and environmental aspects they operate.

2.2.1 Legitimacy Theory

One of the major reasons as to why companies or business entities willingly release their non-financial performance is to reduce information irregularities. Assurance of the data provided by these disclosures tends to convince the stakeholders of the reliability and trustworthiness of SRs (Simnett et al., 2009). Further, assurance of SRs indicates that companies seeking the assurance services have a high non-financial performance. Under this theory, companies are expected to carry out their business activities in accordance with the limits and customs of the particular social order (Dowling & Pfeffer, 1975). This theory tends to recognize the societal indenture that exists among business entities and the social order. Essentially, these companies resolve to act in such a way that the public views them as publicly accountable (Dowling & Pfeffer, 1975). Casey and Grenier (2015) exemplify that companies do carry out their business operations guided by a societal contract and thus seek assurance services on their non-financial performance on issues that may pose a threat to their legitimacy.

Previous research has used this theory to make clear the quality of assurance on SRs (Cohen & Simnett, 2015; Deegan, 2002; Patten, 2002; Hummel & Schlick, 2016). In this study, this theory was used to explain quality of assurance as more of a premeditated tool corporate use to manipulate the public perceptions essentially maintaining their legality. The theory informed the dependent variable (quality assurance) that a company's management may use to legitimize their organization (independent variables). Thus, this theory explains SRs as a task of public demands that corporations encounter (Patten, 2002). The assurance of the information disclosed in SRs can be taken as a management's way of controlling and suppressing societal demands hence, closing any legitimacy gaps that may exist.

2.2.2 Stakeholder Theory

Another reason why most companies engage in SR and its assurance is linked to stakeholder theory. Stakeholder theory suggests that stakeholders in the end control a company's right to use scarce resources and companies have to deal with their association with stakeholders to make sure that right to use these resources is upheld (Roberts, 1992). Legitimacy theory takes a keen interest on the social order and at the same time, stakeholder theory centers on the grouping of stakeholders that are significant to a corporation and how these corporations can manage their associations with the stakeholders. The two theories elucidate SRs as measures for persuading the perceptions of stakeholder and instituting organizational legality (size, profitability, and leverage). This theory informs the independent variables used in determining the quality of assurance on SRs as well as the control variables. It further informs the perception of industry players on the barriers that hinder the adoption of assurance of sustainability reports. Preceding literature has shown stakeholder pressure is linked to industry sector and corporation size (Sierra-Garcia et al., 2013a; Mock et al., 2007; Kolk & Perego 2010). In this study, this theory offers partly competing explanations as industry sector and profitability have a high significant as determinants of quality of assurance.

2.2.3 Institutional Theory

Institutional theory emphasizes the societal framework within which companies' function. Bansal (2005) puts forward that this theory is significant to corporate sustainability reporting (CSR) because individual principles and viewpoints critic a company's obligation to

sustainability, affecting perceptions of the firm's suitability plus legality; deliberations amongst populace with dissimilar views result in general attitudes and customs; finally, sustainability concerns turn out to be institutionalized and synchronized. The permissible structure has been employed as an institutional aspect to clarify the resolution to assure SRs and the big 4 audit firms as the assurance providers (Simnett et al. 2009; Kolk & Perego 2010). In this study, this theory informs the need to collect data from the Big 4 audit firms, as they are less likely to fall prey to fee reliance, (Craswell et al. 2002). Essentially, shareholders and potential investors may have a high perception of a company if these Big 4 audit firms in contrast to other lesser audit firms due to the reasons identified earlier assure their sustainability reports. This study relied on abovementioned theories since the first theory focuses on shareholders and the society while the other two focuses on the shareholders and management.

2.3 Empirical Review

This section of the study consists of an empirical review on the quality of assurance. Research conducted in this area has shown various inconsistencies, which may be explained by different theories used, variables used, context of the study and the methodology. Hence, this section highlights the various inconsistencies presented in the empirical findings.

2.3.1 Quality of assurance on SRs

Early research showed that assurance of SRs is becoming a global business standard practice mirroring SR (KPMG, 2013). A majority of G250 companies believe that SR data is relevant to their investors and most of these investors are showing concern on socially responsible investments. In the KPMG's Corporate reporting survey of 2017, there are various G250 companies that incorporate SR data in their annual financial reports and the number has been on rise seeing an increase from 44% in 2011 to 78% in 2017. Perego and Kolk (2012) evaluated material in addition to quality of assurance aspects, moreover their findings indicate there is a rise in the assurance of SRs. Regardless of the fact that there is an increase in assurance, the average quality is quite low.

Further, amongst the N100, the SR trend is undeniably on the rise with 60% of the companies reporting on their sustainability performance in 2017 up from 56% in 2015. Equally, assurance

rates among G250 companies has grown steadily from 30% in 2015 to 67% in 2017 and N100 from 33% in 2005 to 45% in 2017 (KPMG, 2017). Integrated reporting has also been on the rise with a 14% of G250 and N100 two thirds referencing the International Integrated Reporting Council (IIRC) framework for integrated reporting (KPMG, 2017). However, GRI remains the de facto framework for SR as seen in G250 and N100 companies using GRI G3 is at 2%, GRI G4 at 88% and GRI Standards at 10% in the year 2017 (KPMG, 2017).

A study by Edgley, Jones and Solomon (2010) among professionals in the accounting field as well as consultants offering assurance services show that consultants were concerned with stakeholder inclusivity while accountants were concerned with the organizations structure and internal systems. Deegan et al. (2006) examined assurance reports on SRs on Australian companies from 2000 to 2003 and the results were similar to Kamp-Roelands (2002). A study by O'Dwyer and Owen (2005) sought to scrutinize assurance reports on SRs by European companies to clarify if assurance augments transparency and accountability to the various organizational stakeholders.

For the reason that the scope of assurance process is complex and the incapacity to examine assurance quality openly, preceding literature in assurance has used diverse alternatives in evaluating the quality of the assurance (Casey & Grenier, 2015). Majority of researchers use an evaluative framework for the study of quality compiled by O'Dwyer and Owen (2005) that address important aspects addressed in GRI, FEE, and AccountAbility.

A number of issues could explain inconsistencies in results such as the scope, methodologies used in determining quality of assurance on SRs, differences in theories used or the variables used. Inconsistencies also are brought about by the assurance procedures used scope of the assurance engagement, criteria followed, and independence of the assurance provider, (Ball, Owen, & Gray, 2000; Kamp-Roelands 2002). Kamp-Roelands (2002) exemplify most important inconsistencies in audit scope, criteria employed, objectives, and level of assurance provided. Additionally, Frost and Martinov-Bennie (2010) recognized dissimilarity in assurance standards employed throughout the assurance development such as AA1000AS and ISAE 3000.

2.4 Conceptual Analysis of the Value of SRA

Assurance is predominantly vital for constructive information, which happens to be the major part of SRs, while unconstructive information is viewed being reliable even without the existence of assurance (Casey & Grenier, 2015). Constructive non-financial data if left un-assured may be alleged as green washing. Green washing is said to be the exploitation of the transmission of data by corporations in order to misinform the society (Lyon & Maxwell, 2011). Important comments have been brought up in regards to the quality of assurance of SRs. First, the independence of assurers, and that is the assurance provider that determines the methodology and process to be followed ignoring the stakeholder of the organization (O'Dwyer & Owen, 2005; Ball et al., 2000b; Smith et al., 2011). Further, the assurance process is subject to management control. Thus, by seeking assurance services, especially from the four audit firms builds on credibility of SR. However, the influence of management on the assurance process can compromise whole process leading to a lack of significance and wholeness of SR (Casey & Grenier, 2015). It is therefore necessary to have inclusivity of stakeholders in the assurance process to fill up these gaps and avoid bias by management.

2.4.1 Sustainability Reporting Assurance in Kenya

The global concern of sustainable development is being driven by 'go green' otherwise green economy and some of the Kenyan companies are making headway. Kenya is making tremendous effort in the promotion of green initiatives through targeted investments all sectors. Key milestones have been accomplished largely in renewable energy resources, agriculture, water harvesting, environmental legislation, sound waste management through recycling efforts and wastewater treatment among others. Through Kenya National Cleaner Production Centre (KNCPC), industries have focused in the improvement of efficiency in the status of production systems and equipment with the objective of reducing wastage of raw materials and energy (NEMA, 2012). In this regard, the Ministry is expected to formulate policies, standards, and procedures to support the implementation of sustainable development. Further, the Ministry is the link to internal Multi-lateral Environmental Agreements (MEAs) to which Kenya is Party thus providing modalities for domestication and negotiations. The Ministry has created the necessary structures to facilitate the delivery of its mandate. It comprises one Parastatal and three

key Departments. These include Department of Remote Sensing & Resources Surveys (DRSRS), National Environment Management Authority (NEMA), and Kenya Meteorological Department (KMD). Kenya Association of Manufacturers (KAM) having adopted the global compact principles, is cheering its members and other companies to amalgamate sustainability in their production policies and operations (NEMA, 2012).

2.4.2 Sustainability Reporting Assurance in Nigeria

Nigeria is the biggest and richest economy in Africa in terms of GDP and how it compares to other countries in this research. Nigeria has also put in place mechanisms and initiatives for green economy. As many countries came together and implemented the Kyoto protocol, Nigeria endorsed the Kyoto Protocol in 2004 adopting some of its systems such as carbon trading (Klein, Jochaud, Richter, Bechmann, & Hartmann, (2013). Nigeria so far is gearing to creating a home market by incorporating the energy and agricultural markets forming a strong bio-fuel industry, rural communities, and minimizing fossil fuels dependence. Nigeria registered CDM projects under the UNFCCC by the year 2013 has taken on numerous projects (Klein et al., 2013).

2.4.3 Sustainability Reporting Assurance in Botswana

The National Environmental Fund in Botswana aspire to shoring up projects that are and are linked to environmental fortification, climate change alleviation, waste management just to mention a few. National Environmental Fund projects commenced in January 2016. Botswana has faced harsh climatic conditions such as drought, stern desertification, and land degradation, and these are some of the major environmental problems that pose a challenge. However, it has not been left behind in sustainability matters; it has a vigorous wildlife fortification policy. Botswana is leading the way in re-shaping sustainable tourism, and in doing so, it proves that the planet and profit can thrive together. The institution of the Environmental Education Committee, has led to the increased sustainability knowledge and awareness by the general public. The use of action plans such as the National Environmental Strategy and Action Plan, which is aimed at the various stakeholders presenting them with the much-needed information related to recycling, environmental conservation, pollution just to mention a few. The use of Green Scorpions ensures that the environment is clean steers away from pollution. Further, the New BSE Listing Requirements, which commenced on 1 June of 2016, require that companies listed should adhere

to Botswana Corporate Code of Governance, which demands that, companies should publish Integrated Reports (Shapi, 2016).

2.5 Research gap

Previous studies show that there are many similarities; however, they also present many inconsistencies that differentiate them. In results such as the scope, methodologies used in determining quality of assurance of SRs, differences in theories used or the variables used. In regards to the theories used, there seems to be a consensus as different researchers have used similar theories including stakeholder theory, legitimacy theory and institutional theory. In terms of contexts of the studies, different researchers have carried out their studies in different economic contexts such as France, Europe, Asia, and Australia just to mention a few. In terms of the variables used and how they are measured, different researchers have used different variables in measuring quality of assurance such as differences in the assurance standards, and audit scope.

2.6 Factors that affect Quality of Assurance of SRs

To clarify the quality of assurance on SRs, below hypotheses have been developed: company ownership, industry sector, and size.

2.6.1 Corporate Ownership

As a company grows, and its ownership changes in terms of management concentration, the higher the likelihood of stakeholders and its management to influence quality of assurance on its SRs. Corporate ownership constitution is an additional commonly used stand-in for companies' susceptibility to stakeholder demands (Brammer & Pavelin, 2006). As the company's ownership becomes dispersed or there is presence of foreign influence, the shareholder demands turn out to be broader, and pressure to disclose reliable non-financial performance info escalates (Roberts, 1992). Firms with a foreign influence particularly from developed countries have a wealth of experience in reporting environmental concerns adding to the fact that SR is mandatory in Europe and parts of the Asia and USA. Thus, there foreign branches in various countries end up reporting on the social and environmental performance. This could also reflect on companies where the CEO is a foreigner and the decision to disclose SR information and further opt for assurance thus, leading to:

H1 - Companies with foreign ownership influence have a higher likelihood of having high quality assurance on SRs compared to companies with local ownership.

2.6.2 Industry Sector

Industry sector has been a measure of an organization's susceptibility to outer pressure from its stakeholders. Companies in various industry sectors have different intrinsic environmental impacts. In essence, industries with considerable ecological impact are linked to observable environmental harms such as climate change and depletion of the ozone layer. There is a lot of scrutiny of these industries due to the nature of their business operations that is associated with high environmental issues. Industry sector has certainly been found to be a determinant of quality of assurance on SRs. Some of the issues raised by stakeholders are industry-specific due to high-level environmental impact. Most companies with high environmental impact will report on their non- financial performance and some studies have keenly observed the patterns of assurance on SRs with a focus on industry sector (Hahn & Kuhnen, 2013; Perego & Kolk, 2012). In earlier days, companies with high-level environmental impact actively disclosed their non-financial performance and further went ahead to assure the reports compared to companies with minimal environmental impact. As illustrated by Perego and Kolk (2012), their study noted quality of assurance is superior in corporations that happen to be more polluting industries. Furthermore, companies from high polluting industry sectors usually tend to have higher quality of assurance on SRs (Tilt, 2009; Comyns, 2012).

H2 - Companies in industries associated with high-level environmental impact have a high likelihood to have high quality assurance on SRs than companies in industries associated with less environmental impacts.

2.6.3 Size

Numerous variables have been used in the when it come to the analysis of quality of assurance and these variables had a positive association in the subject matter. In this study, legitimacy and stakeholder theory informs size (nSize) of the company as an independent variable in determining the quality of assurance and was measured by total assets of the company (Clarkson et al., 2008). nSize followed the use of a natural logarithm. Preceding research found company

size is positively linked to quality of assurance of SRs (Patten, 2002; Brammer & Pavelin, 2006; Simnett et al., 2009). The bigger the company in terms of total assets, the more the company is under pressure to disclose their sustainability performance, essentially opting for quality assurance. This conclusion leads to:

H3 – large companies in terms of total assets value are more likely to be associated with high quality assurance on sustainability reporting compared to smaller companies.

2.6.4 Leverage

Leverage was included in the regression formula as a control variable in line with preceding research (Patten, 2002; Brammer & Pavelin, 2006). Leverage was calculated by long-term debt on total assets (Simnett et al., 2009). The higher the level of leverage, the greater the likelihood the company will disclose its sustainability performance and further seek assurance on the same.

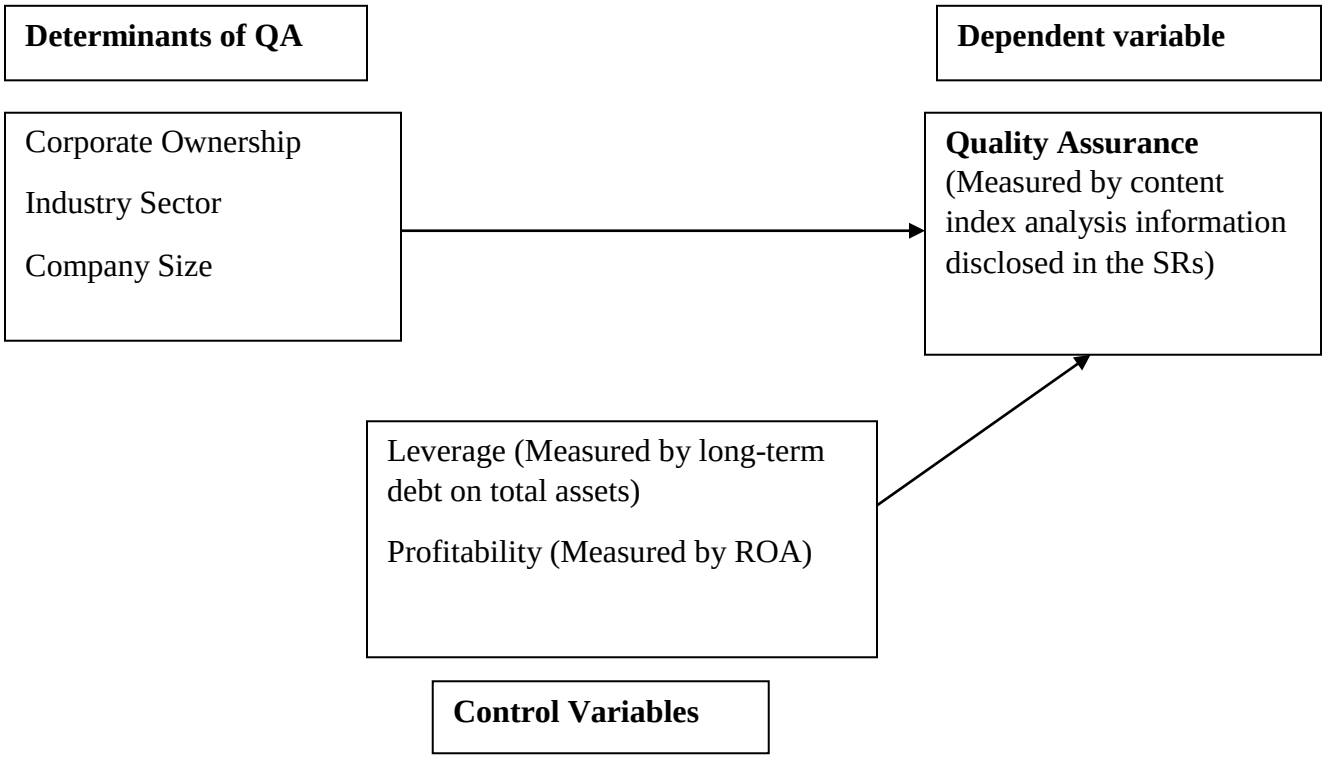
2.6.5 Profitability

Profitability was measured by return on assets (ROA) that is net income divided by total assets (Simnett et al., 2009). Profitability was also included in the regression formula as this aspect point out the suppleness quality of assurance (Hahn & Kuhnen, 2013). All other factors held constant, the higher the profitability, the higher the probability that a company will seek assurance on their sustainability disclosures.

2.7 Conceptual Framework

Based on literature of quality of assurance on SRs, industry and firm characteristics were used in the development of the conceptual framework. The framework spells out the association of involving the independent variables (corporate ownership, industry sector and company size), dependent variables (quality assurance), and the control variables (Leverage, and Profitability).

Figure 2 1 Conceptual Framework



Source: (Researcher, 2019)

Table 2 1 Operationalization and Measurement of Variables

Variable	Variable definition	Measurement
Dependent Variable		
wQA	Quality of assurance on SRs	calculated using an evaluative framework with a score of 41 points (see appendix I)
Independent Variables		
CO	Company ownership	**1** if a company has foreign ownership and 0 when the company's ownership is not foreign.
IS	Industry sector	**1** if a company fits in an industry linked to high-level environmental impact and **0** if the company fits in an industry linked to minimal environmental impact
SIZE (S)	Size	calculated by total asset value (Clarkson et al., 2008)
Control Variables		
P(ROA)	Profitability	Net income divided by total assets (Simnett et al., 2009).
LEV	Leverage	Total debt divided by total assets (Simnett et al., 2009).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section highlights techniques that the researcher used in responding to research objectives. It also spells out the research design, target population, and sampling, methods of data collection and data analysis.

3.2 Philosophical Framework

There are various philosophical approaches or assumptions that have been used in research by various researchers, which include epistemology, ontology, axiology, and methodology. These assumptions are founded within various frameworks as defined by Creswell (2014) that most researchers use in their studies and these frameworks include but not limited to positivism, post-positivism, constructivism, postmodern perspectives, and transformative.

This research adopted an ontological research philosophy that embraces multiple realities and thereafter reporting on these realities, which explore various forms of facts from the diverse individuals' perspectives and experiences. Secondary data was gathered from integrated reports as well as stand-alone sustainability reports, while primary data was obtained using a questionnaire. Further, the study adopts a post-positivism explanation, which highlights that a study should follow logical steps that incorporate the viewpoints of the diverse individuals rather than centering on a single reality. In addition, proponents of post-positivism believe in thoroughness in data compilation and analysis while making use of computer programs for data analysis (Creswell, 2014).

3.3 Research Design

This study adopted a descriptive research design. The research design seeks to assess and evaluate at least two or more variables in order to establish the degree of the relationship, influence, and interdependence (McBurney & White, 2009). In this case, the quality of assurance on SRs in Sub-Saharan Africa focusing on Kenya, Nigeria and Botswana as a sample to give the overview of the determinants of quality (industry sector, company ownership, and size). The

study considered listed companies on the securities exchange's markets in Kenya, Nigeria, and Botswana.

3.4 Population and Sampling

This study target population was publicly listed companies in Kenya's, Nigeria's and Botswana's Securities Exchange through the period 2013 to 2017. Companies not listed are excluded in this study because they face little to no stakeholder pressure to disclose their sustainability performance. Listed companies are predisposed to stakeholder and shareholder pressure to disclose their non- financial performance, and increasingly, even conventional institutional investors are making use of sustainability data to assess viability in investments. Two hundred and sixty-seven (267) companies were actively listed on the securities exchange in Kenya, Nigeria, and Botswana for the period of 2013- 2017. These countries were selected on the basis that Kenya, Nigeria, and Botswana were selected on the basis that they are among the top six leading stock exchanges in the Sub-Saharan Africa by market capitalization. Botswana ranked second with $ 39.261 billion in market capitalization, while Nigeria ranked third with a market cap of $33.757 billion. Lastly, Kenya ranked fourth with a market cap of $23.537 billion. In addition, they joined the Sustainable Stock Exchanges initiative (SSE) within the period under study (Kenya - 10 March 2015, Nigeria- 31 Oct 2013, and Botswana- 20 Jul 2016). Having been launched in 2009 by the UN Secretary-General, the SSE initiative strives to uphold transparency and performance on issues regarding corporate sustainability practices among its partner exchanges. Out of the 267 companies, 234 had insufficient data as revealed in table below. 18 were listed in Kenya, 9 in Nigeria and 7 in Botswana. Kenyan companies alone made up 52% of the study population.

Table 3 1 Companies included in the sample

Company category	Kenya	Nigeria	Botswana	Total
Total number of companies listed as at 2017	64	167	36	267
Less				
No. of companies with insufficient data	(46)	(158)	(29)	(233)
Companies included in the sample	**18**	**9**	**7**	**34**

3.5 Data Collection

To establish the quality of assurance on SRs and further seek to evaluate what determines the quality of assurance on these SRs, the research mainly used secondary data. Due to the complexity of measuring quality, an evaluative framework was used in order to extract the data from integrated and stand-alone SRs of the various companies. There are pros and cons of using secondary data. As highlighted by Kumar (2008), secondary data can be disadvantageous when it comes to determining the accuracy of the data. Secondly, the data may be out of date rendering it irrelevant. Some of the major advantages in using secondary data in research include easy accessibility of the data, data may not be available in any other form, and in terms of economics, it saves time and cost. In addition, secondary data allows for replication of studies thus ascertaining validity of preceding results in research (Kitchin & Tate, 2013) In this research, data was collected through primary and secondary methods (questionnaire and content analysis) for the period 2013 to 2017. This will help the researcher in the pursuance of insights answering the questions that instigate the undertaking of the research.

Primary data was used in this research to establish the quality of assurance on SRs as and determinants of quality assurance on sustainability reports. Primary data was also used in determining perspectives of industry players on quality assurance on SRs. The questionnaires targeted internal auditors, external auditors (Big 4 firms) and sustainability specialists of the various companies. The questionnaires were sent via email and distributed online. The advantage of using primary data is that it is tailored to definite researcher's needs. It time consuming in terms of respondents taking time but provides important actual data in addition to being cost effective (Kothari, 2004).

3.6 Data Analysis and Presentation

Quality of assurance was treated as a dependent variable. The researcher employed both qualitative and quantitative data analysis techniques to evaluate the quality of assurance on SRs and to evaluate determinants of quality of assurance. The study used the Ordinary Least Squares regression (OLS) which was combined with generalized least squares (*GLS*) in estimating degree of autocorrelation (Brooks, 2014). Bar graphs and tables were used in the presentation of data for easier analysis and assessment of the relevant conclusions and findings.

3.6.1 Empirical Model

Ordinary Least Squares regression (OLS) and generalized least squares (*GLS*) regression analysis were used to produce a regression output that was used to determine the relationship between the independent variables and dependent variable.

Model: Multiple Regression Model

$$wQA = \beta_0 + \beta_{CO}X_{LAit} + \beta_{IS}X_{ISit} + \beta_S X_{Sit} + \beta_{ROA}X_{ROAit} + \beta_{LEV}X_{LEVit} + ei$$

Where; *wAQ* is the dependent variable short of weighted quality of assurance, β_0 is a constant. The independent variables include Company Ownership (CO) and Industry Sector (IS). The control variables include profitability (ROA), and leverage (LEV).

$B_{CO,}\ \beta_{IS,}\ \beta_{S,}\beta_{ROA,}\beta_{LEV}$ *are* the regression coefficients.

$X_{COt,}\ X_{ISt,}\ X_{St}$ *represents* the independent variables while $X_{ROAt,}\ X_{LEVt,}$ represents the moderating variables, *ei* is the error term, *I* is the number of listed companies under study in Kenya, Nigeria and Botswana (268) under study *t*= time period (2013 – 2017)

The research will use a 95% confidence level to test for the significance of the model variables i.e. at P-values =0.05

3.7 Reliability and validity of research quality

This section is apprehensive to the question of whether the findings of a research are repeatable. In research, reliability is a gauge that points to the degree to which the research is devoid of bias (Sekaran & Bougie, 2013). Validity of research is concerned with the reliability of the findings that regenerated from the research. Thus, to improve the validity of this research, tests for multi-collinearity, normality, and serial correlation were conducted (Brooks, 2014)

Multi-collinearity refers to the level at which there is high inter-correlations among the independent variables (Sreejesh, Mohapatra & Anusree, 2013). If there is high level among independent variables, then there will be some sort of disturbance in the data deeming it unreliable. VIF of ten (10) and above indicates that the independent variables are highly correlated and high degree of multi-collinearity (Gujarati & Porter, 1999).

To test for nomarlity, Shapiro-Wilk test was used since the sample size happens to below 2000 (Jarque & Bera, 1980). In this study, Shapiro-Wilk test shows that the data sample follows non-normality.

To test for autocorrelation, Durbin-Watson was used. In accordance to the rule of thumb, a 1.5 to 2.5 range indicate that there is no autocorrelation and the data is free from major errors. According to Brooks (2014), autocorrelation refers to the situation where the error terms are correlated with each other.

Heteroscedasticity refers to when the error terms do not have constant variance and this may cause high standard errors. To test for Heteroscedasticity, white test was used. The null hypothesis of Heteroscedasticity is rejected if the probability of the test statistics is significant, i.e. if the p-value is less than 0.05. This problem may be fixed by transformation of data using logs and further using a different regression analysis such as generalized least squares (Brooks,2014).

3.8 Ethical Considerations in Research

The ethical part is essential in research as it prescribes how and why the researcher collects data. There are ethical considerations that were made by the researcher essentially safeguarding the respondents and participants. Some of major ethical issues that a researcher should ensure to safeguard the privacy, discretion and anonymity, in addition to not harming the respondents and ensuring that there is no lack of informed consent (Bryman & Bell, 2015). In accordance to the ethical considerations, permission from Strathmore University was obtained in order to carry out the research study. Participation by respondents was on a voluntary basis and they were issued with their privacy whereby their identities were kept confidential.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter comprises of data analysis and research results in accordance with the study objectives of this study. There are seven sections in this chapter explaining sample representation, diagnostic tests, and descriptive statistics, and correlation analysis, goodness of fit tests, regression analysis, and results from the questionnaire.

4.2 Sample representation

Thirty-four (34) companies were incorporated in the final sample as illustrated in the table 4.1 below, 3% of the companies' samples are from automobiles and aaccessories, 42% from banking and financial constituting the largest sample followed by 18% from consumer goods.

Table 4. 1 Population and Sample representation

Sectors	**No. of Companies**	**Proportion (%)**
Automobiles & Accessories	1	3%
Banking	6	18%
Commercial and Services	1	3%
Construction & Allied	2	6%
Energy & Petroleum	2	6%
Insurance	2	6%
Manufacturing & Allied	3	9%
Telecommunication & Technology	1	3%
Basic Materials	1	3%
Consumer Goods	4	12%
Financials	3	9%
Oil & Gas	1	3%
Consumer Goods	2	6%
Financials	5	15%
Total	**34**	**100%**

4.3 Diagnostic Tests

This section of the chapter consists of the diagnostic tests that were carried out before the regression analysis could be done.

4.3.1 Multi-collinearity

The tests for multi-collinearity were conducted before conducting the regression model particularly, a regression model to establish the dependent variable and the relationship in factors determining the quality of assurance on SRs. Multi-collinearity refers to the level at which there is high inter-correlations among the independent variables (Sreejesh, Mohapatra & Anusree, 2013). If there is high level among independent variables, then there will be some sort of disturbance in the data deeming it unreliable. In the case of this study, correlation matrix and Variance Inflation Factor (VIF) were used to determine the level of multi-collinearity. The correlation coefficients suggested that no significant multi-collinearity problem existed as the coefficients were less than 0.8. The highest coefficient observes was 0.33 while the least was 0.10. VIF of ten (10) and above indicates that the independent variables are highly correlated and high degree of multi-collinearity (Gujarati & Porter, 1999). According to table 4.2, the highest VIF is 1.302 while the lowest tolerance is 0.768. These results showed that there was no significant multi-collinearity problem existing among the explanatory variables.

Table 4. 2 Collinearity Matrix

wQA	1.000					
Company_Ownership	0.043	1.000				
Industry_Sector	-0.258	0.262	1.000			
Profit__ROA_	0.180	0.105	0.233	1.000		
nSize	0.183	-0.028	-0.108	0.044	1.000	
Leverage	-0.033	-0.198	-0.309	-0.110	0.302	1.000

Table 4. 3 Coefficients Statistics

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.006	0.036		-0.161	0.873		
	Company ownership	0.012	0.012	0.081	1.060	0.291	0.910	1.098
	Industry sector	-0.049	0.010	-0.398	-4.800	0.000	0.771	1.297
	ROA	0.050	0.018	0.211	2.754	0.007	0.902	1.108
	nSize	0.005	0.002	0.182	2.433	0.016	0.952	1.050
	Leverage	-0.004	0.001	-0.218	-2.625	0.010	0.768	1.302

4.3.2 Heteroscedasticity

Heteroscedasticity refers to when the error terms do not have constant variance and this may cause high standard errors. To test for heteroscedasticity, white test was used. The null hypothesis of heteroscedasticity is rejected if the probability of the test statistics is significant, i.e. if the p-value is less than 0.05. This problem may be fixed by transformation of data using logs and further using a different regression analysis such as generalized least squares (Brooks, 2014). In this study generalized least squares was used as a corrective measure to heteroscedasticity and autocorrelation since the results have been taken into consideration during the analysis.

4.3.3 Autocorrelation Test

To test for autocorrelation, Durbin-Watson was used. In accordance to the rule of thumb, a 1.5 to 2.5 range indicate that there is no autocorrelation and the data is free from major errors. In this case, as indicated the table below, the Durbin-Watson was 0.864 indicating that there is a positive autocorrelation. However, to resolve this test generalized least squares regression analysis was used.

Table 4. 4 Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.439[a]	.193	.167	.05352	.864

a. Predictors: (Constant), Leverage, nSize, Company ownership, ROA, Industry sector

b. Dependent Variable: wQA

For the reason that by using the ordinary least squares brought about the issue of heteroscedasticity and autocorrelation as the Durbin-Watson is below the rule of the thumb (1.5-2.5). The study included results from the generalized least squares (GLS) as shown in table 4.5 below. GLS was used as a corrective measure since the results have taken into account heteroscedasticity and autocorrelation during the analysis. Results from the GLS are picked over the results from OLS.

Table 4.5 Generalized least squares

Dependent Variable: WQA
Method: Generalized Linear Model (Quadratic Hill Climbing)
Sample: 1 90
Included observations: 90
Family: Normal
Link: Identity
Dispersion computed using Pearson Chi-Square
Coefficient covariance computed using observed Hessian
Convergence achieved after 1 iteration

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.027	0.065	0.420	0.674
NSIZE	0.003	0.004	0.766	0.443
LEVERAGE	-0.002	0.002	-1.023	0.306
PROFIT__ROA_	0.216	0.068	3.156	0.002
INDUSTRY_SECTOR	-0.063	0.017	-3.629	0.000
COMPANY_OWNERSHIP	0.007	0.019	0.365	0.715
Mean dependent var	0.064	S.D. dependent var		0.073
Sum squared resid	0.362	Log likelihood		120.353
Akaike info criterion	-2.541	Schwarz criterion		-2.375
Hannan-Quinn criter.	-2.474	Deviance		0.362
Deviance statistic	0.004	Restr. deviance		0.468
LR statistic	24.561	Prob(LR statistic)		0.000
Pearson SSR	0.362	Pearson statistic		0.004
Dispersion	0.004			

4.3.4 Normality Test

For normality test, Kolmogorov- Smirnov test and the Shapiro-Wilk test was done. These two tests help in the comparison of the shape of the sampling distribution to that of a normal bell-shaped curve. Shapiro-Wilk test is used when the sample size happens to below 2000 while Kolmogorov- Smirnov test is used when the sample size is greater than 2000 (Jarque & Bera, 1980). In this study, Shapiro-Wilk test shows that the data sample follows non-normality as indicated in the table 4.3 below

Table 4. 5 Normality Tests

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
wQA	.238	170	.000	.555	170	.000

a. Lilliefors Significance Correction

Further normality tests are carried out using Q-Q plots and histograms that were of a bell shape thus indicating that the data was near normal distribution. These Q-Q plots and histograms are illustrated in appendices III and IV.

4.4 Descriptive results on quality assurance on SRs in Sub-Saharan Africa

The quality of assurance on SRs was measured using content analysis with a score of 41 points. The average mean of wQA of the three countries is 0.063 with a minimum of 0.024 and a maximum of 0.488 and a standard deviation of 0.057. This indicates on average, the quality of assurance in the selected Sub-Sahara African countries is relatively low. The highest score being 1, the results indicate that there is a lot that need to be done in the assurance of sustainability reporting. The highest score from the data was 0.488

In Kenya, the average mean of wQA is 0.064 with a minimum of 0.024 and a maximum of 0.488 and a standard deviation of 0.073 (see appendix V). In Nigeria, the average mean of wQA is 0.049 with a minimum of 0.024 and a maximum of 0.122 and a standard deviation of 0.031 (see appendix VI). In Botswana, the average mean of wQA is 0.078 with a minimum of 0.024 and a maximum of 0.108 and a standard deviation of 0.026 (see appendix VII). Botswana is highest in terms of quality of assurance with the score of 0.078. This is attributable to the fact that most of the companies use the King code of governance and get a lot of influence from neighboring country South Africa. Kenya ranks second with average score of 0.064 while Nigeria is last with a score 0.049.

Table 4. 6 Descriptive Statistics Table

Descriptive Statistics								
		wQA	Company Ownership	Industry sector	profit (ROA)	nSize	Leverage	Valid N (listwise)
N	Statistic	171	170	170	170	170	170	170
Minimum	Statistic	.024	0	0	-.20	10.617	-31.532	
Maximum	Statistic	.488	1	1	2.574	20.136	18.326	
Mean	Statistic	.063	.835	.353	0.089	16.782	3.294	
	Std. Error	.004	.029	.037	0.019	0.171	0.333	
Std. Deviation	Statistic	.057	.372	.479	0.244	2.230	4.344	
Variance	Statistic	.003	.138	.230	0.060	4.972	18.873	
Skewness	Statistic	5.011	-1.824	.621	7.952	-0.739	-2.462	
	Std.	.186	.186	.186	0.186	0.186	0.186	
Kurtosis	Statistic	35.363	1.343	-1.634	73.493	0.188	24.432	
	Std.	.369	.370	.370	0.370	0.370	0.370	

4.5 Descriptive results on determinants of quality of assurance on SRs in Sub-Saharan Africa

Table 4.8 shows summary statistics for the variables in use, observations made, the variable mean, and standard deviation, given. The statistics show that company ownership has a mean of 0.84 with a minimum of 0 and a maximum of 1 and a standard deviation 0.372. This indicates on average, the company ownership of the selected Sub-Sahara African countries had highly dispersed ownership during the period of the study. The company ownership had a skewness of -1.824and kurtosis of 1.343.

In regards to industry sector, it has a mean of 0.35 with a minimum of 0 and a maximum of 1 and a standard deviation 0.479. This indicates on average, the industry sector show that most of the companies listed in the selected Sub-Sahara African countries did not come from industry sectors that had high negative impact on the environment during the period of the study. The industry sector had a skewness of 0.621 and kurtosis of -1.634.

In regards to Profit (ROA), it has a mean of 0.891 with a minimum of -0.20 and a maximum of 2.57 and a standard deviation 0.24423. This indicates on average, the Profit (ROA) of companies listed on the stock exchanges of the selected Sub-Sahara African countries had moderate profitability during the period of the study. The Profit (ROA) had a skewness of 7.952 and kurtosis of 73.493. This indicates a positively skewed and a highly peaked distribution.

In regards to nSize, it has a mean of 16.7818 with a minimum of 10.62 and a maximum of 20.141 and a standard deviation 0.479. The nSize had a skewness of -0.739 and kurtosis of 0.188. In regards to leverage, it has a mean of 3.2939 with a minimum of -31.53 and a maximum of 18.33 and a standard deviation 4.34434. The Leverage had a skewness of 0.186 and kurtosis of 24.432. This indicates a positively skewed and a highly peaked distribution.

Table 4. 7 Summary Statistics

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.027	0.065	0.42	0.674
Nsize	0.003	0.004	0.766	0.443
Leverage	-0.002	0.002	-1.023	0.306
Profit (ROA)	0.216	0.068	3.156	0.002
Industry_Sector	-0.063	0.017	-3.629	0
Company_Ownership	0.007	0.019	0.365	0.715
Mean dependent var	0.064	S.D. dependent var		0.073
Sum squared resid	0.362	Log likelihood		120.353
Akaike info criterion	-2.541	Schwarz criterion		-2.375
Hannan-Quinn criter.	-2.474	Deviance		0.362
Deviance statistic	0.004	Restr. deviance		0.468
LR statistic	24.561	Prob(LR statistic)		0
Pearson SSR	0.362	Pearson statistic		0.004
Dispersion	0.004			

From the table 4.8 above, only two variables are significant in the determination of the quality of assurance of sustainability reports. By the standard significance level, analyses with a p-value less than .05 are said to be statistically significant. Although the difference between .04 and .06

may seem minor, the practical consequences can be major. In this study, industry sector (0.0003) and profitability (0.0016) are significant to the study while company ownership, size, and leverage are not significant to the study.

4.6 Perception of industry players on quality of assurance on SRs

4.6.1 Response rate

A total of 128 questionnaires were emailed on google docs, each company was issued with two questionnaires to be filled by the internal auditor and the sustainability officer/expert. A total of 66 questionnaires were issued to the companies, 12 to the Big 4 audit firms in the respective countries while 50 questionnaires were issued to the sustainability consultants and practitioners. Out of these 128 questionnaires issued, 74 responded essentially resulting to a 57.8% response rate.

4.6.2 Demographic characteristics

Most of the respondents in this study were male (67%) as compared to female respondents (33%). 52% constituted of internal auditors while 9% constituted of external auditors and 39% were sustainability consultants and practitioners. Additionally, majority of the respondents had work experience of 5 to 10 years (48%), 1 to 4 years of experience constituted 41% while 11% constituted respondents with work experience of 11 to 15 years. The results clearly indicate that respondents had the knowledge and skills to answer the question asked.

4.6.3 Quality of assurance on sustainability reports (stand-alone, integrated reports)

The questionnaires sought to establish the quality of assurance on SRs by inquiring from the respondents about the aspects critical in evaluating the quality of assurance. The questions adopted the likert scale where 1 indicated a very low likelihood of not being critical while 5 indicated a high likelihood of the aspects being critical. The average weighted mean was used to show where the majority of the responses lie and the majority with the high likelihood to determine high quality assurance is standard used in the preparation of the SRs, followed by profession of assurer, assurance providers, criteria used and independence of assurer.

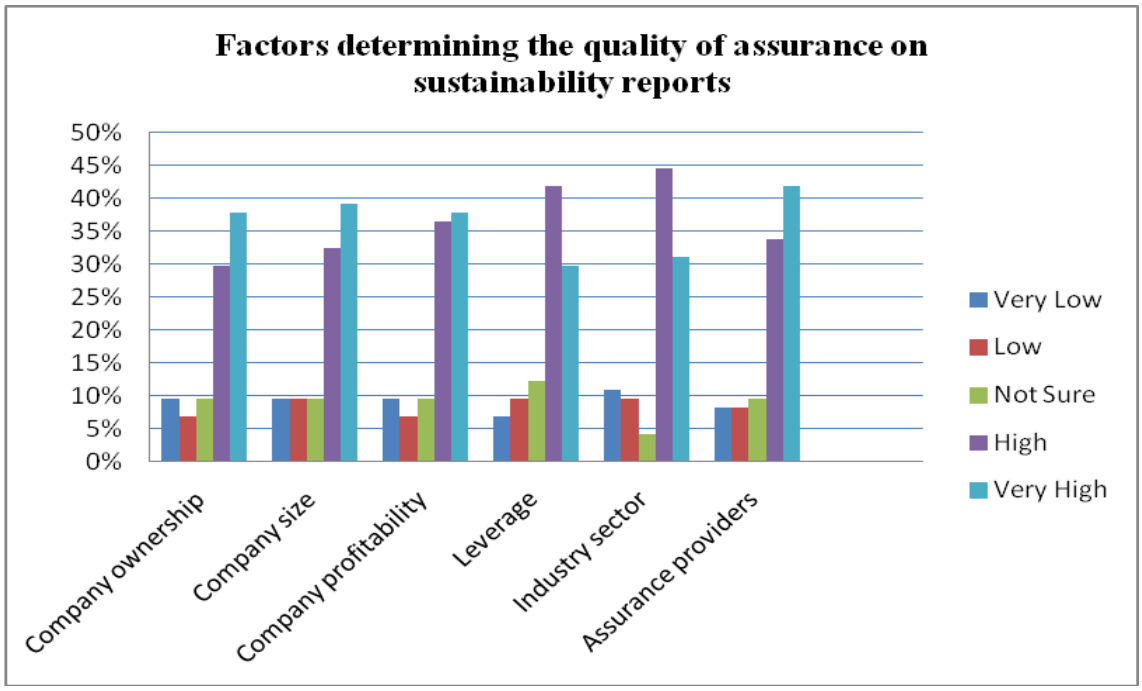
Table 4. 8 Techniques in quality assurance

Statement	Weighted Average Mean	Standard Deviation
Profession of assurer	3.986	0.172
Independence of assurer	3.905	0.171
Objective of the assurance engagement (indicating the level of assurance intended)	3.838	0.157
Scope of the assurance engagement	3.865	0.164
Criteria used to assess evidence and reach a conclusion	3.905	0.152
Standards used which govern the work of the assurance provider (e.g. AA1000AS, ISAE3000 or IIRC)	4.000	0.178
Statement explaining the actions taken to arrive at a conclusion	3.608	0.129
Listing status	3.892	0.165
Company ownership	3.676	0.142
Company size	3.824	0.146
Company profitability	3.865	0.157
Leverage	3.784	0.152
Industry sector	3.757	0.172
Assurance providers and their professional competences	3.946	0.163
Management's perceptions	3.541	0.104
High cost implications	3.730	0.139
Other budgetary priorities	3.892	0.159
No clear ties to financial gains	3.905	0.170
Lack of knowledge and skills in assurance process	3.824	0.173

4.6.4 Factors determining the quality of assurance on sustainability reports Sub-Saharan Africa (Kenya, Nigeria, and Botswana)

The results have illustrated in the chart below indicate; respondents were inquired of their opinion regarding factors that are critical in determining the quality of assurance. In their opinion, 46 % strongly agreed that listing status is the most common factor determining the

quality of assurance followed closely by assurance providers at 42%. Company size at 39% while both company ownership and profitability were at 38%.



4.6.5 Perception quality of assurance on sustainability reporting

The respondents were inquired of their views on quality of assurance reports. The table below illustrates the results.

Table 4. 9 Factors on quality of assurance

Factors	Weighted Average Mean	Standard Deviation
Management's perceptions	3.541	0.105
High cost implications	3.730	0.139
Other budgetary priorities	3.892	0.159
No clear ties to financial gains	3.905	0.171
Lack of knowledge and skills in assurance process	3.824	0.174

The various factors were ranked in the order of the weighted average mean and standard deviation. The results indicate that the factor rank in the following order: No clear ties to

financial gains, other budgetary priorities, Lack of knowledge and skills in assurance process, High cost implications, Management's perceptions.

4.7 Comparison of findings from secondary data and primary data

The findings from primary data and secondary indicate different results in factors that determine the quality of assurance of SRs. Majority of the respondents in their opinion, 46 % strongly agreed that listing status was highly significant factor determining the quality of assurance of followed closely by assurance providers at 42% while company size was at 39% while both company ownership and profitability was at 38%. Results from secondary data show that industry sector and company profitability were high predictors of the quality of assurance on SRs.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section of the study includes the discussion of the results with regard to the research objectives. In addition, it includes the winding up of the study as well as the contribution to the body of knowledge. The limits of the research are also highlighted and suggestions for additional exploration given.

5.2 Discussion of findings

This research was expected to help in determining the quality of assurance on sustainability reports. Objectives of the study were to establish quality of assurance by using an evaluative framework. Further, establish what determines the quality of assurance on SRs while obtaining perspectives of industry players on the adoption of quality assurance amongst listed corporations in Kenya, Nigeria, and Botswana. The determinants were analyzed using regression analysis. Findings of the study are argued in accordance research objectives.

5.2.1 Determining the quality of assurance on SRs in listed companies in Kenya, Nigeria, and Botswana.

From the content analysis, the level of quality of sustainability reports in Sub-Saharan Africa was deficient with as minimum of 0.0244, maximum of 0.4878, mean of 0.0629 and a standard deviation of 0.0569. Hypothesis 1 stated that companies with foreign ownership influence have a higher likelihood of having high quality assurance on SRs than companies constituting of local ownership. However, an unconstructive relationship involving company ownership and quality assurance on SRs as illustrated by p- value of 0.7150.

Hypothesis 2 predicted that corporations in industries linked to high-level ecological impact have elevated quality assurance on SRs than corporations in industries associated with less environmental impacts. There was a positive association between industry sector and quality of assurance with the p-value 0.0003 indicating significance. Profitability also had a positive association with quality of assurance, as the p-value was < 0.05 standing at 0.0016.

Hypothesis 3 predicted that large companies in terms of total assets value are more likely to be associated with high quality assurance on sustainability reporting compared to smaller companies. However, a negative association between size and quality assurance on sustainability reports as illustrated by the p- value of 0.443

From the questionnaire, average weighted mean was used to show where the majority of the responses lie and the majority with the high likelihood to determine high quality assurance is Independence of assurer at 47%, followed by Profession of assurer at 43% and objective of the assurance engagement at 42%.

As a result, there is no believable verification for a connection linking leverage, size and company ownership and quality of assurance. The variation may be clarified by confines of the measurement of these variables.

5.2.2 Establishing the determinants of quality of assurance on SRs in listed companies in Kenya, Nigeria, and Botswana.

From the regression analysis, company's profitability and industry sector were most significant as determinant of quality assurance. Industry sector p-value 0.0003 indicating significance and profitability p-value was < 0.05 standing at 0.0016.

From the questionnaire, most respondents at 46 % strongly agreed that listing status is the most common factor determining the quality of assurance of followed closely by assurance providers at 42% while company size at 39% while both company ownership and profitability was at 38%.

5.2.3 Perception of industry players on quality of assurance on SRs in listed companies in Kenya, Nigeria, and Botswana.

Results from the questionnaire indicate that most respondents were of the opinion that lack of knowledge and skills in assurance process at 46% was the biggest barrier when it came to quality of assurance of sustainability reports. No clear ties to financial gains at 39%, other budgetary priorities at 36%, High cost implications at 36%, Management's perceptions at 32%.

5.3 Conclusion

This study intended to answer the question of quality of assurance in Sub-Saharan Africa and further establish what determine the quality of assurance. The findings indicate that company's

profitability and industry sector are positively linked to the quality of assurance on SRs. It is expected that these relations are present for the reason that these definite companies encounter elevated stakeholder pressure and are obliged to produce SRs and ensure that these reports are assured. These results indicate that higher quality assurance may be used deliberately to decrease stakeholder pressure and maintain their legitimacy. Furthermore, the results indicate that the quality of assurance on SRs is higher with assurance providers, their independence and criteria and standards used.

5.4 Research implications and recommendations

5.4.1 Investors

Regardless of the fact that this study considered listed companies, the results may present practical approach for companies that look for high quality assurance on sustainability reports, and for stakeholders in search of reliable sustainability information. In this day, investors have evolved and are looking to invest in socially responsible investments.

5.4.2 Researchers and scholars

The study examined extent of quality of assurance on sustainability reports in Kenya, Nigeria, and Botswana. The study builds up to the existing body of knowledge where limited research carried out in relation to quality of assurance in Sub-Saharan Africa. It highlights some of the determinants of quality of assurance, thus forming a basis for further research.

5.4.3 Policy makers and regulators

Through the assessment factors that determine the quality of assurance on sustainability reports in Kenya, Nigeria, and Botswana, policy makers and industry regulators such as the Capital Markets Authority (CMA) bring about the best practices that ought to be adopted and implemented to drive up quality sustainability reporting essentially achieving high quality assurance. It builds up to the proposal of having a standard framework that can be used in evaluating quality of assurance.

5.5 Contribution to knowledge

This study sought to build on to the stakeholder, legitimacy and institutional theory by determining the quality of assurance. Additionally, this research adds on the limited literature on quality of assurance on sustainability reports in Sub-Saharan Africa. The study also examined the perception of industry players in the adoption of quality assurance on sustainability reports in an attempt to understand the extent of quality of assurance.

5.6 Limitations of the research

As is with any kind of study, there exist a number of limitations. The measurement of quality of assurance on sustainability required the use of an evaluative framework that is not an ideal way of measuring quality. Some elements might have been eliminated which in turn would be critical to the study. The study only looked at the top six largest stock exchanges in Sub-Saharan Africa. From the hypothesis testing, findings indicate that there is no significance between company ownership and quality of assurance. Same for leverage and company size. It was expected that companies with high leverage and are large would be positively linked to quality of assurance. It was also expected that companies with dispersed ownership would have been positively associated with quality of assurance. The deficient in results in addition to the results opposing the expectations may have been brought about by data limitations and how the variables were measured.

5.7 Areas of further research

This study considered listed companies; however, a similar research on non-listed companies would be of value. Well this study points out the need for obligatory disclosure that will ensure high quality assurance can be attained. Future studies can opt to evaluate the cost of obligatory assurance of SRs.

REFERENCES

Adams, C. A., & Evans, R. (2004). Accountability, completeness, credibility and the audit expectations gap. *Journal of Corporate Citizenship, 14*, 97–115.

African Business Central. (2017). Top 6 largest stock exchanges in Sub-Saharan Africa (Video). Retrieved from https://www.africanbusinesscentral.com/2019/02/17/top-6-largest-stock-exchanges-in-sub-saharan-africa-video/

Bepari, M.K., & Mollik, A.T. (2016). Stakeholders' Stakeholders' interest in sustainability assurance process: an examination of assurance statements reported by Australian companies. *Managerial Auditing Journal, 31*(7), 655-687

Birkey, R.N., Michelon, G., Patten, D.M. & Sankara, J. (2016). Does assurance on CSR reporting enhance environmental reputation? An examination in the U.S. context. *Accounting Forum, 40,* 143-152.

Brammer, S. & Pavelin, S. (2006). Voluntary Environmental Disclosures by Large UK Companies. *Journal of Business Finance and Accounting*, *33,* (7-8), 1168-1188.

Brooks,C. (2014).*Introductory econometrics for finance*. Cambridge University Press.

Bryman, A., & Bell, E. (2015). Business Research Methods. 4th ed. New York: Oxford University Press.

Casey, R.J. & Grenier, J.H. (2015). Understanding and Contributing to the Enigma of Corporate Social Responsibility (CSR) Assurance in the United States, *Auditing: A Journal of Practice and Theory*, *34*, (1), 97-130.

Clarkson, P.M., Li, Y., Richardson, G.D. & Vasvari, F.P. (2008). Revisiting the Relation Between Environmental Performance and Environmental: Disclosure: An Empirical Analysis. *Accounting, Organization and Society*, *33*, (4), 303-327.

Cohen, J.R. & Simnett, R. (2015), "CSR and assurance services: a research agenda", Auditing: *A Journal of Practice & Theory, 34* (1), 59-74.

Craswell, A., Stokes, D. & Laughton, J. (2002). Auditor Independence and Fee Dependence. *Journal of Accounting and Economics*, *33,* 253-275.

Dando, N. & Swift, T. (2003). Transparency and Assurance: Minding the Credibility Gap. *Journal of Business Ethics*, *44,* (2), 195-200.

De Beelde, I. & Tuybens, S. (2015), "Enhancing the credibility of reporting on corporate social responsibility in Europe", *Business Strategy and the Environment*, *24*(3), 190–216

DeAngelo, L. (1981), "Auditor size and audit quality", *Journal of Accounting & Economics*, *3* (3), 183-199.

Deegan, C., Cooper, B.J. & Shelly, M. (2006a), "An investigation of TBL report assurance statements: Australian evidence", *Australian Accounting Review*, *16* (39), 2-18.

Deegan, C., Cooper, B.J. & Shelly, M. (2006b), "An investigation of TBL report assurance statements: UK and European evidence", *Managerial Auditing Journal*, *21* (4), 329-371.

Dienes, D., Sassen, R., & Fischer, J. (2016) "What are the drivers of sustainability reporting? A systematic review", *Sustainability Accounting, Management and Policy Journal*, *7* (2), 154-189.

Dowling, J. & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *Pacific Sociological Review*, *18,* (1), 122-136.

Edgley, C., Jones, M. & Solomon, J. (2010), "Stakeholder inclusivity in sustainability report assurance", *Accounting Auditing and Accountability Journal*, *23* (4) 532-557.

Fernandez-Feijoo, B., Romero, S. and Ruiz, S. (2012), "Measuring quality of sustainability reports and assurance statements: characteristics of the high-quality reporting companies", *International Journal Society Systems Science*, 4 (1), 5-27.

Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Pitman Press, Boston.

Gillet, C. (2012), "A study of sustainability verification practices: the French case", *Journal of Accounting and Organizational Change*, *8* (1), 62-84.

Gray, R.H. (2000), "Current developments and trends in social and environmental auditing, reporting and attestation: a review and comment", *International Journal of Auditing*, *4* (3), 247-268.

Hahn, R. & Kuhnen, M. (2013), 'Determinants of Sustainability Reporting: A Review of Results, Trends, Theory, and Opportunities in an Expanding Field of Research', *Journal of Cleaner Production*, *59,* 5-21.

Herda,D.N, Taylor, M.E., & Winterbotham, G. J. (2014), The Effect of Country-Level Investor Protection on the Voluntary Assurance of Sustainability Reports, *Journal of International Financial Management & Accounting*, *25*, (2), 209-236.

Hodge, K., Subramaniam, N. & Stewart, J. (2009), "Assurance of sustainability reports: impact on report users' confidence and perceptions of information credibility", *Australian Accounting Review*, *19* (3), 178-194.

Hu, Y. & Karbhari, Y. (2015), "Incentives and Disincentives of Corporate Environmental Disclosure: Evidence from Listed Companies in China and Malaysia", *Thunderbird International Review*, *57* (2), 143-161.

Ioannou, I. & Serafeim, G. (2011), "The consequences of mandatory corporate sustainability

Jarque, C. M., & Bera, A. K. (1980). Efficient tests for normality, homoscedasticity and serial independence of regression residuals. Economics letters, 6(3), 255-259.

Junior, R.M., Best, P.J. & Cotter, J. (2014), "Sustainability reporting and assurance: a historical analysis on a world-wide phenomenon", *Journal of Business Ethics*, Vol. 120 No. 1, pp. 1-11.

Kamp-Roelands, N. (2002), "Towards a framework for auditing environmental reports", unpublished PhD thesis, Tilburg University.

Klein,J. Jochaud, P. Richter, H. Bechmann, R. & Hartmann, S. (2013). Green Economy in Sub-Saharan Africa:Lessons from Benin, Ethiopia, Ghana, Namibia and Nigeria, Germany: GIZ

Kolk, A. & Perego, P. (2010), "Determinants of the adoption of sustainability assurance statements: an international investigation", *Business Strategy and the Environment*, *19* (3), 182-198.

KPMG (2013). *The KPMG Survey of Corporate Responsibility Reporting 2013:* Executive Summary.

KPMG (2015). *Currents of Change: The KPMG Survey of Corporate Responsibility Reporting 2015.*

KPMG (2017). The Road Ahead: *The KPMG Survey of Corporate Responsibility Reporting 2017*

Kumar, R. (2010). Research Methodology*: A Step-by-Step Guide for Beginners*. 3rd ed. London: SAGE Publishers.

Laufer, W. (2003), "Social accountability and corporate greenwashing", *Journal of Business Ethics, 43* (3), 253-261.

Lyon, T.P. & Maxwell, J.W. (2011). Greenwash: Corporate Environmental Disclosure under Threat of Audit. *Journal of Economics and Management Strategy, 20,* (1), 3-41.

Manetti, G. & Becatti, L. (2009), "Assurance services for sustainability reports: standards and empirical evidence", *Journal of Business Ethics,* 87 (1), 289-298.

Manetti, G. & Toccafondi, S. (2012), "The role of stakeholders in sustainability reporting assurance", *Journal of Business Ethics, 107,* (3), 63-377.

Martinov-Bennie, N., Frost, G. & Soh, D.S.B. (2012), "Assurance on sustainability reporting: state of play and future directions' in contemporary issues", in Jones, S. and Ratnatunga, J. (Eds), *Sustainability Accounting, Assurance and Reporting*, Emerald Publishing, pp. 267-283.

Marx, B. & Dyk, V. (2011), "Sustainability reporting and assurance: an analysis of assurance practices in South Africa", *Meditari Accountancy Research, 19* (1), 39-55.

McBurney, D., & White, T. (2009). *Research methods*. London: Thomson Learning.

Mishra, S., & Suar, D. (2010). Does corporate social responsibility influence firm performance of Indian companies? *Journal of business ethics, 95*(4), 571-601.

Mock, T.J., Rao, S.S. &Srivastava, R.P. (2013), "The development of worldwide sustainability reporting assurance", *Australian Accounting Review, 23* (4), 280-294.

Mock, T.J., Strohm, C. & Swartz, K.M. (2007), "An examination of worldwide assured sustainability reporting", *Australian Accounting Review, 17* (1), 67-77.

Moneva, J.M., Archel, P. & Correa, C. (2006), "GRI and the camouflaging of corporate unsustainability", *In Accounting Forum, 30* (2), 121-137.

Mori Junior, R., Best, P.J. & Cotter, J. (2013), "Sustainability reporting and assurance: a historical analysis on a world-wide phenomenon", *Journal of Business Ethics, 120* (1), 1-11.

Moroney, R., Windsor, C. and Aw, Y.T. (2012), "Evidence of assurance enhancing the quality of voluntary environmental disclosures: an empirical analysis", *Accounting and Finance, 52* (3), 903-939.

O'Dwyer, B., & Owen, D. L. (2005). Assurance statement practice in environmental, social and sustainability reporting: A critical evaluation. *The British Accounting Review, 37*(2), 205-229.

O'Dwyer, B., Owen, D., & Unerman, J. (2011). Seeking legitimacy for new assurance forms: The case of assurance on sustainability reporting. *Accounting, Organizations and Society, 36*(1), 31-52.

Owen, D.L., Chapple, W. & Urzola, A.P. (2009), Key Issues in Sustainability Assurance, The Association of Chartered Accountants, International Centre for Corporate Social Responsibility, London.

Patten, D.M. (2002). The Relation between Environmental Performance and Environmental Disclosure: A Research Note. *Accounting, Organizations and Society*, 27, (8), 763-773.

Perego, P., & Kolk, A. (2012). Multinationals' accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics, 110*(2), 173–190.

Perego, P.M. (2009), "Causes and consequences of choosing different assurance providers: an international study of sustainability reporting", *International Journal of Management*, *26*(3), 412-425.

Pflugrath, G., Roebuck, P., &, Simnett, R. (2011). Impact of assurance and assurer's professional affiliation on financial analysts' assessment of credibility of corporate social responsibility information. Auditing: *A Journal of Practice and Theory, 30*(3), 239-254.

Ramus, C.A. & Montiel, I. (2005), "When are corporate environmental policies a form of greenwashing?" *Business & Society, 44* (4), 377-414.

Reimsbach D, Hahn R, & Gurturk A. (2017). Integrated reporting and assurance of sustainability information: An experimental study on professional investors' information processing. *European Accounting Review 26*(1): 1–23.

Roberts, R.W. (1992). Determinants of Corporate Social Responsibility Disclosure. *Accounting, Organizations and Society*, *17*, (6), 595-612.

Romero, S., Ruiz, S. & Fernández-Feijóo, B. (2010), "Assurance statement for sustainability reports: the case of Spain", Proceedings of the Northeast Business & Economics Association, EBSCO, 105-112.

Seanama (2012). Botswana National Report for the United Nations Conference on Sustainable Development – Rio+20 Conference. Seanama Conservation Consultancy (Pvt) Ltd

Sekaran, U., & Bougie, R. (2013). Research Methods for Business: *A Skill-Building Approach*. 6th ed. U.K: John Wiley & Sons Ltd.

Shapi, B. (2016). Time now for green building concept. Botswana Daily News.Retrieved from http://www.dailynews.gov.bw/news-details.php?nid=30080

Sierra-Garcia, L., Zorio-Grima, A. & Garcia-Benau, M.A. (2013a). 'Sustainable Development and Assurance of Corporate Social Responsibility Reports Published by Ibex-35 Companies', *Corporate Social Responsibility and Environmental Management*, *20*, 359.

Sreejesh, S., Mohapatra, S. and Anusree, M. (2013). *Business Research Methods: An Applied Orientation*. India: Springer Science & Business Media.

sseinitiative.org. (2018). *2018 REPORT ON PROGRESSA paper prepared for the Sustainable Stock Exchanges 2018 Global Dialogue*. [online] Available at: http://www.sseinitiative.org/wpcontent/uploads/2018/10/SSE_On_Progress_Report_FINAL.pdf [Accessed 24 Apr. 2019].

Tilt, C.A. (2009). Corporate responsibility, accounting and accountants. In S.O. Idowu & W.L.Filho (Eds.), *Professionals' perspectives of corporate social responsibility,* 11-32. Berlin:Springer.

Watts, R. L., & Zimmerman J. L. (1986). *Positive Accounting Theory*. Englewood Cliffs, NJ: Prentice Hall.

APPENDICES

APPENDIX 1: A content index analysis of quality of assurance statements

Ranking	Definition	Score (41 Points)	
1. Type of report	If references Annual report/ Sustainability report/ Integrated Report	0	No reference
		1	Annual report
		2	Integrated report
		3	Stand- alone report
2. Title	Title of the assurance statement	0	No reference
		1	Reference
3. Addressee	Persons or individuals to whom the assurance statement is formally addressed	0	No reference
		1	Addressee is internal or "the readers"
		2	Stakeholder mentioned in the addressee
4. Responsibilities of assurer	Explicit statement that the reporter is responsible to express an (independent) opinion on the subject matter (the sustainability/ environmental/ social report)	0	No reference
		1	Reference
5. Independence of assurer	A statement expressing the independence of the two parties involved	0	No reference
		1	Reference or mere statement expressing independence
		2	Compliance with independent, IFAC and International Ethics Standards Board for Accountants (IESBA) codes of ethics
6. Objective of the assurance engagement	Objective to be achieved through the engagement (indicating the level of assurance intended)	0	No reference
		1	Review, limited assurance, independent opinion, independent assurance, external verification, external assurance or validation
		2	Reasonable Assurance or reasonable and limited

			assurance (e.g., two different levels of assurance for different parts of the report)
7. Scope of the assurance engagement	Assurance statement coverage	0	No reference
		1	Reference to the greenhouse gas emission section
		2	Reference to multiple sections reference to the entire report
8. Criteria used to assess evidence and reach a conclusion	A statement that makes reference to particular criteria against which the Sustainability report/ Integrated Report has been prepared (e.g, GRI, King III and IIRC often internally developed standards)	0	No reference
		1	Reference to publicly unavailable criteria
		2	Reference to publicly available criteria (e.g., internally developed criteria that are published anywhere in the report or GRI)
9. Assurance standard used	Standards used which govern the work of the assurance provider (e.g. AA1000AS, ISAE3000)	0	No Reference
		1	Reference to publicly unavailable criteria
		2	Reference to publicly available criteria
		3	Reference to AA1000AS or ISAE3000
10. Summary of work performed	Statement explaining the actions taken to arrive at a conclusion	0	No Reference
		1	Reference
11. Impartiality of assuror towards stakeholders	Assuror's declaration of impartiality with respect to stakeholder interests	0	No reference
		1	Reference (a remark that such a declaration can be made available on request or reference to an internet site already qualifies for a 1)
12. Materiality (from a stakeholder perspective)	Degree of information provision on materiality level. If the conclusion states that the report is in conformance with the AA1000 principles (Materiality, completeness,	0	No reference
		1	Reference limited to a broad statement (e.g. "covers all material aspects" or "…in all material respects…") but also negative statements claiming that assuror has *not*

	and responsiveness) this qualifies for a reference and thus 1 is assigned		undertaken any work to confirm that all relevant/material issues are included
		2	Reference and explanation of materiality setting or reference limited to a broad statement and stakeholder perspective introduced (e.g. "issues material to stakeholders have been considered")
		3	Reference, explanation of materiality setting and stakeholder perspective introduced
13. Completeness	Statement expressing that all material aspects are covered by the report. If the conclusion states that the report is in conformance with the AA1000 principles (Materiality, completeness, and responsiveness) this qualifies for a reference and thus a 1 is assigned	0	No Reference
		1	Reference
14. Responsiveness to stakeholders	Statement referring to the organization's procedures (or lack of them) for identifying stakeholder interests and concerns.	0	No Reference
		1	Reference
15. General conclusion/ opinion	Statement expressing the result of the assurance exercise. If there is no general conclusion but the conclusion solely refers to the 3 principles of AA1000 (Materiality, completeness, and responsiveness) a 0 is assigned	0	No Reference
		1	A simple statement expressing the opinion of the assurer (e.g., "XY's report is a fair representation of its Sustainability performance"). One should be assigned only if the conclusion consists only of one sentence
		2	An explanatory statement (more than one sentence, including recommendations

			for improvement if necessary)

Source: O'Dwyer and Owen (2005), Simnett, Vanstraelen and Chua (2009), Perego and Kolk (2012) and Zorio et al. (2013)

APPENDIX II: Research Permit Letter

Strathmore UNIVERSITY

13 May 2019

TO WHOM IT MAY CONCERN

Facilitation of Research for Njeri Christine Gatakaa Student No. 096401

Ms Njeri Christine Gatakaa is a postgraduate student in our Master of Commerce (MCom) programme. In partial fulfilment of the MCom degree, students are required to carry out a research project and write a thesis on a contemporary subject within their field of specialisation. Among other activities, the project involves data collection and analysis.

Christine is requesting to gather information to be used in her research. The information she will obtain from your organization will be used for this academic purpose only and will be kept confidential. The results of the survey will be in summary form and will not disclose any individual, company name or company information in any way.

Our MCom seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share the findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

The research study is entitled **"A study on determinants of the quality of sustainability assurance among listed companies in Kenya, Nigeria, and Botswana."**

We appreciate your support and shall be willing to provide any further information if required.

Yours faithfully,

Quindos Karanja
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APPENDIX III: Research Questionnaire

The purpose of this questionnaire is to collect data on quality of assurance of sustainability reports. The information will be treated with the deserving confidentiality and it is purely for academic purpose.

Part one: General information

1. Gender. Male [ ] Female [ ]
2. Occupation. Internal auditor [ ] External auditor [ ] Sustainability expert [ ] Other……..
3. Years of experience in the position. Less than 1 year [ ] between 1- 4 years [ ] between 5-10 years [ ] between 11-15 years [ ] over 15 years [ ]

Part two: Determining the quality of assurance on sustainability reports (stand-alone, integrated reports).

Indicate with ticking, to what extent does the following aspects critical in the assessment of quality of assurance on sustainability reports?

Statement	**1 Strongly disagree**	**2 Disagree**	**3 Not sure**	**4 Agree**	**5 Strongly agree**
Profession of assurer					
Independence of assurer					
Objective of the assurance engagement (indicating the level of assurance intended)					
Scope of the assurance engagement					
Criteria used to assess evidence and reach a conclusion					
Standards used which govern the work of the assurance provider (e.g. AA1000AS, ISAE3000 or IIRC)					
Statement explaining the actions taken to arrive at a conclusion					

Part three: Establishing factors that determine the quality of assurance on sustainability reports

1.) Indicate through ticking, to what extent the following factors determine the level of quality of assurance of sustainability reporting.

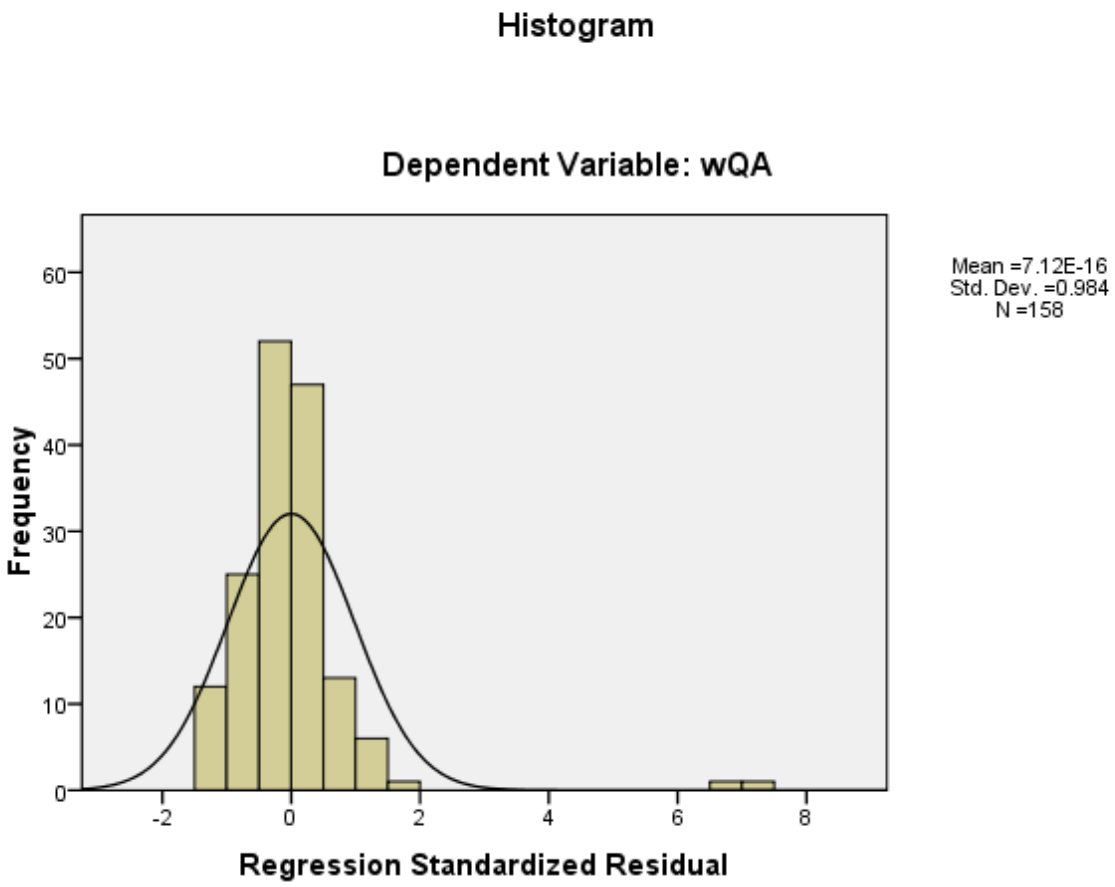
Factors	**1 Strongly disagree**	**2 Disagree**	**3 No Opinion**	**4 Agree**	**5 Strongly agree**
Listing status					
Company ownership					
Company size					
Company profitability					
Leverage					
Industry sector					
Assurance providers and their professional competences					
Any other factors					

2.) Indicate through ticking; which of the following barriers that hinder quality of assurance on Sustainability Reports

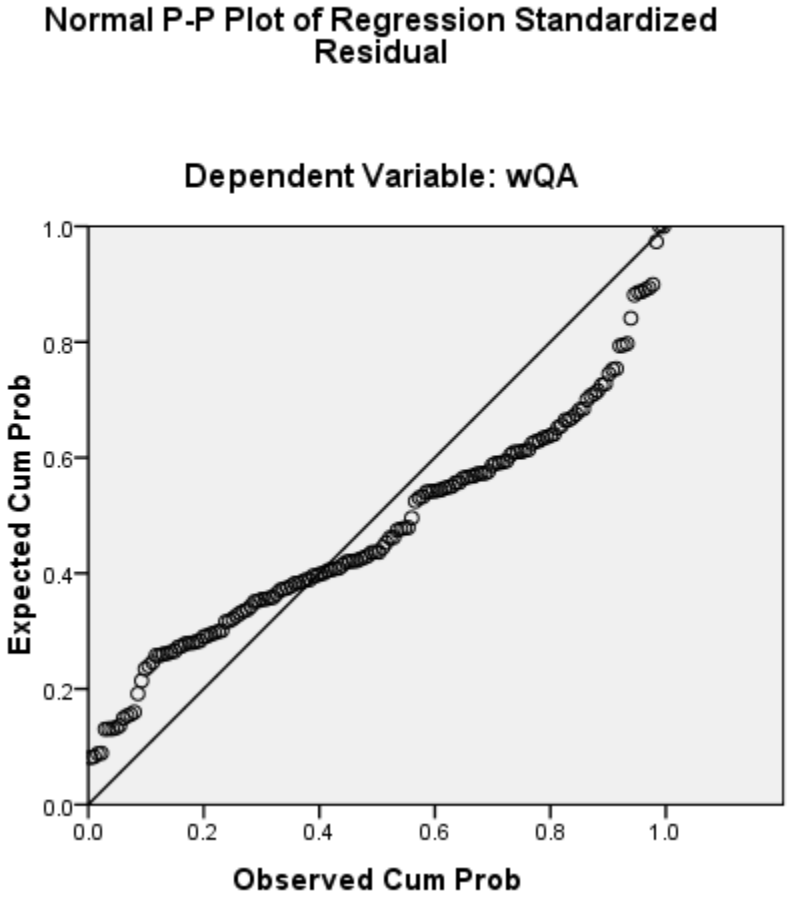
Statement	**1 Strongly disagree**	**2 Disagree**	**3 No Opinion**	**4 Agree**	**5 Strongly agree**
Management's perceptions					
High cost implications					
Other budgetary priorities					
No clear ties to financial gains					

Voluntary in nature					
Lack of knowledge and skills in assurance process					
Any other factors					

APPENDIX IV: Histogram for dependent variable wQA



APPENDIX V: Normal quantile-quantile plot for dependent variable wQA



APPENDIX VI: Descriptive Statistics on Quality in Kenya

Descriptive Statistics (Kenya)								
		wQA	Company Ownership	Industry sector	profit (ROA)	nSize	Leverage	Valid N (listwise)
N	Statistic	90	90	90	90	90	90	90
Minimum	Statistic	.024	0	0	-.20	10.617	-31.532	
Maximum	Statistic	.488	1	1	.41	20.136	15.220	
Mean	Statistic	.064	.822	.433	.072	17.152	2.694	
	Std. Error	.008	.041	.053	.012	0.271	0.515	
Std. Deviation	Statistic	.073	.384	.498	.111	2.567	4.887	
Variance	Statistic	.005	.148	.248	.012	6.589	23.884	
Skewness	Statistic	4.593	-1.714	.274	.969	-1.226	-3.569	
	Std. Error	.254	.254	.254	.254	0.254	0.254	
Kurtosis	Statistic	25.072	.960	-1.969	1.824	0.739	27.025	
	Std. Error	.503	.503	.503	.503	0.503	0.503	

APPENDIX VII: Descriptive Statistics on Quality in Nigeria

Descriptive Statistics (Nigeria)								
		wQA	Company Ownership	Industry sector	profit	nSize	Leverage	Valid N (listwise)
N	Statistic	45	45	45	45	45	45	45
Minimum	Statistic	.024	0	0	-.015	13.803	.177	
Maximum	Statistic	.122	1	1	2.574	19.762	10.242	
Mean	Statistic	.049	.733	.467	.153	16.855	3.265	
	Std. Error	.004	.067	.075	.066	0.287	.404	
Std. Deviation	Statistic	.031	.447	.505	.444	1.923	2.710	
Variance	Statistic	.0009	.200	.255	.197	3.696	7.347	
Skewness	Statistic	1.338	-1.092	.138	4.786	-0.176	.830	
	Std. Error	.354	.354	.354	.354	0.354	.354	
Kurtosis	Statistic	1.006	-.847	-2.075	23.350	-1.646	-.278	
	Std. Error	.695	.695	.695	.695	0.695	.695	

APPENDIX VIII: Descriptive Statistics on Quality in Botswana

Descriptive Statistics (Botswana)								
		wQA	Company Ownership	Industry sector	profit	nSize	Leverage	Valid N (listwise)
N	Statistic	35	35	35	35	35	35	35
Minimum	Statistic	.024	1	0	.004	13.585	.418	
Maximum	Statistic	.108	1	0	.154	16.977	18.326	
Mean	Statistic	.078	1.00	0.000	.050	15.736	4.875	
	Std. Error	.004	0.00	0.000	.006	0.184	.722	
Std. Deviation	Statistic	.026	0.00	0.000	.037	1.090	4.273	
Variance	Statistic	.001	0.00	0.000	.001	1.187	18.257	
Skewness	Statistic	-1.043			1.205	-0.890	1.051	
	Std. Error	.398			.398	0.398	.398	
Kurtosis	Statistic	.375			.758	-0.703	1.264	
	Std. Error	.778			.778	0.778	.778	

APPENDIX IX: List of companies

	Kenya	**Nigeria**	**Botswana**
1	B.O.C Kenya Ltd	Guinness Nigeria	Choppies Enterprises
2	Bamburi Cement Ltd	Nestle Nigeria	Wilderness Holdings (Botswana)
3	British American Tobacco Kenya Ltd	Nigerian Breweries	Barclays Bank of Botswana
4	CFC Stanbic of Kenya Holdings Ltd	PZ Cussons Nigeria	Botswana Insurance Holding
5	Diamond Trust Bank Kenya Ltd	Total Nigeria	First National Bank Botswana
6	E.A.Portland Cement Co. Ltd	Union Bank of Nigeria	Letshego Holdings
7	East African Breweries Ltd	United Bank for Africa	Standard Chartered Botswana
8	KCB Group Ltd Ord	Berger Paints	
9	Kenya Airways Ltd	FBN Holdings	
10	Kenya Power & Lighting Co Ltd		
11	Kenya Re Insurance Corporation Ltd		
12	Liberty Kenya Holdings Ltd		
13	National Bank of Kenya Ltd		
14	Safaricom Ltd		
15	Sameer Africa Ltd		
16	Standard Chartered Bank Kenya Ltd		
17	The Co-operative Bank of Kenya Ltd		
18	Total Kenya Ltd		

Source: Nairobi Securities Exchange (2019); Nigeria Stock Exchange (2019); Botswana Stock Exchange (2019)