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The Relationship between Audit Committee Best Practice and Good Governance

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Abstract

Purpose: This study investigated, from a practice-theory perspective, whether audit committee best practice influences sound governance, applying the proxy of the external audit outcome.

Methodology: Binary logistic analysis was applied to determine a relationship between audit committee best practice and the external audit outcome, within a sample of South African private sector and public sector organisations, employing optimal scaling to reduce the items to a workable number of variables.

Findings: The results indicated that there is a statistically significant relationship between some audit committee 'best practice' practices and the external audit outcome – supporting practice theory..

Originality/Value: Although studies have investigated the relationship between certain audit committee characteristics and the external audit outcome, no study could be found where the influence of audit committee best practice on the external audit outcome was examined, supporting the worth of an effective audit committee in a time of regular corporate failures.

Introduction

Audit committees (ACs) are perceived as essential to a sound governance structure (Brennan & Kirwan, 2015), conveying an objective scrutiny to modern organisations and reinforcing the accountability of management. To accomplish these attributes, ACs hold several roles and responsibilities (Audit Committee Institute, 2017), with oversight of financial reporting quality as the key goal (Ghafran & O'Sullivan, 2013) – connecting the AC (oversight role) and external auditing (assurance role) (Inaam & Khamoussi, 2016). The presence of a negative external audit outcome, e.g. modified audit opinion for private sector organisations (Fahrinha & Viana, 2009) and a qualified audit opinion for government organisations (Auditor General South Africa [AGSA], 2019), usually infers the absence of financial reporting quality. This is caused by, inter alia: 1) an inferior external audit quality (excluded from the scope of this study), or 2) a flaw in the monitoring mechanism of sound governance that includes the oversight role of the AC (Sun, 2019). Thus, linking the external audit outcome to governance, and given that the audit opinion is the result of an independent review, the audit outcome is a compelling indication of sound governance, or lack thereof. Although Abbott et al. (2004) and Archambeault et al. (2008) have investigated the relationship between certain AC characteristics and the external audit outcome, no study could be found where the influence of AC best practice on the external audit outcome was examined. Therefore, this study investigates the aforementioned relationship by following a cross-sectional research design.

Contextualising the need for the study reveals that an increase in business dynamics leads to more complex structures, systems and processes to keep abreast of an ever-evolving business landscape, resulting in the augmented stakeholder demand for independent assurance – i.e. that 'all is well'. Both the corporate sector and governments are experiencing proliferating governance scandals (Faull, 2017), casting doubt on whether the independence of the AC, as overseer of organisational governance aspects, can be trusted. In addition to the question, 'Where were the auditors?', a concerned stakeholder may now add 'Where was the AC?'.

In South Africa, a strong governance country (Radebe, 2017), both legislative rules and principle guidance support the establishment of an effective AC for all organisations. Legislation (Republic of South Africa [RSA], 1999, 2003, 2008) provides clear rules on the establishment and operations of an AC. Conversely, the first three King reports on corporate governance (Institute of Directors South Africa [IoDSA], 1994, 2002, 2009), widely regarded as best practice (Atkins et al., 2015; Jones & Solomon, 2013), propagated its principled approach. Therefore, this study will focus on both the King code and legislation in establishing best practice for the AC.

Analyses of the current body of knowledge renders scholarly contributions to the discourse on ACs from various theoretical perspectives (see studies that have collated previous research such as Bédard & Gendron, 2010; Brennan & Kirwan, 2015; Ghafran & O'Sullivan, 2013), identifying primarily agency theory, institutional theory and respective operational-level theories. This large body of work resulted in a plethora of perspectives, allowing researchers to analyse and question prior research, with many studies contributing to the body of knowledge after 2015. Analysis indicates that early studies typically focused on what ACs should do, as opposed to what they are doing (Brennan & Kirwan, 2015). Most, if not all, of the aspects included in these studies are rule-driven by legislated disclosure (forced) of AC functions and characteristics. Nonetheless, research (Coetzee & Erasmus, 2019) supports the notion of voluntary disclosure being a more realistic and true reflection of actual activities directing ameliorated outcomes. Although voluntary disclosure may refer to best practice based on principle, the notion that all voluntary disclosure is based on principle only, is debatable. Best practice, however, remains highly regarded and where causality between best practice and good governance may exist, no study could be discovered that assesses the influence of AC best practice on the external audit outcome as a proxy of good governance.

Therefore, in consideration of AC best practice disclosure, orientated towards a balanced approach (principle fand rules) and viewed through the lens of practice theory (substantive activities performed by a multi-actor collective, directing

outcomes), the aim of this study is to determine whether disclosed AC best practices contribute to good governance. The study was conducted amongst South African private and public sector organisations. As mentioned, South Africa boasts a strong governance foundation. Hence, a South African audit committee best practice context may contribute not only to a South African discourse, but also the international body of knowledge on this topic. Several measures were executed towards realisation of the research objective, namely: 1) a comparison of King III (applicable at the time of analysis) to local legislation, 2) a document analysis of King III generating 3) a structured content analysis of annual reports. Additional measures included 4) applying optimal scaling to forty-eight (48) identified best practice items in the King III (Annexure A), to render a workable number of variables, following which 5) binary logistic regression analysis was applied to determine which variables influence the external audit outcome. In support of practice theory, the study provides insight as to the significance of practice and in what sense it can be beneficial to determine how key relationships in a multi-actor collective affect practice for ameliorated outcomes.

This study holds a few limitations requiring consideration. First, only activities disclosed in annual financial statements could be included. Validity assumes that management will report on all activities conducted. Secondly, the binary model applied to statistical analysis and its results requires careful contemplation, owing to omitted variables that may be relevant to different economic sectors, as well as potential endogeneity. It is acknowledged that potential endogeneity, a variable, observed or unobserved, that is not included in the models, is related to a variable in the equation such as a proxy measure for size. However, the aim of the research was to investigate the extent to which the variables studied, as a result of the document analysis on the adherence to the requirements of King III, can *contribute* to explaining AC effectiveness – not to *predict* AC effectiveness. The layout of the remainder of this paper is as follows: the theoretical framework, literature review and development of the hypotheses are introduced, followed by the research design, discussion of the results and the conclusion.

Theoretical and Literature Framework

Theoretical framing

The Attending to substantive AC practices adding value to good governance, supports a practice-theory approach. This study favours the perspective of Schatzki (2012) who views practices as organised constellations of material activities performed by multiple people, and the application of this concept by Brennan and Kirwan (2015), in reviewing previous AC research by focussing on interactions between practices and outcomes. AC best practice may be viewed as social norms and rules (routine events) that, when performed (converting practices into activities) by members as a collective, should lead to a desirable or intended outcome.

In terms of the external audit outcome, various factors may influence the audit opinion, such as aspects influenced by the external auditors, e.g. audit quality, and aspects influenced by the organisation, e.g. sound financial management and other governance-related mechanisms (Pamungkas et al., 2018). The governance directly affects the practice of the AC, and so stakeholders are seeking better evidence that ACs are fulfilling their oversight role (Brennan & Kirwan, 2015), which may result in an improved external audit outcome. Following extended research on best practices incorporated in guidance documents and legislation, scholars concluded that mandatory rules may not always achieve the desired objective but can result in a symbolic display of conformity (Contessotto & Moroney, 2014). However, Bédard and Gendron (2010) caution that investor (stakeholder) perceptions are still influenced by the supposition that ACs can improve stakeholder confidence via the information presented to the organisational stakeholders, albeit superficially. Stakeholder confidence is increased when it is perceived that the AC adopts practices that are considered by the market as 'best practices' – regardless of its substantive impact on information quality.

Consequently, scholars investigated elements relating to AC best practice (e.g. Dewayanto et al., 2017; Martinov-Bennie et al., 2015) and AC disclosures (Allegrini & Greco, 2013, Coetzee & Msiza, 2018). Also, the industry acknowledges that organisations have in general increased voluntary disclosure regarding the role and

activities of ACs (Deloitte, 2017). The results of this study may therefore illuminate whether disclosure is executed in an effort to create the appearance of best practice, measuring the extent to which AC members convert practices into activities and the level of its autonomy to act external to mandated precincts. Alternatively, whether disclosed practices represent actual activities that, when performed, lead to improved outcomes as determined by the external audit outcome - a major impactful measure, being as the audit opinion results from an independent review.

The AC's role and responsibilities

The literature review structure of this paper espouses the dimensions identified by the optimal scaling exercise applied to the 48 best practice items included in King III and organisational disclosure on these items.

Financial reporting quality mechanism

One of the AC's primary functions is to oversee the financial reporting process (Inaam & Khamoussi, 2016), to ensure ethical reporting by management of an organisation's performance (Kusnadi et al., 2016), assisting various stakeholders in rendering informed decisions (Kibiya et al., 2016). Contributing to the enhancement of the financial reporting process, ACs are vital role players through their oversight responsibilities (Ghafran & O'Sullivan, 2013). It is therefore imperative that an AC possesses attributes that render it effective in executing its oversight responsibilities. Schatzki (2012) suggests, as his basic premise of practice theory, that people do what makes sense for them to do – institutions, thus, need to ensure that suitable members serve on their ACs, to perform the necessary activities (oversight responsibilities) in order to achieve desired outcomes.

Many studies investigating AC effectiveness suggest a positive relationship between AC attributes and financial reporting quality, such as independence of the AC (Kibiya et al., 2016), members having financial expertise (Kusnadi et al., 2016) and the AC size and number of meetings (Inaam & Khamoussi, 2016). Some of these attributes are also linked to external audit quality (Sulaiman, 2017; Wu et al., 2016) and the decrease of accounting errors of overstatement (Haldar & Raithatha, 2017). It can therefore be concluded that in the event that activities of an AC – established by

applying best practices – enhance both financial reporting quality and audit quality, it is then highly likely that the organisation may achieve a positive external audit outcome, leading to the following hypothesis:

H₁: When ACs' role in ensuring financial reporting quality is based on best practice, the likelihood of a positive external audit outcome increases.

Functional and judgement responsibilities

The functioning of the AC refers to its role and responsibilities as well as the reporting thereof. Judgement responsibilities refer to activities, in addition to oversight activities, on a higher level of involvement in the external audit reporting process (Brennan & Kirwan, 2015), in such a way that the role of the AC should shift from performing a review, to performing an examination. Where stakeholders emphasise the disclosure of praxis (what you did) as opposed to reporting on compliance (what you do) (Coetzee & Erasmus, 2019).

Analyses of the body of knowledge on ACs identifies two phases of research. Initial studies focus on the ACs functionality and related activities (Tanyi & Smith, 2014). The second phase connects the AC attributes to responsibilities, such as financial reporting as discussed in the previous section, moreover including the coordination of the internal and external audit functions (Appiah & Amon, 2017) and oversight of the risk management and internal control functions (Cohen et al., 2017). All of the aforementioned relate to practices that – when performed (converted by AC members into activities) – are envisaged to enhance good governance and, as a result, receive a positive external audit outcome, as per Brennan and Kirwan's (2015) adaptation of Whittington's (2006) core tenets of practice theory. The above directs the following hypothesis:

H₂: When ACs' functional and judgement responsibilities are based on best practice, the likelihood of a positive external audit outcome increases.

Internal audit quality

ACs bear a responsibility to oversee internal auditing (Inaam & Khamoussi, 2016), considering that such a function supported by an AC, is expected to hold the ability to implement controls more objectively and forcefully (Khelil et al., 2016). The

increased quality of internal audit activities owing to the responsibility (activities) of the AC, supports the practice-theory approach of multiple actors and their interaction. Oversight of internal auditing is a well-documented responsibility of the AC that includes the value of interaction between both parties (Zaman & Sarens, 2013), resulting in the following hypothesis:

H3: When ACs' role in ensuring internal audit quality is based on best practice, the likelihood of a positive external audit outcome increases.

Assurance providers' independence

For assurance to be trusted by stakeholders, the parties involved need to be independent, enhancing audit quality (Rahmina & Agoes, 2014; Tepalagul & Lin, 2015). The role of the AC includes the nomination of external auditors considered for appointment (Haldar & Raithatha, 2017), separating audit activities from non-audit services (Boiral et al., 2018), and appointment and termination of the head of the internal audit function, (Abbott et al., 2010) – yet again revealing how key relationships may shape practice, as per the practice theory. This aspect resulted in the development of the following hypothesis:

H4: When ACs adhere to best practice to ensure the independence of assurance providers, the likelihood of a positive external audit outcome increases.

AC approves the internal audit plan

Regulation (Institute of Internal Auditors [IIA], 2017) requires senior management and the board (represented by the AC) to approve the internal audit plan, yet studies in this regard are scant. Since practitioners are at the core of practice theory to change and improve activities, and King III's dictate that the AC should approve the internal audit plan, the following hypothesis is developed:

H5: When ACs approve the internal audit plan, the likelihood of a positive external audit outcome increases.

AC chair sets agenda

Little is known about the role of the AC chair. Although guidance documents stipulate the functions of such role, it appears that aspects of the role of the AC chair have not

been investigated scientifically – once again reflecting on practice theory and the need for research, leading to the following hypothesis:

H_6: *When the AC's chair is involved in setting the AC's agenda, the likelihood of a positive external audit outcome increases.*

Research Design

Data analyses

Following a cross-sectional research design to address the six hypotheses, binary logistic regression analyses were conducted. Various steps that include different research methods and statistical analyses were followed to achieve the research objective that is, to determine whether AC best practices (as it is disclosed) influence the external audit outcome.

Document analyses

The first document analysis was conducted to determine whether the King guidance (voluntary disclosure on best practices) can be viewed as 'best practice' compared to legislative requirement (forced disclosure). Forty-eight (48) King III requirements were identified (although a fourth King report was issued in 2016, its inaugural application succeeds the data collected for this study) and were compared to legislative requirements from the Companies Act (RSA, 2008), the Public Finance Management Act (PFMA) (RSA, 1999), its supporting Treasury Regulations (RSA, 2005) and the Municipal Finance Management Act (MFMA) (RSA, 2003). This body of statutes represents the South African private sector and various public sector spheres. From the 48 best practice items, 42 per cent was included in the PFMA and Treasury Regulations, 35 per cent in the MFMA and 33 per cent in the Companies Act, with no additional items in any of these statutes that are not dealt with by King III (refer to Annexure A). This signifies that King III (IoDSA, 2009) is considerably more comprehensive concerning its guidance to ACs.

Content analysis

A document analysis in the form of a structured content analysis was conducted on the 2014/15 audited annual reports of organisations as presented in Table 1, to determine the activities and duties of the ACs. Although the board would in all

probability be inclined to communicate when it follows best practice, the unlikely occurrence that ACs failed or neglected to report on all executed activities and duties (resulting in a limitation to the study) should be noted. A rigorous exercise was conducted to concur on the interpretation of the King III requirements and its application to the organisations.

Table I: Population and sample

Economic Sphere	Legislation	Organisation	Population (N)	Sample (n)
Private sector	Companies Act; King III comply or explain (listing requirements)	Top 100 companies on the JSE securities exchange	100	40 (40%)
Parastatals	Companies Act; PFMA	Parastatals	21	21 (100%)
Central government	PFMA	National government	39	39 (100%)
		Provincial government	120	52 (44%)
Local government	MFMA	Municipalities	278	78 (28%)
Total			**500**	**230 (46%)**

The population consists of organisations within all four economic sectors in the South African economy – each regarded as a stratum within the population. For the private sector, the top 100 listed companies were identified on 9 November 2015, based on their market capitalisation ranking and representing 95 per cent of the listed companies on the South African stock exchange (Bureau van Dijk database). The top 20 companies and the 20 companies ranking from 81 to 100 were selected, to enable extreme or deviant case sampling (Etikan et al., 2016) – the norm for a study seeking to develop a 'best practice'. For the public sector, the 21 major public entities (parastatals) as listed in Schedule 2 of the PFMA were selected. This selection owes to the parastatals being established to operate independently of the fiscal budget (RSA, 2015) and any regression in the parastatals' financial position necessitating assistance by government financial guarantees or funding – hence, a positive audit outcome is essential. National and provincial government departments (central government) were combined in one stratum, as these are regulated by the

same legislation in terms of ACs and external auditing. All central government departments (39) that were in existence in the 2014/15 financial year were selected, as the number was feasible for this study. For the provinces, based on previous audit reports (AGSA, 2015), all the departments of two soundly governed provinces (Western Cape (14 departments) and Gauteng (13 departments)) and two ineffectually governed provinces (Limpopo (13 departments) and North West (12 departments)) were selected, ensuring a balanced representation. Selecting these provinces assisted in achieving a greater understanding of the entire population of the nine provinces, analogously to the extreme or deviant case sampling of the private sector population. Finally, for municipalities, all the metropolitan municipalities (8), district municipalities in respect of which annual reports could be obtained (33), and one or more local municipality (37) for each of these districts were selected, resulting in a representation of all three municipal levels within the sample.

Most of the total sample is derived from central government (39.57%), followed by municipalities (33.91%), private sector (17.39%) and lastly, parastatals (9.13%). The annual reports were analysed with regard to adherence to the 48 King III requirements. Adherence was coded as a '1' and non-adherence was coded as a '-1'. Certain items, i.e. the number of committee members and the number of meetings, were recorded as ratio data.

Optimal scaling

In order to include all 48 items in the analyses while observing sound statistical guidelines and converting the items to a workable number of variables, 1) optimal scaling (that converts nominal and ordinal variables into variables that are scaled in interval) and 2) multiple correspondence analysis or MCA (considered to be the primary components analysis of data that has undergone scaling at the multiple nominal level (Bijleveld et al., 1998)), were applied. The key criteria for identifying the number of dimensions is Cronbach's alpha and the eigenvalue/inertia. It is deemed satisfactory for the object of exploratory analysis when the Cronbach's alpha threshold is 0.6 (Hair et al., 2010), measuring the consistency or reliability of the

items relating to the identified dimensions. The eigenvalue is a measure of the extent to which a dimension explains the variance of the observed items (refer to Annexure A for the discrimination measures). The MCA presented four dimensions, specifically Financial Reporting Quality mechanism (FRQ); Functional and Judgement Responsibility (FJR); Internal Audit Quality (IAQ); and Independence of Assurance Providers (IAP), before the Cronbach's alpha registered below the satisfaction level. Two items, namely AC approves Internal Audit Plan (ACIAP); and AC Chair sets Agenda (ACCA) did not form part of any dimension, resulting in six independent variables. Descriptive results were acquired to determine which of the economic spheres demonstrated the highest adherence within each dimension. Table 2 presents the adherence percentage of the 230 organisations to the 48 King III requirements.

Table II: Frequency of adherence to best practice requirements

Dimensions /Items	Private Sector	Parastatals	National Government	Provincial Government	Local Government
FRQ	77%	85%	6%	14%	43%
FJR	91%	95%	97%	96%	56%
IAQ	50%	65%	20%	28%	52%
IAP	80%	57%	66%	67%	67%
ACIAP	70%	86%	82%	56%	73%
ACCA	18%	5%	0%	0%	0%

Overall, the private sector and parastatals achieved the highest frequency percentages (>70%) in most of the dimensions and items. In relation to the central government, the highest frequency was achieved on FJR, while the FRQ and the IAQ dimensions' adherence was alarmingly low (<50%). Lastly, the local government, on average, achieved more than 50 per cent frequency in most dimensions, with FRQ on 43 per cent. All the economic spheres recorded concerningly low frequencies in the last item, ACCA.

Binary logistic analysis

Finally, binary logistic regression analysis was applied to determine which variables influence the external audit outcome (dependent variable). The analysis initially included all economic spheres, in other words, all 230 organisations, and was then repeated for each of the economic spheres. Due to the limited number of

organisations included in the private sector (40) and the parastatals (21), of which many of the latter organisations are also listed on the Johannesburg Stock Exchange (JSE Limited) and must likewise adhere to the Companies Act, these two groups were combined as one group for the purpose of logistic analysis.

Development of variables

Independent variables

The dimensions formed by the optimal scaling and MCA analysis and two items that did not fit in a dimension, served as the independent variables.

Table III: Optimal scaling to determine new dimensions

Dimensions/Items	Number of Items	Eigenvalue	Cronbach's Alpha
FRQ	26	15.540	0.956
FJR	14	7.177	0.879
IAQ	3	4.200	0.778
IAP	3	2.551	0.621
ACIAP	1	N/A	N/A
ACCA	1	N/A	N/A

The first dimension, FRQ, constitutes 26 out of the 48 items (54.2%) and may be regarded as a primary focus of the AC's best practice guidance. Three themes emerged when analysing the 26 items, i.e.: 1) the AC's interaction with the external auditors (with six items) – the main assurance providers to stakeholders; 2) external reporting oversight responsibilities, with 14 items; and 3) the independent status of the AC (with six items), suggesting that an independent AC enhances the quality of financial reporting. The second dimension, FJR, consists of 14 of the 48 items (29.17%). Two themes emerged: 1) the AC's functioning and reporting thereof, with nine items; and 2) judgement-type of responsibilities (represented by five items) – referring to activities where, in addition to oversight, a higher level of involvement in external reporting is required. The third dimension, IAQ, consists of three out of the 48 items (6.25%) that relate to the AC's oversight role of the internal audit function. The last dimension, namely IAP, also consists of three of the 48 items (6.25%) that focus on the appointment and nomination of the head of internal auditing, external auditors and approval of non-audit fees by external auditors. The two items, namely 1) ACIAP, that was expected to be in Dimension 3, since it related to the internal

audit quality as the plan addresses the road map of the work to be conducted by the internal auditors; and 2) ACCA that was expected to have been part of the second dimension, since it relates to the functioning of the AC are, however, presented as separate items in the regression models, since the optimal scaling exercise did not fit them into any of the dimensions.

Table 4 presents the descriptive statistics of the independent variables. As the two items ACIAP and ACCA are categorical, only frequencies per category (in percentage) are provided.

Table IV: Independent variable descriptive statistics

Variable	Mean	Standard Deviation	Frequency (%)
FRQ	11.4130	8.63975	
FJR	11.4435	3.59328	
IAQ	1.2522	0.82899	
IAP	2.0391	0.32807	
ACIAP			-1 = 28.7%
			1 = 71.3%
ACCA			-1 = 96.5%
			1 = 3.5%

The descriptive statistics indicated that the highest level of adherence is observed for FJR (82%) and the lowest for IAQ (41.7%). Pearson correlation analysis was performed for the four dimensions with point bi serial correlation analysis for the two categorical items with the four dimensions. The results are presented in Table 5.

Table V: Correlation analysis

		IAQ	IAP	FJR	FRQ	ACCA	ACIAP
IAQ	Pearson Correlation	1					
	Sig. (2-tailed)						
IAP	Pearson Correlation	0.156**	1				
	Sig. (2-tailed)	0.018					
FJR	Pearson Correlation	0.124	0.067	1			
	Sig. (2-tailed)	0.061	0.314				
FRQ	Pearson Correlation	0.664***	0.195***	0.223***	1		
	Sig. (2-tailed)	0.000	0.003	0.001			
ACCA	Pearson Correlation	0.461***	0.105	0.309***	0.334***	1	
	Sig. (2-tailed)	0.000	0.112	0.000	0.000		
ACIAP	Pearson Correlation	0.000	0.195***	0.089	0.219***	-0.142**	1
	Sig. (2-tailed)	0.994	0.003	0.178	0.001	0.032	
** Correlation is significant at the 0.05 level (2-tailed)							
***Correlation is significant at the 0.01 level (2-tailed)							

The correlation between the various independent variables was presented as extremely weak to strong, with the highest correlation observed between FRQ and IAQ (0.664). As none of the correlation coefficient values were above 0.8, no multi-collinearity exists between the independent variables.

Dependent variable

The dependent variable, namely the measurement of the external audit outcome, was recoded into two possible options to enable coalescence of the private sector (two options) and the public sector (five options). Option 1 refers to the external audit outcome being positive, whereas option 2 refers to the external audit outcome being negative. These are explained in Table 6.

Table VI: Dependent variables

Item	Option 1 = recorded as 1	Option 2 = recorded as 2
Need to restate financial figures (private sector)	No	Yes
Qualified / unqualified audit report (public sector spheres)	1. Clean audit outcome 2. Financial unqualified audit opinion	3. Qualified audit opinion 4. Adverse audit opinion 5. Disclaimer of audit opinion
Descriptive information		
Private sector and Parastatals (n 61)	24 (40%)	37 (60%)
Central government (n 91)	12 (14%)	79 (86%)
Local government (n 78)	25 (32%)	53 (68%)
Total (n 230)	**61 (27%)**	**169 (73%)**

Regarding the private sector, when an adjustment of a company's published financial statement is required owing to a material inaccuracy, this restatement has a negative impact on the organisation, often resulting in a decline of the stock price (Robanni & Bhuyan, 2010). In respect of the public sector, a qualified audit opinion refers to material misstatements within the financials of the organisations, whereas a clean or unqualified audit opinion refers to the absence of either material misstatements or

financial misstatements, however, not exclusive of findings on predetermined objectives and/or non-compliance with legislation (AGSA, 2019).

Binary logistic regression analyses and results

Model specification

By means of the variables discussed above, binary logistic regression analysis was performed to test the hypotheses. The standard binary logistic regression model[1] was used to test the six hypotheses and was structured as follows:

$$\text{logit}[\pi_i] = \log\left[\frac{\pi_i}{1-\pi_i}\right] = \alpha + \beta_C x_i$$

Towards this study, a total of four models (refer to Table 7) were used to empirically test and answer the hypotheses. Model 1 was based on all the economic spheres, whereas models 2, 3 and 4 were based on a specific economic sphere(s). The Hosmer and Lemeshow test was used to determine whether each of the models exhibits an acceptable goodness of fit, with a significance level of $p > 0.05$ indicating an acceptable fit (Esarey & Pierce, 2012).

Table VII: Binary logistic regression models

Indepen-dent variables	Model 1: All economic spheres			Model 2: Private sector and Parastatals			Model 3: Central government			Model 4: Local government		
	ß	Sig.	Exp (ß)	ß	Sig.	Exp (ß)	ß	Sig.	Exp (ß)	ß	Sig.	Exp (ß)
FRQ	-0.087	0.001***	0.916	0.104	0.397	1.109	0.383	0.131	1.466	0.190	0.057*	1.210
FJR	0.170	0.000***	1.186	-0.084	0.778	0.920	0.469	0.061*	1.599	-0.270	0.143	0.763
IAQ	0.753	0.006***	2.123	0.723	0.067*	2.060	-0.386	0.594	0.680	1.055	0.195	2.872
IAP	-0.540	0.290	0.583	-0.411	0.424	0.663						
ACIAP	0.286	0.519	1.331	-0.699	0.439	0.497	0.225	0.752	1.253	0.172	0.891	1.188
ACCA	1.797	0.117	6.032	1.996	0.101	7.362						
Constant	0.086	0.938	1.090	-0.700	0.814	0.497	-52.966	0.999	.000	-1.007	0.091	0.365
Hosmer & Lemeshow	13.001 [0.112]			6.286 [0.615]			5.223 [0.733]			12.956 [0.113]		
Classifica-tion Model 0(1)%	73.5 (78.3)			60.7 (68.9)			86.8 (89)			67.9 (80.8)		

* significant at 10% level; ** significant at 5% level; *** significant at 1% level
Hosmer and Lemeshow: p-value indicated in parentheses [ ]

In robustness testing, the standard process followed is to examine how certain 'core' regression coefficient estimates behave when the regression specification is modified by adding (instrumental variable(s) using two stage least squares). Robust coefficients are generally interpreted as evidence of structural validity. However, Lu

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and White (2014) identified numerous pitfalls, as the typically implemented robustness checks render neither necessary nor sufficient evidence of structural validity. No additional variables were considered and no instrumental variables regarding the four economic sectors are available or considered appropriate. Size could be a potential instrumental variable, however, considering that both public and private entities are encompassed, no meaningful size measure across these entities could be established.

Random permutation tests by sample split was conducted on Model 1 to determine regression robustness. The sample split was conducted on a split of 50% of the sample. The results of the training and test samples indicated statistical significance of the three dimensions as stipulated in Table 7 in either the test or training sample with the alternative sample confirming the statistical significance of FRQ and FJR, with IAQ becoming non-significant, but with a fairly low value (p-value between 0.1 and 0.2). Further research is suggested to confirm the role of IAQ's contribution in expounding the external audit outcome.

The regression method employed in binary logistic regression is the Stepwise method. Stepwise regression is a modification of the forward selection method in that, following each step where a variable was added, all candidate variables in the model are checked to see if their significance has been reduced below the specified tolerance level. If a non-significant variable is found, it is removed from the model. Regression excluded the two individual requirements that did not load on the four key dimensions identified. To ensure further accuracy of the standard error, bootstrapping was used. The results confirmed the results as presented in the article (significance and size of estimates). As logistic regression of a binary dependent variable – employing several continuous, normally distributed independent variables, at 80 per cent power, and at a 0.05 significance level – requires a sample size of 150, the sample size of 230 was considered appropriate.

Discussion of Results

In accordance with the Hosmer and Lemeshow test, all four models display an acceptable fit (p = 0.112, 0.615, 0.733 and 0.113, respectively). Furthermore, based

on the percentage increase of the classification of the models, all indicated an improvement over the baseline model.

With regard to the first model, where all 230 organisations were included in the analysis, three of the six independent variables (reflecting on H_1, H_2 and H_3) are statistically significant predictors at the 1 per cent level. These three dimensions represent 43 (89.6%) of the 48 items. Regarding FJR, if one more of the AC's functional and judgement responsibilities are implemented, it is 1.186 more likely that the external audit outcome will be positive (ß = 0.170). Similarly, for IAQ, if one more element of the internal audit quality guidance is implemented, it is 2.123 more likely that the external audit outcome will be positive (ß = 0.753). In contrast, although only marginally negative (-0.087), if one more FRQ is implemented by the AC, it is 1.091 (1/0.916) more likely that the external audit outcome will be negative. Models 2 to 4 and the various economic sectors are contemplated, prior to analysing implications for the hypotheses.

In respect of the second model, reflecting on the private sector and parastatals, only IAQ is a statistically significant predictor at the 10 per cent level. Similarly, for the third (FJR for central government) and the fourth (FRQ for local government) models respectively, only one statistically significant predictor on the 10 per cent level was established. A numerical error occurred when conducting the binary logistic regression for the central government. An investigation determined redundant variables as the cause of the error, following which two variables that were constant across the sample, were removed. The Stepwise regression requires two significance levels: one for adding variables and one for removing variables. The cut-off probability for adding variables was 0.05 and the cut-off probability for removing variables was 0.1. In the case of local government, two non-significant variables were identified, namely IAP and ACCA. The final model thus includes only four independent variables.

Following analysis of the hypotheses, H_1 (FRQ), consisting of more than half the best practice items, may be regarded as the priority focus of the AC. This hypothesis can only be accepted for Model 4 (local government) where the regression resulted in a

statistically significant predictor for a positive external audit outcome. This result may be attributable to the Auditor General South Africa's drive, called *Operation Clean Audit by 2014*, specifically targeting local government and focusing on financial reporting quality as the basis of good governance. Furthermore, it is a concern that the variable has no statistical influence on the external audit outcome in central government and companies/parastatals. Especially with regard to the latter, where financial reporting qualities have been widely researched and are deemed important to earnings management, it is disturbing that the AC's best practice on financial reporting quality has no influence on the external audit outcome. In light of proliferating corporate scandals, it is paramount that the interactions between key role players ensure the activities of this primary FRQ dimension are substantive and focused towards good governance, and not merely ritualistic ceremonial behaviours – activities should lead to outcomes.

H_2 (FJR) can be accepted for Model 1 (all economic sectors) and Model 3 (central government), where statistically significant predictors are observed for a positive external audit outcome. H_2 reflecting on functional and judgement responsibility refers to a higher level of involvement by the AC. Items from this dimension (refer to Annexure A) that refer to judgement responsibility in particular, may indicate the significance of the objective scrutiny and authority of the AC to demand additional activities, such as the decision to publish interim results. The outcome indicating that FJR is a statistically significant predictor of a positive external audit result for central government may be owing to compliance driven legislation that includes most of the best practice requirements, directing central government (PFMA). As this variable reflects on a higher order practice of ACs, it supports the notion that a mere tick-box exercise of the obvious or basic practices of the AC is not sufficient to influence the external audit outcome, hence the emphasis on the practice-theory led conversion of practices into substantive activities.

H_3 (IAQ) can be accepted for Model 1 (all economic sectors) and Model 2 (private sector and parastatals), where statistically significant predictors are observed for a positive external audit outcome. This is an interesting result, as it appears that the

role of the internal audit function to ensure a positive external audit outcome may be underestimated, based on continuing research on the effectiveness of this function. The result may be attributable to a higher level of capacity by the corporate internal audit functions (Barac & Coetzee, 2011) engendering a more vibrant relationship between the AC and internal auditing. Conversely, research on the status and demand of internal auditing in the South African public sector (Erasmus & Coetzee, 2018) indicates that the South African public sector is faced with severe internal audit capacity challenges, especially in the rural municipalities that together with the outsourcing and sharing of the internal audit function, render the relationship between the AC and internal audit function more complex. The result, therefore, supports the practice theory, in that collective actions of multiple capable actors and their positive interaction (in this case the private sector and parastatals) may change and improve activities, to achieve intended outcomes.

H_4 (IAP), H_5 (ACIAP) and H_6 (ACCA) are rejected for all models. The rejection of H_4 is of particular concern, as the appointment of both the internal and external auditors is an important aspect when considering the independence of these assurance providers and their role in the multi-actor mosaic - interacting to execute activities towards good governance.

Conclusion

The AC, as a cornerstone of good governance, ought to contribute to the trust by stakeholders – whereby adherence to best practices is most likely to increase this trust. The question is whether disclosed best practices reflect substantive activities that contribute to good governance, or whether more action is required. In this study, the existence of or compliance to best practice does not necessarily lead to the quality of activities that may influence the outcome of a particular objective. Results of this study indicate that, following analyses of the King III guidance on ACs, several of the items favour a rule-based approach and not the perceived principle-based guidance, as observed in the body of knowledge.

The study concludes that adherence to AC best practice does influence good governance as measured by the external audit outcome. Even though previous

studies only analysed the influence of one or two AC characteristics on restatements, this study supports the notion that the relationship is mostly positive. However, when reflecting on the specific economic sectors within the South African economy, further research should be conducted to understand the reasons for the limited statistically significant relationships.

The study contributes to the practice of ACs, as regulators, management and the AC may take cognisance of the enveloping extent of AC best practices: regulators – to ensure that best practice elements are included in legislation and guidance documents; management – to ensure that ACs are supported to adhere to best practice improving their oversight role and positively influencing the external audit outcome; ACs – improving their activities. Owing to the entirely principle-based King IV, this study should be repeated in future, to determine the relationship of AC best practice activities to good governance relative to a purely principle-based approach. In addition, when repeating this study, the disclosure of best practices could be replaced by actual activities (in the event all activities are not being disclosed) as well as the quality of those activities.

Note 1: π_i is the probability that the dependent variable takes on a value of 1 (having the attribute of interest), xx_i represents the independent variables included in the regression, ß_c represents the coefficients of the independent variables and α is an intercept parameter.

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ANNEXURE A –Audit committee best practice *versus* legislation

	King III	Companies Act	PFMA & TR	MFMA	Optimal Scaling Factor Loading
Dimension 1: Financial Reporting Quality Mechanism					
1	Board approve terms of reference	X	√	X	0.520
2	Meets annually with external audit (EA)	X	√	√	0.257
3	Independence and capacity of members	√	√	√	0.230
4	Members keep up to date	X	X	X	0.362
5	Consult specialists/consultants subject to board-approved	X	X	X	0.322
6	Board fills vacancies	√	X	X	0.294
7	Board elects chair	X	X	√	0.235
8	Chair present at annual general meeting (AGM)	X	X	X	0.347
9	Regard all factors/risks that may impact integrity of integrated report	X	X	X	0.725
10	Review disclosure of sustainability issues in integrated report	X	X	X	0.491
11	Recommends to board to engage an external assurance provider on material sustainability issues	X	X	X	0.340
12	Ensure appropriate combined assurance addressing all significant risk	X	√	X	0.514
13	Monitors relationship between external assurance providers and organisation	X	√	X	0.759
14	Review of finance function	√	√	√	0.702
15	Review of finance function is disclosed in integrated report	X	X	X	0.685
16	Oversight of financial reporting risk	X	√	√	0.608
17	Oversight of internal financial controls	√	√	√	0.659
18	Oversight of financial reporting fraud risk	X	√	√	0.515
19	Oversight of financial reporting IT risk	X	√	√	0.417
20	Approves EA terms, fees and remuneration	√	X	X	0.539
21	Monitors and reports EA independence	√	√	X	0.634
22	Informed of EA's identified and reportable irregularities	X	√	X	0.345
23	Reviews EA process' quality and effectiveness	√	X	X	0.450
24	Reports to shareholders on satisfaction with EA independence	X	X	X	0.688

	King III	Companies Act	PFMA & TR	MFMA	Optimal Scaling Factor Loading
25	Reports to shareholders on effectiveness of internal financial controls	√	√	X	0.384
26	Recommends an integrated report for approval to board	X	X	X	0.722
Dimension 2: Functionality and Judgement Responsibilities					
27	Establish AC	√	√	√	0.222
28	Meets minimum twice annually	X	√	√	0.328
29	Members have sufficient qualifications and experience	√	√	√	0.365
30	Minimum three members	√ Independent non-executive	√	√	0.285
31	Chair is not chair of board	X	√	√	0.403
32	Reviews and comments on financial statements	√	√	√	0.332
33	Considers need to issue interim results	X	X	X	0.454
34	Reviews content of summarised information	X	X	X	0.641
35	Engages EA to provide assurance on summarised financial information	X	X	X	0.513
36	ERM role described in charter	X	X	√	0.360
37	Reports to board on statutory and assigned duties	X	X	X	0.431
38	Reports to shareholders how statutory duties were conducted	√	√	X	0.425
39	Reports to shareholders on view of financial statements and accounting practices	√	√	√	0.387
40	Provides summary in integrated report on role, composition, number of meetings and activities	X	X	X	0.460
Dimension 3: Internal Audit Quality					
41	Meets annually with internal audit (IA)	X	X	√	0.162
42	Performance assessment of Chief Audit Executive (CAE)	X	X	X	0.344
43	Ensures IA is subject to independent quality review	X	X	X	0.345
Dimension 4: Independence of Assurance Providers					
44	Appointment/dismissal of CAE	X	X	X	0.258
45	Nominates EA for appointment	√	X	X	0.174
46	Defines policy and approves EA's non-audit services	√	X	X	0.209
Individual items					
47	Approves IA plan	X	√	√	N/A
48	Chair involved in setting/agreeing AC agenda	X	X	X	N/A