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The Effect of Recurrent Deficiencies in PCAOB Inspections on Audit Quality within the Big Four Audit Firms in South Africa

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Abstract: The research aims to examine PCAOB inspection deficiencies' impact on audit quality in South Africa's Big Four, highlighting challenges in maintaining high standards across Financial Statements (FS), Internal Control Over Financial Reporting audits (ICFR), Auditor Ethics, Professional Conduct, and Due Professional Care. The study analyzes South African Big Four firms' audit work and its impact on audit quality, focusing on four PCAOB inspection deficiencies: FS and (ICFR) audits, Auditor Ethics/Independence, Professional Conduct, and Due Professional Care and Scepticism. The study used a mixed-method (qualitative and quantitative) case study approach. A self-administered questionnaire was used to collect primary data. Secondary data was collected from existing literature and inspection reports. The test results indicate that the identified deficiencies significantly influence audit quality, establishing a strong connection between these deficiencies and the audit quality of Big Four firms. The findings suggest that *recurrent deficiencies in PCAOB inspections have a negative effect on audit quality within the Big Four Audit Firms in South Africa*, concluding that deficiencies in these variables (Integrated Audits of FS and ICFR, Auditor Ethics and Independence, Professional Misconduct, and Due Professional Care and Professional Scepticism) can adversely affect the overall audit quality of the Big Four firms.

Keyword: Audit Quality, Auditor Ethics and Independence, Financial Statement Audit, Internal Control Over Financial Reporting Audit, PCAOB Inspection Deficiencies

INTRODUCTION

The research explores the impact of recurring inspection deficiencies on audit quality from global and South African perspectives. Globally, such deficiencies are widespread and require attention across accounting and auditing firms, necessitating regulatory bodies involvement (PCAOB, 2023). The study emphasizes the importance of addressing deficiencies in integrated audits, internal control over financial reporting, and the role of organizations like PCAOB and the International Forum of Independent Audit Regulators (IFIAR) in improving audit quality. According to IFIAR (2023, p.1), their inspection results survey highlights the

persistent recurrence of deficiencies and lack of consistency in high-quality audit execution. This problem underscores the urgent requirement and commitment to improving audit quality, particularly within the Big Four firms, to enhance global audit performance continuously.

In South Africa, similar deficiencies are observed in Big Four audit firms, affecting audit quality. IRBA's (2022, p. 9) report has revealed an increase in themes of recurring quality deficiencies observed during the initial year of their eighth audit inspection period. The report highlights the local regulatory board's ongoing concern regarding a worrisome trend observed in certain firms. A significant number of high-risk engagement files subjected to inspection displayed notable deficiencies in audit quality. To address this issue, the South African audit regulator has cautioned the registered auditors (Audit firms), including independent reviewers, to apply the contents of the latest IRBA inspection reports in their audit practices to prevent the occurrence of these identified deficiencies (IRBA 2022, p. 30).

The research aims to fill gaps in the existing literature by conducting an in-depth case study on the causes of these deficiencies and proposing effective remedial actions. The study stresses the significance of FS and ICFR audits for trustworthy financial information. Addressing professional misconduct and enhancing quality control processes are crucial for improving audit quality and preventing future deficiencies. This research case study investigates and evaluates the recurring PCAOB inspection deficiencies in FS and ICFR audits carried out by the South African Big Four audit firms over the past ten years. The study aims to understand the impact of these deficiencies on audit quality. Also, it provides valuable insights into the effects of FS and ICFR audit deficiencies, auditor ethics/independence deficiencies, professional conduct deficiencies, and due professional care/professional scepticism deficiencies on the quality of audit work performed by the Big Four firms in South Africa. Additionally, the study suggests strategies to minimize the recurrence of deficiencies identified in the inspection of these audit firms.

The Basic Theory of Audit Quality

This study aims to assess the impact of PCAOB inspection deficiencies, including those in Financial Statements (FS) and Internal Control Over Financial Reporting (ICFR) audits, as well as deficiencies in auditor ethics and independence, professional conduct, and due professional care and scepticism, on audit quality within the Big Four audit firms in South Africa. The literature review comprises three main parts that focus on prior studies related to regulatory inspection deficiencies, challenges in the audit profession in South Africa, and audit quality. In addition, the review critically highlights and analyses the key findings, conclusions, strengths, weaknesses, and gaps or limitations of these studies. Furthermore, the review provides the foundational theory of audit quality, supported by existing research, and explores the relationship between audit quality (AQ) and the four independent variables formulated in this study's hypotheses.

In the foundational theory of audit quality, the significance of audit services lies in addressing the needs and expectations of stakeholders and investors (Dubihlela & Gwaka, 2020, p. 143). However, Vaicekauskas and Mackevičius (2014) highlight that audit performance often falls short of these expectations, leading to concerns regarding audit expectations. The authors emphasize the influence of expectations on users' perceptions of auditing services, presenting a significant challenge faced by audit firms in modern auditing services. As investors place great importance on the reliability and credibility of the organizations in which they invest, the independent auditor must offer assurance by aiding the distribution of transparent and trustworthy financial data and information to investors (Munter, 2021). The concept of audit quality is multifaceted and can be defined in various ways. DeAngelo (1981) defines audit quality as the market-perceived probability of the auditor detecting and reporting breaches or misstatements.

Similarly, Vaicekauskas and Mackevičius (2014) stress that audit quality measures how well the audit aligns with the expectations of third-party users and audit clients. According to their analysis, meeting or surpassing stakeholder needs involves auditors producing factual and credible reports, providing valuable insights to clients, reducing the risk of material misstatements, employing qualified and organized auditors, adhering to professional standards and ethics, and ensuring clients' awareness of their responsibilities in maintaining a high-quality internal control system. In essence, the study highlights the crucial importance of meeting stakeholder and investor expectations in audit services, recognizing challenges and stressing the multifaceted nature of audit quality, including factors like credibility, value-added insights, risk reduction, competent auditors, ethical practices, and compliance with professional standards, enabling audit firms to deliver high-quality audits aligning with stakeholders' needs.

The Relationship Between the Audit Quality and the Four Independent Variables

The study analyzed the relationship between the dependent variable, audit quality (AQ), and four independent deficiency variables, including integrated audits of FS and ICFR, auditor ethics and independence, professional misconduct, and due professional care and professional scepticism.

FS and ICFR Audit

Deficiencies in FS and ICFR directly impact audit quality, as outlined by PCAOB (2021), where the auditor must address distinct objectives for each audit, with FS audits focusing on material misstatement risks, while ICFR audits assess the efficiency and effectiveness of internal controls, and any deficiencies can undermine the effectiveness of ICFR and overall audit quality. Therefore, integrated FS and ICFR audit deficiencies directly impact audit quality. In essence, a deficiency in FS and ICFR audits negatively affects audit quality.

Auditor Ethics and Independence

The study emphasises the importance of ethics, defined by Singer (2018) as principles of right and wrong, and Rich (2016, p. 4) as a systems-based approach to distinguish good and bad, highlighting integrity, honesty, and responsibility. Ethics, perceived as moral guidelines, are crucial in the audit profession for credibility (Ardelean, 2013). Independence, vital for auditors and accountants, is both a state of mind and appearance, ensuring unbiased judgment and credibility with investors (AICPA, 2021; PCAOB, 2023). Auditor ethics and independence are foundational for quality audits, building trust in financial statements reviewed by unbiased third parties, and influencing audit quality according to research by Watts et al. (1986, p. 314), Arens et al. (2014, p. 134), Enofe et al. (2013, p. 131), and Suseno (2013, pp. 82-86).

Professional Conduct

Professional conduct involves ethics, morals, and behaviour standards. It means upholding moral principles and exhibiting good professional behaviour (Nelson et al., 2019). It's part of an organization's code of ethics, mandating that auditors follow professional norms, enhance service quality, and fulfil obligations (Dubihlela & Gwaka, 2020, p. 143). Al qtaish et al. (2014, p. 259) confirm that professional behaviour significantly impacts audit quality. To maintain professional conduct, one must ensure ethical behaviour enhances business reputation, and respect and minimizes conflicts. IFAC (2021, p. 23) outlines principles of professional behaviour in its international code of ethics for accountants, including auditors, mandating compliance in performing their duties.

Due Professional Care and Scepticism

IFAC (2021, p. 33) and PCAOB (2022) emphasize due professional care as the knowledge, skills, and conscientious performance required by accountants and auditors to meet relevant standards and ensure the delivery of qualified professional service. PCAOB (2022) specifies its importance in planning, executing, and reporting in audits, with a mandate for auditors to apply professional scepticism and responsibility for audit quality and investor protection (PCAOB 2023). Due professional care also necessitates the application of professional scepticism skills to prevent fraud risks, as defined by PCAOB (2022) and described by Dubihlela and Gwaka (2020). Researchers, including Nugroho (2018, p. 72), highlight the significant impact of due professional care and audit scepticism on audit quality, emphasizing their consistent application in audit work.

Conceptual Framework and the Research Hypotheses

Conceptual frameworks enable researchers to explicitly outline the relationships among the different elements of the phenomenon being studied. By definition, a conceptual framework is a concept being studied and described in writing and illustrated visually, which provides an explanation of a researcher's understanding of the elements investigated in the study and how they relate to one another (Luft et al., 2022, p. 3). Luft et al. (2022, p. 3) further describe conceptual framework as the researcher's comprehension of the key phenomenon being examined, wherein the researcher presupposed links or connections between concepts and covers necessary study topics found in the literature review.

Consequently, the study formulated the following hypotheses:

H1: The Effect of FS and ICFR Audits Deficiency on Audit Quality

Considering the attributes and explanation given for FS and ICFR, a deficiency in the integrated audit of SF and ICFR signifies lower audit quality. This implies that deficiencies in this area can negatively affect audit quality**.**

H2: The Effect of Auditor Ethics and Independence Deficiency on Audit Quality

Deficiencies in auditor ethics and independence adversely affect audit quality, significantly impairing the audit process and resulting in poor-quality outcomes. Thus, it can be concluded that such deficiencies can have a negative impact on audit quality.

H3: The Effect of Professional Conduct Deficiency on Audit Quality

Based on the attributes and explanation of professional conduct described earlier, a deficiency in professional conduct impacts audit quality. When professional conduct is deficient, it significantly undermines the overall quality of the audit. Therefore, it can be concluded that professional conduct deficiencies can negatively impact audit quality.

H4: The Effect of Due Professional Care and Scepticism Deficiency on Audit Quality

The attributes and explanation of Due Professional Care and Professional Scepticism demonstrate that deficiencies in these aspects significantly affect audit quality. A deficiency in due professional care and scepticism detrimentally impacts audit quality, leading to the conclusion that such deficiencies can have a negative impact on audit quality.

A research model is developed from existing literature to examine the effect of PCAOB/IRBA inspection deficiencies (X1-X4) on audit quality for Big Four Audit firms in South Africa, aiming to understand how these variables influence each other. The model includes four hypotheses (H1-H4) establishing relationships between the dependent variable (AQ) and independent variables (X1-X4), shedding light on deficiencies' role in audit quality and Big Four Audit firms in South Africa. The model is shown in Figure 1.

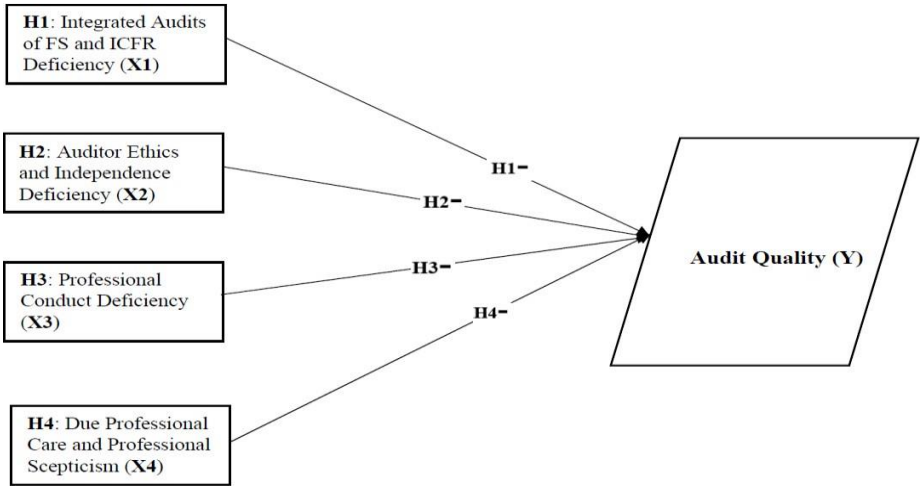

Figure 1. Model For PCAOB/IRBA Deficiencies and their Impact on Audit Quality
Source: Author's own Compilation

The remaining sections of this article are organized as follows: Section 3 outlines the research methodology, while Section 4 covers research results and discussions focusing on the presentation of primary data and descriptive analysis. Lastly, Section 5 offers research conclusions, limitations, and recommendations.

METHOD

This study employs a multiple case study approach to investigate deficiencies in PCAOB and IRBA inspections within South African Big Four audit firms, combining quantitative PCAOB analysis with qualitative examination. This approach is chosen for its robustness and reliability, facilitating a comprehensive understanding of the phenomenon (Gustafsson, 2017). The study uses a mixed methods approach, combining quantitative analysis of survey questionnaire responses received from participants and inspection reports with a qualitative examination of PCAOB and IRBA activities and processes. This approach allowed for data triangulation from various sources, enhancing the interpretation of findings and increasing the overall validity and credibility of the research (Bhandari, 2022). Primary data is collected through questionnaires for three groups (A, B, and C) using SurveyMonkey and LinkedIn, while secondary data from existing literature, such as inspection reports, is also used. The research population consists of three groups, A, B and C, with current and former employees, inspection personnel, and individuals from affiliated or audit firms. Snowball Sampling is used due to the challenge of reaching out to many participants in the audit firms because of the confidential nature of some participants' jobs. Therefore, existing respondents were asked to refer their colleagues to participate, forming the sample. Despite the challenges, the Snowball Sampling method was employed successfully to gather PCAOB and IRBA inspection knowledge and information from individual respondents (Casteel & Bridier, 2021, pp. 349-350).

Ethical Issues

The study emphasizes key research ethical principles, including transparency, confidentiality, anonymity, voluntariness, avoiding harm, and maintaining impartiality, as outlined by Biggam (2017, pp. 66-68).

Procedures and methods for data analysis

The research used primary and secondary data sources, collecting data through questionnaires due to limitations in obtaining permission for interviews from auditing firms. The researcher employed IBM SPSS for statistical analysis, including descriptive and inferential statistics. A pre-test approach validated the questionnaires, and their reliability was assessed using Cronbach's coefficient of correlation (α). The analysis methods included visual representation, descriptive statistics, and inferential statistics. Descriptive analysis calculated means, standard deviations, and percentages for variables in groups A, B, and C, while multiple regression and statistical tests assessed relationships and significance. Visual methods like pie charts were used for secondary data presentation.

RESULTS AND DISCUSSION

Research sample distribution: primary data for groups A, B and C

The survey collected data on PCAOB and IRBA inspection deficiencies affecting audit quality in South African Big Four audit firms. With a proposed sample of 100, 101 respondents completed the questionnaire, forming a 100% sample size, with one rejected questionnaire, as shown in Table 1.

Table 1. Research Sample Distribution Table

Category of Groups	Target No of Respondents	Responses Received & Analysed
Group A: (KPMG, EY, PwC, Deloitte)	60 (15 each firm)	47
Group B: (PCAOB & IRBA)	20 (10 each firm)	17
Group C: (Audit, Accounting Professionals)	20 Individuals	37
Totals	**100**	**101**

Source: Author's own Compilation from Research Data

Respondents' Demographics

Survey questionnaires and Tables 2, 3, 4and 5 gathered participant details such as job titles, audit firm names, years of experience, and work location (country).

Group A (PwC, EY, Deloitte, and KPMG)

The questionnaire demographics included 47 Group A respondents, with 63.83% being senior/audit managers, 21.28% senior/supervisory/lead auditors, 8.51% managing partners/principals/managing directors, and 6.38% audit associates/trainees/specialists. Regarding audit firms, 36.17% were from PwC, SA, 25.53% from EY, SA, 21.28% from KPMG, SA, and 17.02% from Deloitte, SA, with the lowest response rate.

Tables 2 and 3 display the distribution of sample respondents from group A based on career positions, audit firms, experience, and country. The survey included 47 employees from individual Big Four audit firms in South Africa. Most respondents were senior/audit managers (63.83%), followed by senior/supervisory/lead auditors (21.28%), with fewer respondents in other positions as managing partners/principal/managing director and audit associate/audit trainee /specialist with less than 10%. The study observed many senior or audit managers among the respondents.

Table 2. Respondents' Characteristics for Group A (Number of respondents = 47, All from South Africa): Positions (Titles) and Name of Audit Firms

Category Description	Frequency	Percentage	Firms	Frequency	Percentage
Senior/Lead/Supervisory Auditor	10	21.28%	PwC, SA	17	36.17%
Senior/Audit Manager	30	63.83%	EY, SA	12	25.53%

Managing Partner/Principal or Managing Director	4	8.51%	Deloitte, SA	8	17.02%
Audit Associate/Audit Trainee/Specialist	3	6.38%	KPMG, SA	10	21.28%
Total	**47**	100.00%		**47**	100.00%

Source: Author's own Compilation from Research Data

Table 3. Respondents' Characteristics for Group A (Number of respondents = 47, All from South Africa): Number of Working Experience and Country or Location of Workplace

Years of Working Experience	Frequency	Percentage
0 – 5	11	23.40%
6 – 10	16	34.04%
11 and above	20	42.55%
Total	**47**	100.00%

Source: Author's own Compilation from Research Data

Group B (PCAOB and IRBA)

Table 4 shows the demographics for respondents from PCAOB in group B, while Table 5 indicates the demographics for IRBA in group B. According to their career positions, there were 12 respondents from PCAOB and six respondents from IRBA, totalling 18 respondents in group B. 41.67% of respondents were inspection officers, 25.00% were Auditors/Inspection Analysts, 8.33% were Managing Directors, and 25.00% former employees from PCAOB. While only 6% of IRBA former employees responded to the survey questionnaires.

Table 4. Respondents' Characteristics for Group B (PCAOB) (No. of respondents = 12): Positions (Titles) and Number of Working Experience

Category Description	Frequency	Percentage	Years of Experience	Frequency	Percentage
Auditor/Inspection Analyst	3	25.00%	0 – 5	5	41.67%
Inspection Officer	5	41.67%	6 – 10	5	41.67%
Managing Director	1	8.33%	11 – 15	2	16.67%
Former Employee	3	25.00%	15 and above	0	0.00%
Total	**12**	100.00%	**Total**	**12**	100.00%

Source: Author's own Compilation from Research Data

Table 5. Respondents' Characteristics for Group B (IRBA) (No. of respondents = 6): Positions (Titles) and Number of Working Experience

Category Description	Frequency	Percentage	Years of Experience	Frequency	Percentage
Former Employees	6	100.00%	0 – 5	6	100.00%
Total	**6**	100.00%	**Total**	**6**	100.00%

Source: Author's own Compilation from Research Data

Group C (Other Audit/Assurance Professionals)

Group C demographics has 37 respondents who are accounting professionals with strong knowledge and a solid background in auditing, performing assurance and advisory engagements for accounting and auditing firms, including the Big Four and smaller auditing firms in different countries excluding South Africa. 17 (45.95%) of group C respondents are Senior/Lead/ Supervisory Auditors, followed by 15 (40.54%) for Senior/Audit Managers, then 3 (8.11%) of them are Staff Auditors, and the rest are Managing Partner/Principal/Managing Directors and Audit Associate/Audit Trainees /Specialists with 1 (2.70%) each.

Group C is very diverse, and some respondents work for smaller firms in accounting, auditing, and assurance and consulting environment in other African countries such as Zimbabwe, Botswana, Kenya, Rwanda, and Ghana. Other countries include the United States,

the UK, Switzerland, and Hungary as displayed in Table 6. In addition, Table 7 demonstrates respondents' characteristics for Group C's audit firms and county or location of workplace. Table 7 indicates 20 (54.05%) of group C work for the Big Four audit firms (KPMG, PwC, EY, Deloitte) and 21(56.76%) of group C work in the U.S.A. while 16 (43.24%) work in the different countries mentioned above with valuable working experience in the accounting, auditing, assurance, and consulting industry.

Table 6. Respondents' Characteristics for Group C (No. of respondents = 37): Positions (Titles) and Number of Working Experience

Category Description	Frequency	Percentage	Yrs. of Exp	Frequency	Percentage
Senior/Lead/Supervisory Auditor	17	45.95%	0 – 5	12	32.43%
Senior/Audit Manager	15	40.54%	6 – 10	15	40.54%
Managing Partner/Principal or Managing Director	1	2.70%	11 – 15	10	27.03%
Audit Associate/Audit Trainee/Specialist	1	2.70%	15 – 19	0	0.00%
Staff Auditor	3	8.11%	19 and above	0	0.00%
Total	**37**	100.00%	**Totals**	**37**	100.00%

Source: Author's own Compilation from Research Data

Table 7. Respondents' Characteristics for Group C (No. of respondents = 37): Audit Firms and County or Location of Workplace

Audit Firm	Frequency	Percentage	Country/Location of work	Frequency	Percentage
Big Four (KPMG, PwC, EY, Deloitte)	20	54.05%	U.S. A	21	56.76%
Non-Big Four Firms	17	45.95%	Other Countries (Excluding SA)	16	43.24%
Total	**37**	100.00%	**Total**	**37**	100.00%

Source: Author's own Compilation from Research Data

Validity and reliability test results for groups A, B, and C

The validity test examines the instrument's accuracy in measuring the intended concept and its alignment with research goals and objectives (Middleton, 2022). The researcher validated the questionnaires through a pre-test approach by having experts in accounting and auditing review them before distributing them to participants. These experts checked the questions for accuracy and relevance to the research objectives. This validation process confirmed the suitability of the sample questionnaire for factor analysis of the deficiency variable factor statements in groups A, B, and C, effectively capturing intended constructs for data analysis, and ensuring the quality of the questionnaires before they were used.

Cronbach's Alpha coefficients were calculated for internal consistency and reliability assessment of deficiency variable factor statements (X1, X2, X3, and X4) in groups A, B, and C. Responses from participants on five-point Likert scale were utilized, employing Cronbach's Alpha to evaluate the reliability. This statistical measure gauges how consistently items within each factor statement measure the same concept, with higher values indicating greater reliability. Table 8 displays Cronbach's Alpha Coefficients (α), indicating the internal consistency reliability of deficiency variable factor statements. The calculated α value for all variable questions was 0.9439. Sürücü and Maslakçı (2020, p. 2714) suggest that a variable's internal consistency is acceptable and reliable if $0.6 \leq \alpha < 0.7$ and unreliable if $0.5 \leq \alpha < 0.6$.

Table 8 confirms the reliability and acceptability of deficiency factor statements (X1, X2, X3, and X4) for groups A, B, and C.

Table 8. Cronbach's Alpha Coefficient: Reliability Test Results of Deficiency Variable Factor Statements: Group A, B and C

Deficiency Variable Factor Statement	Number of questions	The Cronbach's Alpha value %	Notes
X1: The impact of deficiency in FS and ICFR audits on audit quality (X1)	4	0.8102	Reliable
X2: The impact of Auditor Ethics/Independence deficiency on audit quality	4	0.8398	Reliable
X3: The impact of Professional Conduct deficiency on audit quality	4	0.7929	Reliable
X4: The impact of deficiency in Due Professional Care and professional Scepticism on audit quality	4	0.7717	Reliable
Total	**16**	**0.9439**	

Source: SPSS

Descriptive Statistics Measures: Mean, Standard Deviations, and Percentages for Groups A, B and C

The researcher used descriptive statistical analysis in calculating the means and standard deviations for deficiency factor statements in groups A, B, and C, showing average responses (mean) and variability (standard deviation) around the mean. The calculated means, standard deviations, and respondent agreement levels on deficiency factor statements were used to gauge the impact and agreement of participants' Likert scale responses from Strongly Disagree to Strongly Agree determined the degree of agreement. Mean and standard deviation analysis revealed consensus or divergence among responses and opinion variability, offering insights into respondent perceptions. This assessment helped evaluate agreement levels and potential effects on audit quality.

Tables 9 and 10 show the agreement and impact for groups A, B, and C, revealing strong agreement across all groups. Mean responses ranged from 4.53 to 4.77, with standard deviations from 0.24 to 0.49. To assess the effect of deficiency factors (X1-X4 and recurring deficiencies) on audit quality, group A, B, and C participants answered the questions in Table 10 using the Likert Scale.

Table 9. Agreement Degree and Impact Scale: Group A, B and C

Average Answers/Responses	The Degree of Impact
1 - 2.33	Weak
2.34 - 3.66	Medium
3.67 - 5.00	High

Source: Author's own Compilation from Research Data

Table 10. Descriptive Statistics Measurement: Groups A, B and C

Deficiency Impact Statement/Question	Group A		Group B		Group C	
	Mean Range	SD Range	Mean Range	SD Range	Mean Range	SD Range
Can **X1-X4** deficiency negatively impact audit quality in PCAOB/IRBA Inspection Performance?	4.53-4.77	0.24-0.46	4.71- 4.53	0.29-0.46	4.75-4.57	0.31-0.49

Source: Author's own Compilation from Research Data

Descriptive statistics measurement results and findings

Tables 9 and 10 reveal high (strong) agreement across all groups (A, B, and C) for deficiency impact questions (variables X1-X4 and recurring deficiencies) on audit quality. The findings highlight a significant negative impact of all the independent variables on audit quality, affirming that all developed hypotheses in Table 8 above have been confirmed reliable and accepted.

Moreover, respondents strongly agree that recurring deficiencies from PCAOB/IRBA inspections can notably affect audit quality, potentially resulting in lower-quality audits. Addressing these issues in Big Four firms could improve audit quality for South African public companies.

Multiple Regression Analysis and Statistical Tests

Table 11 shows regression analysis results, indicating the four independent variables have a statistically significant impact on the audit quality of the South African Big Four audit firms for public companies, with a significance level of $\alpha \leq 0.05$, explaining about 91.4% of the variance in audit quality.

Table 11. The Results of the Multiple Regression Analysis

Independent Variable Deficiencies	Corrl. Coef. (R)	Deter. Coef. (R^2)	Regress. Coef. (B)	Beta Coef. (Beta)	Calct. t-value	Statistical Signif. (α)
Intercept			0.7682		0.829	0.039
Integrated audit SF and ICFR Defi.	0.956	91.4%	0.362	0.391	3.952	0.001
Due Professional Care/Scepticism Defi.			0.197	0.221	4.415	0.000
Auditor Ethics/ Independence Defi.			0.153	0.264	3.391	0.002
Professional Conduct Defi.			0.247	0.260	3.436	0.001

Source: SPSS. Note: *The impact of statistical significance at the significance level ($0.05 \geq \alpha$)

Statistical Tests

t-Test

The t-test was conducted to evaluate each independent variable's impact (X1-X4) on the dependent variable (Y) in the regression model, assessing the coefficient significance and the relationship between variables (Independent and dependent). Additionally, the coefficient of determination (R-square/R^2) was used to measure the proportion of variance in the dependent variable that the independent variables in the model can explain, described in the results under R-square/ R^2) below. Statistically significant regression coefficients provide evidence for accepting the research hypotheses, implying a meaningful relationship between variables (Independent and Dependent), while insignificant coefficients suggest rejection. The t-test was run using SPSS 29 for Windows per Table 12 with regression coefficients below 0.05 ($\alpha < 0.05$), revealing that each independent variable (X1-X4) negatively affects audit quality, leading to acceptance of hypotheses H1-H4.

Table 12. The t-Test Results of the Research Hypotheses

Hypotheses	Mean	Standard Deviation	(t) Value Calculated	Degree of Freedom	Statistical Significance	Result of the Hypotheses
Hypothesis 1:	4.69	0.32	15.219	46	0.000 *	Accepted
Hypothesis 2:	4.58	0.45	19.323	46	0.000 *	Accepted
Hypothesis 3:	4.50	0.56	16.911	46	0.000 *	Accepted

Hypothesis 4:	4.45	0.48	21.905	46	0.000 *	Accepted

Source: SPSS. Note: *The impact of statistical significance at the significance level (0.05≥ α)

The Coefficient of Determination (R-square/ R^2)

The coefficient of determination (R^2) measures how much of the dependent variable's variability is explained by the independent variables in a regression model, with a higher value indicating a stronger relationship and better predictive ability of the model (Turney, 2022). Table 11 above shows that all four independent variable deficiencies significantly affect audit quality at a 0.05 (0.05≥ α) significance level, explaining 91.4% of variations in audit quality. Notably, all four independent variable deficiencies significantly or strongly affect audit quality. These findings reveal how different degrees of influence can impact the audit quality of the Big Four audit firms in South Africa.

Hypotheses Test Summary

Table 12 above summarizes one-sample test results (0.05≥ α) for each study variable (independent variable deficiency), all showing statistical significance ($p < 0.05$) and t-values leading to the acceptance of all variables with the critical t-value for each response greater than the critical t-value of 1.319 with a degree of freedom of 46 freedom, confirming their inclusion in the analysis. As all the hypotheses have been validated, the summary of the hypotheses test is presented in Tables 13 and Table 14 below with the One-Sample Chi-Square Test Summary.

Table 13. The Research Hypotheses Test Summary

H1:	Deficiencies in FS and ICFR audits have a negative impact on audit quality.
H2:	Auditor Ethics/Independence Deficiency has a negative impact on audit quality.
H3:	Professional Conduct Deficiency has a negative impact on audit quality.
H4:	Due Professional Care and Professional Scepticism have a negative impact on Audit Quality.

Source: Author's own Compilation

Table 14. One-Sample Chi-Square Test Summary

Total N	47
Test Statistic	1.682
Degree of Freedom	42

Source: SPSS. Note: *The impact of statistical significance at the significance level (0.05≥ α)

Results Pertaining Statistical Tests (All Groups)

Discussion of Analysis Results and Hypotheses Test Summary

The test results in Tables 12 and 13 above indicate that all four independent variable (X1-X4) deficiencies significantly impact audit quality. Also, based on the hypotheses' tests (H1-H4), it can be proposed that all four independent variables (X1-X4) deficiencies can have a negative impact on audit quality. The researcher conducted a partial regression test (t-test) to determine the partial effect of each independent variable on the dependent variable, which is audit quality. The significance level used in this research was 5% (α = 0.05) or (0.05≥ α). This suggests deficiencies identified in PCAOB/IRBA inspections, such as issues with financial statement and ICFR audits, auditor ethics, professional conduct, and due professional care, can negatively impact the quality of audits conducted by the Big Four audit firms for public companies in South Africa. However, a detailed evaluation of the findings requires more study information. Other factors and interactions should also be considered to understand the causes and effects on audit quality. Further research is needed to fully assess this impact on South African public companies and the Big Four firms.

Discussion and Results for Statistical Tests: The t-Test and Coefficient of Determination (R-square/R^2)

Table 11 above displays the t-test and Coefficient of Determination (R^2) results. All four independent variable (X1-X4) deficiencies significantly affect audit quality. A higher R-squared (R^2) value closer to 1 indicates a better fit for the regression model. In contrast, a value closer to 0 suggests that the independent variables cannot effectively explain or interpret the dependent variable. R^2 value of 0.914 indicates that the independent variables (X1-X4) statistically explain approximately 91.4% of the variation in audit quality. The remaining variation, approximately 8.6%, may be influenced by other variables or factors not included in the regression model. Therefore, the interpretation suggests that the independent variables (X1-X4) included in the regression model have a statistically significant ability to explain their influence or impact on the dependent variable (audit quality), accounting for a substantial portion of the variation.

CONCLUSION

Conclusion Regarding the Impact of the Independent Variables on the Dependent Variable

The study's findings reveal that deficiencies in the four independent variables can negatively impact Audit Quality, affecting overall audit quality by the Big Four firms. This effect implies that increased deficiencies across these variables could lower audit quality. Such persistent deficiencies can negatively affect stakeholders' perceptions, undermining trust in the audit process and impacting confidence in financial reporting. These variable deficiencies don't automatically imply material misrepresentation; however, the regulatory bodies provide the firms time to develop and implement appropriate plans to rectify the issues and improve the overall quality of the audit (PCAOB, 2021). It is essential for audit firms to proactively address deficiencies for continuous improvement and stakeholder trust.

Conclusion Regarding the Results of the Study's Hypotheses

The results of the hypotheses tests conducted for this study indicate that all four developed hypotheses (H1-H4) were accepted and supported. This acceptance is based on the statistically significant impact of deficiencies in all four areas (X1-X4) on audit quality. Therefore, the findings suggest that the hypotheses (H1-H4) support the notion that deficiencies in these areas have a negative impact on audit quality. The statistical analysis provides evidence to conclude that the deficiencies in H1-H4 are the determining factors that can affect audit quality. Hence, there is a significant relationship between the identified deficiencies and the quality of audits performed. These results further emphasize the importance of addressing and mitigating deficiencies to enhance the overall quality of audits conducted by the Big Four audit firms.

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