DETERMINING THE STRENGTH OF AUDITING STANDARDS AND REPORTING

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Abstract

This study devises a model to evaluate the strength of auditing standards and reporting (SARS) in individual countries. Drawing from data collected by the World Economic Forum the model's predictive capabilities are tested in the geographical region of sub-Saharan Africa. Data from 28 countries was utilised.

The predictive powers of the model are significant. Eight of the thirteen variables utilised were found to be significant predictors of a country's SARS. Corporate governance variables and shareholder protection variables were found to be particularly prominent. Evaluation of the results also demonstrates that a country's SARS does not appear to be linked to adoption of international standards of auditing. This suggests standardised adoption of ISAs will not necessarily lead to uniformly strong and consistent audit reporting regimes across countries.

Keywords: Corporate Governance, Strength of Audit Standards and Reporting (SARS), Legal Frameworks, Auditing Standards in Africa

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Introduction

International financial reporting standards (IFRSs) and international auditing standards (ISAs) continue to be implemented worldwide. The pace of adoption in each country varies. Despite these international pronouncements, and other attempts at global harmonisation, the financial reporting and auditing jurisdictions of all countries are not homogeneous. Many factors such as cultural, legislative, economic and educational, all impact on the effectiveness of the governance environment. This is irrespective of whatever standardised pronouncements have been agreed upon.

Little attempt has been made in the extant literature to gauge how effective individual audit reporting environments are in various countries, relevant to each other. Similarly, the issue of whether or not the adoption of the same (or similar) auditing standards results in a uniformly strong governance environment appears worth addressing. The purposes of this paper are therefore twofold. First, to devise a suitable model with which to measure the strength of auditing standards and reporting (SARS) environments in individual countries. Second, to compare the relative strength of the SARS environments of twenty eight sub-Saharan African countries, the sample geographical area chosen to test the model, using individual country level data. The comparison will assist in determining whether or not countries at the same or similar stages of ISA adoption, demonstrate similar strength in the level of their SARS environments.

It is important to investigate the factors that have contributed to SARS for many reasons. For instance, many countries in the world are classified as emerging economies and therefore potential markets for investment. It is important for investors to be informed about the SARS in those countries. Another reason for addressing this question concerns some of the findings from extant literature in accounting, concerning the adoption and implementation of international standards. The implementation processes of both IFRS and ISAs have been reported as problematic in many countries (see Nobes, 2008; 2010; IFAC, 2009; World Bank, 2010). The majority of current literature in the area has focused on IFRS and has been modest on ISAs. Furthermore, there appears very little study on SARS and its determinants in individual jurisdictions. This paper is therefore intended to fill some of these gaps.

The Global Competitiveness Report (2009) of the World Economic Forum (WEF, 2010) provides a comparative qualitative picture of the economic and

business environments of individual countries. The report measures, what it terms, 12 pillars of a global competitiveness index (GPI). A total of 110 variables were utilised to measure the GPI score. The variables were measured predominantly based on the results of surveys of chief executive officers of entities from 139 countries across the world. One of these variables is referred to as the *strength of auditing and reporting standards*. Hence the SARS score arrived at was based on the personal evaluations of SARS in their own countries by these executives. It would appear critical to attempt to evaluate the factors that influenced their SARS assessments. This study therefore utilises 13 other variables from the WEF report, those relevant to evaluating the auditing environment, to devise a model for measuring SARS. The variables are grouped into six main categories, namely: legal framework, corporate governance, financial market status, higher education levels, foreign market influences and shareholder protection regimes.

Analysis of the data supports the two objectives of the study mentioned above. First, the majority of the variables used in the model are found to be accurate predictors of the final SARS evaluation. This would tend to suggest, a general model to predict the *strength of auditing and reporting standards* (a variable the WEF considers significant enough to evaluate) in a country, can be developed. Second, results analysis reveals the strength of SARS varies significantly among the African countries used in this study, despite attempts at harmonisation/ standardisation.

This paper contributes to the auditing literature in four ways. First, potential investors can use SARS evaluations as a basis to assist investment decisions, as it is assumed prudent investors will wish to invest in countries with strong audit and reporting environments. Second, researchers can use the model in future studies of regional or even country comparatives. Third, the paper contributes to the literature on the strength of auditing and reporting standards in sub-Saharan Africa, a region that has not been well researched. Finally, the scores obtained in this study offer support for a possible IFAC classification of the state of auditing standards adaptation in some countries, which were unclassified in previous IFAC reports (see IFAC Report, 2009).

The remainder of this study is organised as follows. The next section contains a literature review of studies in the area of audit regulatory quality. From that review a conceptual framework with which to evaluate the strength of auditing and reporting standards is developed and specific hypotheses for this study are derived. The following section discusses data collection and testing methodology. The empirical results are then presented and analysed. The concluding section summarises the study, discusses limitations and offers areas for future research.

Literature Review and Hypotheses Development

Audit Quality

Watts and Zimmerman (1986) suggest that auditing is fundamental for the effective functioning of capital markets because auditing helps to reduce agency risks. The strength of audit quality is therefore important and has been well investigated in the literature. Most studies on audit quality focus on the so called "big four" auditors in the profession (Durnev et al., 2005; Fan and Wong, 2005; Choi and Wong, 2007). Fan and Wong (2005) suggest that in the context of Asia, countries are more likely to acquire the service of a big four auditor to ensure agency risk is mitigated. Similarly, Lennox (1999) relates the quality of audit with the types of audit firms. He argues that the big four auditors provide quality audit compared with small audit firms. Francis and Wang (2004) maintain that although the audit profession may be less developed in some countries, big four audit firms can perform high quality audits and also transfer their knowledge and expertise into those countries (see also Francis and Wilson, 1988; Reynolds and Francis, 2001). The argument in the above studies may not hold as strong today, given the various financial scandals and recent global financial crisis in the business arena. But the quality of audit firms is certainly one factor which will impact on the quality of the audit function in any jurisdiction.

Other factors however also impact on the effectiveness of auditing and reporting environments. The literature on auditing is very rich in the areas of ethics, theoretical applications, audit procedural practices, audit fees, audit rotation, training and education, etc. (see Watts and Zimmerman, 1986; Peecher and Solomon, 2001; Asare and Wright, 2001; Cobbin, 2002; Nikkinen and Sahalstrom, 2004; Frazer and Lin, 2004; Bewley et al., 2008). All these factors impact on effectiveness to some extent.

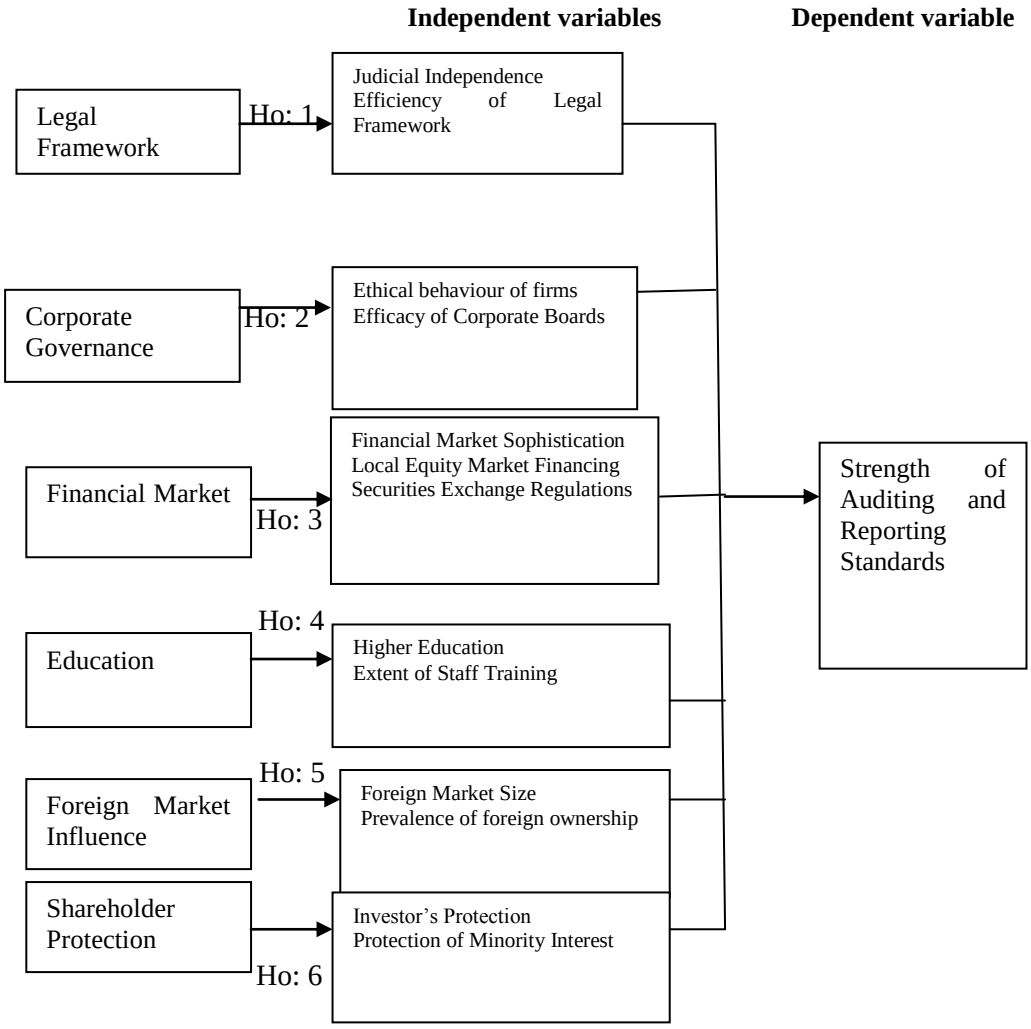
Accounting literature suggests that there are many factors which affect a country's accounting systems and practices, including auditing. These include the rules of law, regulation, financial market characteristics and enforcement (see for example, Briston, 1978; Hove, 1986; Nobes, 1998; Nobes, 2010; and Hatfield, 1911). These arguments therefore support the concept that a country must have a good SARS environment to be able to ensure effective functioning of the capital market, a point highlighted by Lennox (1999) and Carson (2009). The literature review above demonstrates a significant volume of work concerning audit quality in general. However, specific research aimed at identifying groups of factors, that is, a predictive model with which to evaluate the strength of audit regulatory environments, is sparse. Furthermore, there is no study which has addressed the strength of auditing and its determinants in the context of Africa. The

present paper seeks to fill these gaps by developing a conceptual framework, based upon the relevant factors mentioned in the above studies, with which to evaluate SARS, and then applying the model to sub-Saharan African countries, to see if SARS varies from country to country.

Conceptual Framework and Hypotheses Development

From the above review, six main determinants of the strength of auditing standards and reporting are derived. These are: legal framework, corporate governance, financial market framework, higher education, foreign market influence and shareholder protection regimes. Each determinant is taken in turn and the literature is further reviewed to extract specific variables which can be utilised to evaluate them. Variables which have previously been used in the literature assessing quality in accounting/auditing preparation and reporting environments are identified in the hypothesis with an (L). These studies have more often than not concentrated at the individual *firm level*, whereas this study focuses on quality at a country level. We supplement these extant variables with some new variables which we consider could be predictors of *country level* audit quality standards and reporting. These have been derived from the WEF (2010) report and are identified in the hypothesis with an (N). We then assess whether an overall SARS score(s) for individual countries can be accurately predicted from the model. The full SARS process is conceptualised in the chart below.

Chart 1. Conceptual Framework and Hypotheses



Legal Framework Hypotheses

The legal tradition of a country is the basis for defining its legal system. Many studies, such as La Porta et al. (1998) note how a country's legal framework impacts upon the quality of reporting of that country. Similarly, Barniv et al., (2005) use two factors at country level, to determine impact on SARS on individual analysts, namely judicial independence and the efficiency of the legal framework. Both were found to be significant. It would therefore appear valid to assume these variables, measures of a country's legal environment, can be utilised to predict the strength/weakness of the audit reporting environment of that country. The first two hypotheses are therefore stated as follows:

Ho 1.1: There is a positive relationship between the level of judicial independence (L) in a country and its SARS.

Ho 1.2: There is a positive relationship between the efficiency of the legal framework (L) of a country and its SARS.

Corporate Governance Hypotheses

There has been a need to enhance corporate governance, in particular to improve the strength of auditing and reporting, due to some serious financial frauds such as Enron, WorldCom etc (Levitt, 1998, 2000). These reforms relate to improving effectiveness of audit committees and increasing accountability of boards of directors (Sarbanes-Oxley Act, 2002). Cohen et al., (2004) suggest that the quality of auditing and reporting depends on factors such as the effectiveness of audit committees and independence of their members (see also De Zoort et al., 2003). In a similar vein, Francis et al., (2003) contend that the quality of corporate governance positively affects the quality of reporting in countries where corporate governance focuses on stronger investor protection. Given that accounting literature suggests a positive relationship between effectiveness of audit committee and quality of reporting (Cohen et al., 2003, 2008), this paper therefore hypothesises corporate governance variables should impact on SARS. However, the literature is silent as regards one further element of corporate governance, the impact of the ethical behaviour of firms. This is deemed significant enough to be evaluated by the WEF in their reports, hence the next two hypotheses are:

Ho 2.1: There is a positive relationship between the ethical behaviour of firms (N) in a country and its SARS.

Ho 2.2: There is a positive relationship between the efficacy of corporate boards (L) in a country and its SARS.

Financial Market Operations Hypotheses

Nobes (1998) suggests that the strength of a country's equity market influences its financial reporting framework. He further argues that the standard of reporting in a country with a strong equity market should be higher than that of a country with a weak equity market. Accounting literature has empirically tested Nobes' theory by using market capitalisation and number of listed companies per capita as the variables measuring strength of financial markets.

Apart from the strength of a country's equity markets, there are other factors in the financial market environment which may also affect SARS of a country. These are: the sophistication of the equity market, the strength of securities exchange rules, and the level of financing through local equity markets, A more sophisticated financial market (in terms of stage of development) will require stronger auditing and reporting standards and some countries do not necessarily have a sophisticated financial market compared to others (Ong and Lorgova, 2008). Concurring with Nobes (1998), it is evident that when market capitalisation per capita is high, it implies that investors are investing more and that demonstrates confidence in financial information, thus a strong reporting environment. This would tend to suggest securities exchange regulations are considered reliable and local equity markets are considered a safe environment for investment.

However, SARS may not only be determined by the variables proposed by Nobes (1998). As mentioned above, sophistication rather than mere size may be a better explanatory variable. The next three hypotheses are therefore stated as follows:

Ho 3.1: There is a positive relationship between the level of sophistication of the financial market (N) of a country and its SARS.

Ho 3.2: There is a positive relationship between the ease of financing through local equity markets (N) in a country and its SARS.

Ho 3.3: There is a positive relationship between the strength of the securities exchange regulations (L) of a country and its SARS.

Higher Education Hypotheses

Accounting literature supports the theory that a country's level of education impacts on the strength of its auditing and reporting (Nobes, 1983; Nobes, 1998; Gray, 1988). Most of the studies in this area use either literacy rates or the higher education index of a country. In this study two education variables are proposed as determinants of SARS of a country. They are: average higher education index, often used in the literature, and extent of staff training, never used at country level in the literature. This may be an important country level determinant of the standard of auditing and reporting, as Reynolds and Francis

(2001) identified it as significant at individual firm level. It is argued that SARS in a country depends upon how auditing practice is delegated to professionals, hence the education and deployment of those professionals should impact on regulatory effectiveness. The following hypotheses are therefore tested:

Ho 4.1: There is a positive relationship between the level of higher education (L) in a country and its SARS.

Ho 4.2: There is a positive relationship between the extent of staff training (N) in a country and its SARS

Foreign Market Size Hypotheses

The size of the foreign market of a country and prevalence of foreign ownership are also considered, in WEF reports, as significant factors which may impact on the strength of reporting regimes. Furthermore, some countries have key foreign trading partners which exert pressure on them to meet their reporting requirements. Hence, the size of a country's foreign market and the prevalence of foreign ownership may also be important determinants of SARS in a country. Levich (2001) contends that emerging countries are considered as investment opportunities and therefore the standard of reporting should be of high quality. The next two hypotheses are therefore stated as follows:

Ho 5.1: There is a positive relationship between the size of the foreign market (N) of a country and its SARS.

Ho 5.2: There is a positive relationship between the prevalence of foreign ownership (N) in a country and its SARS.

Shareholders' Interests Hypotheses

David and Brierly (1985) classify legal traditions into two types, common law and civil law. Common law is mainly English law which relies less on statutes and more on private litigations to resolve disputes. Civil law is associated with France and some Eastern European countries. This relies more on explicit laws and codes and prefers state regulations as opposed to private litigation. Using this differentiation, La Porta et al., (1998) suggest that common law tradition provides more investor protection (including minority interest protection) than civil law tradition. Many studies have used La Porta et al.'s (1998) proposition to measure legal impact on the quality of reporting in a country. That study uses a 6-points index[1] to determine a country's investor-protection and minority interest protection. It includes factors such as disclosure requirements, litigation standards and public enforcement to evaluate the variables. The authors consolidate their work in a subsequent study (2006). Their indices are scaled from 0 to 1, with 1 indicating the stronger investor protection regime. They theorise that a country with a strong investor protection environment will offer better audit quality. The final two hypotheses are therefore stated as follows:

Ho 6.1: There is a positive relationship between the level of investor-protection (L) in a country and its SARS.

Ho 6.2: There is a positive relationship between the level of protection of minority interest (L) in a country and its SARS.

Data and Methodology

Data for this study is drawn from the World Economic Forum's (WEF) 2010 report entitled: ***Global Competitiveness Report 2009-2010*. The report was constructed from a combination of two distinct sources,** an Executive Opinion Survey and international hard data sources.

The survey is considered a unique tool for capturing timely and vital information related to the business environment in which business executives operate. It provides a valid source from which to assess the competitiveness of the economies of the individual countries surveyed. The survey addresses 12 pillars of the Global Competitiveness Index. These are listed at Appendix 1. The 12 pillars are then sub-divided into 110 variables used to evaluate the pillars. The survey questions are assessed on a 7-point Likert scale, where 1 is the lowest possible score and 7 the highest possible score.

The hard data[2] are basically quantitative data collected from a variety of sources. Contrary to other data used in accounting literature, the WEF data is the most recent data generated from international

[1] The six specific elements of investor protection are ability of minority shareholders to challenge the control of the firm by managers and dominant (inside) owners. Country-level scores range from 0 to 6 based on the sum of six indicators that reflect shareholder rights: (1) the ability to vote by mail, (2) the ability to gain control of shares during the shareholder's meeting, (3) the possibility of cumulative voting for directors, (4) the ease of calling an extraordinary shareholder's meeting, (5) mechanisms are available allowing minority shareholders to make legal claims against directors, and (6) shareholders have pre-emptive rights that can be waived only by a shareholder's vote. Larger values of the anti-director rights' index indicate that minority shareholders are better protected against expropriation by management and large controlling shareholders.

[2] WEF uses the following standard formula for converting hard data:

$$6 \times \frac{\text{(country score} - \text{sample minimum)}}{\text{(sample maximum} - \text{sample minimum)}} + 1$$

The sample minimum and sample maximum are, respectively, the lowest and highest country scores in the sample of countries covered by the GCI. In some instances, adjustments were made to account for extreme outliers.

organisations such as World Bank, United Nations etc. A more detailed description of the hard data is found in the Technical Notes of the report. For this study, fourteen variables from the 110 variables in total assessed by the study were selected.

The dependent variable is the *strength of auditing and reporting standards* (SARS). This refers to the strength of financial auditing and reporting standards in a given country, as compared to other countries in the sample. It was measured by the CEOs of 137 countries who took part in the executive opinion survey.

SARS: Strength of auditing and reporting standards. This refers to the strength of financial auditing and reporting standards in a given country compared to other countries.

As mentioned in the introduction, 13 other variables from the study were then used to see if they were adequate predictors of the SARS score. These variables have been included in the conceptual framework devised earlier, under the six major category headings. All 110 variables from the 12 pillars of the GPI study, listed at Appendix 1, were reviewed but were dismissed, apart from the following 13, as they were not considered directly relevant to evaluation of an audit regulatory framework. The 13 independent variables are described below. As per the framework devised in the earlier section, the first two variables relate to legal frameworks. The next two relate to corporate governance issues. The next three relate to financial market issues. The next two relate to educational issues. The next two relate to foreign market issues and the final two relate to shareholder protection issues. Recall these variables were arrived at either by survey evaluation or analysis of hard data. Three of the 13 come from the latter category and are noted as such.

JUDI: Judicial independence measures the extent to which judiciary in a country is independent from influences of members of government, citizens and the public. (Appendix 1, pillar 1).

EOLFW: Efficiency of legal framework in challenging regulations refers to how efficient the legal framework for private business is in challenging the legality of government actions and/or regulations. (Appendix 1, pillar 1).

EBOF: Ethical behaviour of firms compares corporate ethics (ethical behaviour in interactions with public officials, politicians, and other enterprises) of firms in one country with firms of other countries in the world. (Appendix 1, pillar 1).

EOCB: Efficacy of corporate boards refers to the characteristics of corporate governance based on corporate governance factors pertaining to boards of directors in a country. (Appendix 1, pillar 1).

FMS: Financial market sophistication refers to how sophisticated the financial market is in a country, relative to other countries. (Appendix 1, pillar 8).

LEMF: Financing through local equity market refers to the ease with which money is raised by issuing shares on the stock market in a country. (Appendix 1, pillar 8).

SER: Securities exchange regulations refers to the assessment of the strength of regulation of securities exchange of a country. (Appendix 1, pillar 8).

HET: Higher education and tertiary enrolment refers to the gross tertiary education enrolment rate in a country. (Appendix 1, pillar 5). (Hard data).

EXTSTRA: refers to the extent companies in a country invest in training and development of their staff. (Appendix 1, pillar 5).

FOREMS: The size of the foreign market is estimated as the natural log of the total value of exports of goods and services, normalized on a 1–7 scale. (Appendix 1, pillar 10). (Hard data).

POFO: Prevalence of foreign ownership refers to the proportion of companies in a country owned by overseas companies. (Appendix 1, pillar 6).

INVPRO: Strength of investor protection is a combination of the Extent of disclosure index (transparency of transactions), the Extent of director liability index (liability for self-dealing), and the Ease of shareholder suit index (shareholders' ability to sue officers and directors for misconduct). (Appendix 1, pillar 8). (Hard data).

PROMIN: Protection of interest of minority shareholders measures the extent to which minority shareholders' interests are protected by the legal system. (Appendix 1, pillar 1).

It was decided to test the models predictive powers on sub-Saharan African countries, as this particular geographical area has received scant attention in the audit literature as regards strength or otherwise of reporting and regulatory frameworks. Further it was considered this subset would contain a good mix of developing and developed economies with which to compare the models accuracy. The 2009-2010 WEF report covered 139 countries worldwide. 45 of these countries were in sub-Saharan Africa. Of these 45, complete data for all variables was only available for 28 countries. So the final sample is 28 countries, listed alphabetically at Table 1.

Empirical Results and Analysis

Review of Raw Data

The analysis commences by reporting the SARS score of each country, in alphabetical order, at Table 1. On a seven point scale the range was significant, from a high of 5.8 for Senegal to a low of 2.8 for Chad, Djibouti and Togo. The SARS score – derived from the *WEF* report - is then compared to two other world reports on the adaptation of auditing standards globally. First, the International Federation of Accountants' (IFAC) *Compliance Program Report*

(2009). This report classifies countries on the basis of ISA adoption using four groupings:

(i) ISA required by law or regulation;

(ii) ISAs are adopted by the national standard setter to be used in the country;

(iii) National Standards are ISA, but any modifications(s) to meet local requirements are stated to be in line with the spirit of the IAASB; and

(iv) Other (i.e. country for which no data is available, or have declared convergence with ISAs but are far away from achieving this objective).

For the purposes of this study, scores from 4 to 1 have been assigned to categories (i) to (iv) respectively. The reason for allocating a higher score to category (i) and reducing the score accordingly as we move down the other categories, is based upon the assumption that mandatory ISAs should result in a more reliable governance environment than the other alternatives.

The second international report which comments on ISAs globally, is the World Bank (2002-2008) *Report*(s) *on Observance of Standards and Codes* (ROSC) issued from 2002-2008. These reports offer individual comments on adaptation/compliance with ISAs in individual countries. No scoring or ranking is derived but the comments make for interesting comparisons with the other two data sets.

Table 1. Countries Used for *SARS* Evaluation and Comparisons with IFAC ISAs Classifications and ROSC Findings

Countries	SARS Scores	IFAC ISAs Classification	ROSC main findings
1.Benin	3.9	n/a	Standards on auditing are not defined in a law, regulation or the profession. ISAs 200, 315, 330,505, 560, 580, 600 and 700 are either partly followed or in some cases not followed.(2009
2.Botswana	3.9	3	Application of auditing standards differ among audit firms of different sizes. Practitioners find it difficult to deal with concepts such as audit risks, planning, internal control, materiality, documentation and going concern. Independence of auditors ias also an issue. (2006)
3. Burkina Faso	4.2	n/a	The auditing standards applicable to Burkina Faso have not been defined. Professionals use the standards issued by France's National Association of Auditors. In addition to non-compliance with ISAs, there was also formulation of irrelevant opinion. (2010)
4. Burundi	3.3	n/a	Standards on auditing are neither defined in the law, regulation or the profession. ISAs 220, 330, 540 and 610 , 700 are either partly followed or not followed at all. Lack of professional audit education, public oversight, good corporate governance. The economy is too weak to demand financial information. (2007)
5. Cameroon	3.1	1	N/A
6. Chad	2.8	n/a	N/A
7. Ivory Coast	4.1	n/a	Standards on auditing are not defined. Big four complies with ISAs. Local audit firms whose partners are trained in the Big four refer to international norms. Other audit professionals who are trained from France follow the auditing standards of the National Audit Office of France. ISAs 200, 220, 315, 320, 330, 580, 510, 560, 600, 700 and 800 are not complied with. Audit documentation is not rigorous. (2009)
8. Djibouti	2.8	n/a	N/A
9. Ethiopia	3.8	n/a	17 of 58 audit firms stated that the audit was conducted in accordance with ISA. But there was no mechanism to check actual standards practiced. (2007)
10. Gambia The	5.1	n/a	The Gambia has no locally mandated auditing standards and has not prescribed the adoption of ISA. There is no guidance in regards to proper application of auditing standards. The audit practices diverge from ISA. (2010)
11. Ghana	4.7	1	The national standards on auditing are based on ISas, but many gaps exist. ISAs 100, 120, 260, 402, 505, 710 did not have an ISA equivalent in Ghana. Lack of practical knowledge, no public oversight. No engagement letters are issued in some cases. Lack of documentation. (2004)
12.Kenya	4.6	3	ISAs are applicable auditing standards, but compliance level varies greatly. Non-compliance with standards on audit risks, materiality, documentation and evidence, analytical procedures. Lack of professional capacity.(2010)
13.Lesotho	3.8	3	N/A
14. Madagascar	3.5	1	Standards on auditing are neither mentioned in the law, nor in any regulations and the profession. ISAs 220, 540, 610, 700, 505, 260, 610 are either partly followed or not followed at all. Lack of professional education, public oversight, good corporate governance, weak demand for accounting information.(2008)
15. Malawi	5.1	3	ISA is mandatory under SOCAM directives. Lack of compliance with ethics code on independence and quality control. Auditors do not seem to be able to apply appropriate audit procedures due complexities of business activities (2007).
16. Mauritania	3.1	n/a	N/A
17. Mauritius	5.1	4	N/A
18. Mozambique	3.1	n/a	ISAs are considered the de facto auditing requirements. ISA application differs among audit firms. Lack of practical training affects audit quality. 50% of the audit firms report that about 50% of their audits are in accordance with ISA. (2008)
19. Namibia	5.6	3	
20. Nigeria	4.0	2	Actual audit practice does not comply with ISAs (2004)

21. Senegal	5.8	1	Senegal neither adopted not followed ISAs, but has its own auditing standards. They do not meet the following ISAs: 220, 320, 330, 540, 550, 610 and 700. Lack of audit education and training on ISAs, Lack of Public Oversight of the profession and the weak economic environment did not warrant the adoption of ISAs.(2005)
22. Sierra Leone	3.1	1	Lack of proper training. Lack of audit education mainly for directors. Audit practice diverges from ISAs. (2006)
23.South Africa	3.9	3	South African Auditing Standards accord with ISAs, except a few differences such as SAAs 550. There was no equivalent of ISA 501 and 402. Compliance with audit standards differ among audit firms.(2003)
24. Tanzania	4.2	3	ISAs have been adopted but many compliance gaps exist. Lack of audit education and knowledge. Non-compliance with ISAs on evidence, planning, internal control, materiality, sampling etc. Shortage of expertise in IT. (2005)
25. Togo	2.8	n/a	
26. Uganda	3.9	3	ISAs have been adopted, but many compliance gaps exist. Lack of audit education and knowledge. No proper audit procedures are followed. Non-compliance with ISAs on evidence, reporting, planning, quality assurance. Audit service is also offered by a number of unlicensed auditors. (2005)
27.Zambia	4.7	3	Zambia Institute of Chartered Accountants requires all auditors to comply with ISAs. ISA 545, 300, 315, 230 are not complied with. (2007)
28. Zimbabwe	5.0	3	ISAs and ISQC are adopted, but compliance gaps exist. ISAs 220, 230, 580, 620, 705 are not fully complied with.
Sources: IFAC (2009), WEF Report (2010), ROSC several reports			

The summary of three data sets at Table 1 will be used to conclude on the second stated objective of this paper, as outlined in the introduction. This was, to compare the *SARS* in individual sub-Saharan African countries and ascertain whether there is any level of consistency across jurisdictions that are at the same stage of ISA adoption. But prior to that let us return to the first stated objective of the paper, to evaluate the predictive powers of the SARS model generated from the conceptual framework.

Predictive power of SARS model

Because the number of observations is limited to 28 countries and the independent variables are thirteen in total, running a total regression model with this data structure would over-express the model. The study therefore runs six separate models (Model 1-6) using different variables in each, as per the hypotheses, to evaluate the six main categories. Recall, these were, the legal framework, corporate governance, financial market status, higher education levels, foreign market influences and shareholder protection regimes. The ranks of *SARS* are regressed on the ranks of the various independent variables, by category, on a country-by-country basis. Tables 2 to 7 report the findings.

Considering each category in turn, as regards the legal determinants of SARS, (model 1, at Table 2) one of the variables is statistically significant at conventional levels. The adjusted R^2 of the model is 54.3%. *JUDI* is significant at the .10 level. This supports hypothesis 1.1 which states that the level of judicial independence in a country influences its strength of auditing and reporting standards. The other legal framework variable, EOLWF is not significant.

Table 2. Multiple Regression Result (Model 1: Legal Framework Determinants)

Variable	Coefficient	tvalue	pvalue
Constant	-	1.434	0.164
JUDI	0.466	1.995	**.057***
EOLFW	0.327	1.396	0.175
Adjusted R Square			0.543
F			17.070
P			<.001
N			28
*= significant @.10			

Model 2 (Table 3) which regresses SARS ranks on two corporate governance variables, noted both to be statistically significant. The adjusted R^2 of the model is 81.4%. EBOF is statistically significant at the .01 level and ECOB is significant at the .001 level. This result empirically supports both hypotheses 2.1 and 2.2.

Table 3. Multiple Regression Result (Model 2: Corporate Governance Determinants)

Variable	Coefficient	tvalue	pvalue
Constant		0.131	0.896
EBOF	0.408	3.469	**.002*** **
ECOB	0.574	4.881	**.000**** **
Adjusted R Square			0.814
F			59.945
P			<.001
N			28
=significant @.01, *=significant @.001			

Model 3 (Table 4) deals with the financial market variables. The adjusted R^2 of the model is 81.7%. One of the three independent variables put into the regression is statistically significant. FMS is significant at the .01 level. This result empirically supports hypothesis 3.1. which suggests the sophistication of the financial market is associated with the strength of auditing and reporting standards. In like manner, the finding in this Model supports the theory that the Securities Exchange Regulations impact on the strength of auditing in this region.

Table 4. Multiple Regression Result (Model 3: Financial Market Determinants)

Variable	Coefficient	tvalue	pvalue
Constant	-	1.326	0.197
FMS	0.669	3.611	**0.001*** **
LEMF	.041	.271	0.789
SER	0.232	1.006	0.324
Adjusted R Square			0.817
F			16.046
P			<.001
N			28
***=significant @.01			

Model 4 (Table 5) tests the education variables as determinants of SARS. The adjusted R^2 of the model is 61.6%. EXSTATRA is statistically significant at the .001 level. This supports hypothesis 4.2 which suggests that the strength of auditing and reporting in a country is associated with the training of staff.

Table 5. Multiple Regression Result (Model 4: Education Determinants)

Variable	Coefficient	tvalue	pvalue
Constant		.246	0807
HET	0.002	0.013	0.990
EXSTATRA	0.801	4.884	**0.000**** **
Adjusted R Square			0.616
F			22.667
P			<.001
N			28
****=significant @.001			

Model 5 (Table 6) tests the foreign market influences variables as determinants of SARS. The adjusted R^2 of the model is 26.9%. POFO is statistically significant at the .05 level. This supports hypothesis 5.2 which suggests that the strength of auditing and reporting in a country is associated with the prevalence of foreign ownership of entities.

Table 6. Multiple Regression Result (Model 5: Foreign Influences)

Variable	Coefficient	tvalue	pvalue
Constant		0.702	0.489
FOREMS	0.214	1.256	0.221
POFO	0.472	2.764	**0.011****
Adjusted R Square			0.269
F			5.970
P			<.001
N			28
**=significant @.05			

Finally, Model 6 (Table 7) tests the shareholders' interests variables as determinants of SARS. The adjusted R^2 of the model is 77.0% and both variables were deemed significant. PROMIN is statistically significant at the .001 level. This supports hypothesis 6.2 which suggests that the strength of auditing and reporting in a country is associated with the level of protection of minority interests. INPRO is statistically significant at the weaker level of .10, thus supporting hypothesis 6.1 which suggests the strength of investor protection (assessed by hard data) impacts positively on the strength of auditing and reporting.

Table 7. Multiple Regression Result (Model 6: Shareholders' interests)

Variable	Coefficient	tvalue	p.value
Constant		1.660	0.109
INPRO	0.213	1.987	**0.058***
PROMIN	0.759	7.078	**0.000****
Adjusted R Square			.770
F			46.180
P			<.001
N			28
****=significant @.001, *= significant @.10			

The main findings of this study, as regards the predictive powers of the SARS model (objective 1) are summarised at Table 8. Overall, strong support (significant at <.01) is found for hypotheses H2.1, H2.2, H3.1, H4.2, and H6.2. Modest support (significant at <.10) is found for hypotheses H1.1, H5.2 and H6.1. Eight of the thirteen variables were therefore found to be significant predictors of the SARS in a country. Only five of the thirteen variables, H1.2, H3.2, H3.3, H4.1, and H5.1 are rejected (i.e. this study provides no empirical support for these hypotheses at a country level).

Table 8. Summary of Empirical results

Model (Variables)	1: Legal	2: Corporate Governance	3: Finan'l Market	4: Educ'n	5: Foreign Market	6:S'holder protection
H1.1	**Accepted @ < .1**					
H1.2	Rejected					
H2.1		**Accepted @ <.01**				
H2.2		**Accepted @ <.001**				
H3.1			**Accepted @ <.01**			
H3.2			Rejected			
H3.3			Rejected			
H4.1				Rejected		
H4.2				**Accepted @ <.001**		
H5.1					Rejected	
H5.2					**Accepted @ <.05**	
H6.1						**Accepted @ < .1**
H6.2						**Accepted @ .001**

Referring to the conceptual framework diagram of the SARS model (Chart 1) all six variable categories, derived from the extant literature on quality of reporting (albeit at a firm level on most occasions) were deemed to have significant predictive powers in evaluating the rank given to the SARS in a country. Tables 2 to 7 all demonstrate a *p* score of < .001 for each overall category. However each category may have been dominated by one individual variable in arriving at that overall score, as the breakdown into individual variables only reveals 8 of the 13 to be significant. These results would tend to suggest a model can be developed to predict SARS of a country; some variables may just need to be re-assessed.

This study confirms that four of seven variables often used in the extant literature (marked with an (L) in the hypotheses section) to evaluate quality in an audit environment at various levels, are also found to be good predictors of audit quality at a country level. These are: judicial independence, efficacy of corporate boards, investor protection and protection of minority interests. The other three variables from the literature on audit quality were not found to be good predictors at the country level. Efficiency of legal frameworks, securities exchange regulations and higher education levels did not impact significantly on SARS. Considering these variables, as our geographical sample comes from a predominantly less well developed area of the globe, in terms of legal, financial governance and higher education frameworks, this may explain the results. It would be interesting to evaluate the results in more mature legal, financial regulatory and higher education environments, such as Western Europe for example. This is commented upon at future research below.

Of the six new variables, extracted from the WEF report (marked with an (N) in the hypotheses section) four were found to be significant namely, ethical behaviour of firms, financial market sophistication, extent of staff training and prevalence of foreign ownership. Only local equity market financing and foreign market size were not found to be significant. Whether this would be the case in more evolved markets is unsure and has been noted as another area for future research below.

It is interesting to note the significance of the two corporate governance variables, namely ethical behaviour of firms and efficacy of corporate boards, on the overall SARS score. The corporate governance category and the shareholder protection category were the only two of the six main categories in which each assigned individual variable was found to be significant. Past literature has noted investor's protection legislation as a good determinant of strong audit reporting frameworks, but this study notes the importance of governance issues as well. Possibly they are needed as a support for the former category, to ensure it works well.

Analysis of the Strength of Auditing and Reporting Standards in sub-Saharan Africa

Let us now return to the second stated objective of the paper, whether there is any level of consistency across

jurisdictions that are at the same stage of ISA adoption. Table 1 reports that of the 28 countries in this study only one has made ISA mandatory, Mauritius with a classification (as explained at the empirical results section above) of 4. Ten countries received a classification of 3, i.e. they use their own national auditing standards, but those that they have, do comply with ISAs. Despite being at the same stage of ISA adoption these ten countries demonstrated a wide variation in SARS scores, from 5.6 to 3.8. Ironically, a country with the weakest IFAC classification of 1 (indicating ISAs have not been adopted and the country is far from achieving this objective) received the highest SARS score, Senegal at 5.8. Hence, there does not appear to be any correlation between adoption of ISAs and SARS for the countries in this geographical area.

As mentioned in the introduction to this study, many issues impact on the effectiveness of a country's governance environment. These issues can include cultural, legislative, economic and educational factors. Hence, irrespective of whatever standardised pronouncements have been agreed upon for auditing (ISAs etc.) significant variation may still exist as to the strength of the reporting framework. The results of this study, summarised above, and a further review of Table 1, comparing the WEF, IFAC and ROSC reports tend to support this. Standardisation of auditing standards will not guarantee standardisation of the quality of the reporting environment.

Finally, the results of this study could be used to provide IFAC with an ISA classification for those countries which were not assigned such a ranking in their *Compliance Program Report* (2009). The SARS score and ROSC report data in Table 1 could be reviewed to provide a score for those countries who currently have a *n/a* score in their IFAC categorisation.

Summary and Conclusion

Events such as the Global Financial Crisis can bring into question the integrity of financial accounting and auditing regulatory environments worldwide. It would therefore appear a valid pursuit to attempt to evaluate the strength of audit standards and reporting in individual countries. Many studies to date have considered the strength of audit quality at a firm level, or have looked at the impact of individual factors on the strength of regulatory environments. This study is the first attempt at devising a model with which to predict the strength of auditing and reporting standards (SARS) in a jurisdiction.

A conceptual framework highlighting six categories of variables which impact upon SARS, is derived from the extant literature. Thirteen individual variables were then selected to form the predicting instrument. The model is found to have strong predictive powers with eight of thirteen variables proving significant. Corporate governance factors (ethical behaviour of firms and efficacy of corporate boards) and shareholder protection factors (strength of investor protection and protection of minority interests) were found to be significant grouping variables. Individual variables from the other grouping categories, legal framework, financial market status, higher education levels, and foreign market influences, were also significant. Hence it would appear a model can be derived with which to predict SARS of individual countries.

The model was then used to evaluate the strength of audit standards and reporting in 28 sub-Saharan African countries and to compare them to each other. Individual country's SARS scores were found to vary significantly. Furthermore, when compared to IFAC classifications from their 2009 Compliance Program Report, very little evidence of consistency was noted between classification categories or within classification categories. Countries with supposedly strong reporting regimes (as evidenced by compliance with International Standards of Auditing) were outperformed – in terms of a SARS score - by countries with supposedly poorer reporting regimes (still considering ISA adoption). Also, counties at the same stage of ISA adoption did not reveal similar SARS scores. The *within* category range, for categories with sufficient countries to make a comparison, were quite broad. This would tend to question whether global standardisation of auditing standards across regimes will result in globally standardised audit reporting and regulatory environments. The results of this study would tend to suggest the influence of other factors, such as cultural, educational and legal issues, will still influence the auditing standards and reporting environments.

This study paves the way for significant future research, First, the variables used in this model could be further scrutinised to see if they could be evaluated in other ways apart from those used here, namely the WER survey evaluations and hard data. Second, the model could be tested in other geographical areas to see if it provides similar predictive powers. Third the model could be tested on countries who are categorised as to their level of economic development (fully developed, developing etc.) to evaluate if the model provides consistent results based upon this categorisation of jurisdictions. Finally other variables, not addressed in this study, may be accurate SARS predictors. It would be beneficial to test for these and so possibly enhance the model.

This study has some limitations. First, the model derived here was only tested on one geographical area. As mentioned, sub-Saharan Africa was selected because it has a spread of developed, emerging and developing countries. The model should be tested on other jurisdictions to see if it is still robust. Second, due to the small sample size, 28 countries, the regression analysis was restricted to testing of variables in six separate models as opposed to running

one total regression. These limitations however, offer avenues for future research, as mentioned above.

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Appendix 1.

The Global Competitiveness Index Pillars and Variables*

1st pillar: Institutions
2nd pillar: Infrastructure
3rd pillar: Macroeconomic stability
4th pillar: Health and primary education
5th pillar: Higher education and training
6th pillar: Goods market efficiency
7th pillar: Labor market efficiency
8th pillar: Financial market sophistication
9th pillar: Technological readiness
10th pillar: Market size
11th pillar: Business sophistication
12th pillar: Innovation

(*Refer to *WEF* (2010) report for a breakdown of the 110 individual variables).