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What factors contribute to South African auditors not identifying material misstatements in South African financial statements?

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UNIVERSITY OF THE WITWATERSRAND

SCHOOL OF ACCOUNTANCY

Masters Research Report

What factors contribute to South African auditors not identifying material misstatements in South African financial statements?

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ABSTRACT

This paper's aim is to investigate which factors increase the likelihood of a material misstatement being undetected by South African auditors. This research has used a quantitative research methodology which produced descriptive and inferential statistics. The research is limited to responses submitted by respondents based on their perceptions of South African auditors and South African financial statements. The reason for this is that what appears to be missing from the prior literature is an assessment of which factors in the South African context increase the likelihood of a material misstatement going undetected and a focus on factors under the control of auditors. Understanding which factors are most and least important in the South African context will make it possible to implement remedial actions suited to South Africa. This should enhance audit quality and ensure that errors are identified on a timely basis. This increases confidence in the South African capital market (SAICA, 2017) and may lead to lower cost of capital demands of South African companies (SAICA, 2017).

As per the research, the researcher identified that the factors appear to have equal significance when contributing to auditors missing material misstatements. There were only a few statistically significant differences in responses because of firm type, previous IAS 8 experience, age or gender, which have been highlighted in the findings below. The results were predominantly in line with expectations.

Keywords: Audit failure, prior period error, material misstatement, auditor, contributing factors

DECLARATION

I, Rèzanne Neethling, declare that this research report is my own work, except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Commerce at the University of the Witwatersrand, Johannesburg. It has not been submitted for any degree or examination in this or any other university.



Rèzanne Neethling

Signed at Johannesburg

On the 6 October 2022

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DEFINITIONS

Material	Misstatements, including omissions, are considered to be material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements (IAASB, 2009).
Misstatement	A difference between the amount, classification, presentation, or disclosure of a reported financial statement item and the amount, classification, presentation, or disclosure that is required for the item to be in accordance with the applicable financial reporting framework. Misstatements can arise from error or fraud (IAASB, 2009).
Prior period errors	Prior period errors are omissions from, and misstatements in, the entity's financial statements for one or more prior periods arising from a failure to use, or misuse of, reliable information that: a) was available when financial statements for those periods were authorised for issue; and b) could reasonably be expected to have been obtained and taken into account in the preparation and presentation of those financial statements. Such errors include the effects of mathematical mistakes, mistakes in applying accounting policies, oversights or misinterpretations of facts, and fraud (IFRS Foundation, 2021).

LIST OF ABBREVIATIONS

CA(SA)	-	Chartered Accountant South Africa
EQCR	-	Engagement Quality Control Reviewer
IAASB	-	International Auditing and Assurance Standards Board
IAS 8	-	International Accounting Standard 8: *Accounting Policies, Changes in Accounting Estimates and Errors*
IRBA	-	The Independent Regulatory Board for Auditors
ISA	-	International Standard on Auditing
JSE	-	The Johannesburg Stock Exchange
MAFR	-	Mandatory Audit Firm Rotation
SAICA	-	The South African Institute of Chartered Accountants

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CHAPTER 1: INTRODUCTION

1.1 Background

Capital market participants rely on financial and non-financial information to make informed decisions to allocate capital in an efficient manner (Blessing & Onoja, 2015). As there is information asymmetry between those preparing financial information and those relying on that information, audits strengthen the credibility of financial statements through an independent assessment against a given framework. This reduces agency costs and improves capital market functioning (Houghton, Jubb, Kend, & Ng, 2010).

An audit failure occurs when an audit incorrectly concludes that a set of financial statements faithfully represents the business's performance and position when it does not (DeAngelo, 1981). This may be because of intentional (fraudulent) or unintentional (mistakes) misstatements (Tackett, Wolf, & Claypool, 2004). While this thesis is not testing audit failures directly, it relies on past failures to identify factors or themes which increase the chances of a material misstatement being overlooked. These factors or themes are discussed separately to evaluate the impact they could have on auditors missing material misstatements.

It is important to note that there are various types of audit failures. Firstly, there is outright fraud which, for example, involves a member of executive management syphoning money from the company. Then there are situations in which auditors or individual audit team members have complicitly (which also constitutes fraud) or negligently allowed errors (over- or understatements) to occur. There are also instances in which all the accounting rules are adhered to but where the result is incomparable or contradictory, and as a result, also fails to present a true and fair view of the entity's operations. In this case it is more complex to determine if there is auditor liability but it can still be viewed as an accountability failure as the public interest has not been served (Leaver, Seabrooke, Stausholm, & Wigan, 2020).

Trust in audited financial statements is a crucial component for the efficient functioning of capital markets (Rezaee & Crumbley, 2007). Audit failures destroy this trust, leading to increased cost of capital and lost shareholder value (Holm & Zaman, 2012 ; Rahman, Ying, Zhu, & Ji, 2020). As a result, studies investigating which factors contribute to audit failures are important, especially in a South African context in which numerous high-profile failures have occurred (Business Insider SA, 2020).

Prior research focuses only broadly on the factors which lead to audit failures. For example, independence, adequacy of audit work (Hehong, 2019) and client-specific characteristics (Tackett, Wolf, & Claypool, 2004) have been tested empirically as determinants of audit failures. In contrast, we know relatively little about the factors which increase or decrease the likelihood of a material misstatement being identified and corrected. This is especially the case when an audit failure has not occurred. Most of the accounting and auditing research focuses on high profile corporate or audit failures (Rahman, Ying, Zhu, & Ji, 2020) while avoiding recurring audits where material misstatements may have occurred but have not been identified. This thesis investigates non-fraud factors which can contribute to auditors missing material misstatements, especially on recurring audits where audit failure has not necessarily occurred.

As South Africa is a developing economy with a high reliance on direct foreign investment (Akinboade, Siebrits, & Roussot, 2006), understanding South African audit failures and contributing factors are important to restore and maintain confidence in South African capital markets (Rezaee & Crumbley, 2007). In light of South Africa's recent slippage in rankings in the Word Economic Forum's Global Competitiveness Report, it is important for the audit profession to restore its reputation and global perceptions around audit quality in South Africa (IRBA, 2019). A literature review was performed to develop a survey instrument which was used to solicit participants' views on which factors contribute to auditors missing material misstatements. This instrument was distributed to auditors, preparers of financial statements, academics and members of regulatory bodies in a regulatory role (SAICA, IRBA and the JSE).

1.2 Statement of the problem

Despite the controls in place to prevent and detect material misstatements (for example, additional regulation) (Arruñada, 2004) material prior period errors occur too frequently by both listed (Issuer Regulation Department of the JSE, 2019) and other companies (Burks, 2015). The prior literature is thin on research which considers what factors are most important to prevent auditors not identifying misstatements. Frequent restatements undermine the confidence in our capital market and an understanding of the extent to which certain factors contribute to these errors not being picked up by auditors will facilitate appropriate remedial actions. The JSE's Proactive Monitoring Unit[1] has consistently found and reported prior period errors for the period 2011-2018, (Issuer Regulation Department of the JSE, 2019).

1.3 Purpose and research question

The purpose of the study was to investigate factors contributing to undetected material misstatements by South African auditors. While important, fraud is not the only reason for these. The purpose of this study is therefore to investigate which non-fraud factors increase the likelihood of a material misstatement being undetected by South African auditors.

The research question is:

What factors contribute to South African auditors not identifying material misstatements in South African financial statements?

1.4 Significance of the study

For many years, South African auditors were perceived as being among the best auditors in the world (SAICA, 2017). The last decade has seen numerous claims of unidentified material misstatements by South African auditors. While there are papers investigating which factors lead to unidentified material misstatements (Logie & Maroun, 2020 ; Okaro & Okafor, 2013 ; Hardies, Breesch, & Branson, 2011 ; Kangtao, Yingli, & Jingyu, 2014 ; Willett & Page, 1996 ; Perselling, Schmidt, Vandervelde, & Wilkins,

[1] The JSE Proactive Monitoring Unit was established to review the financial statements of listed entities to measure the integrity of financial information and enhance the quality of financial reporting (Issuer Regulation Department of the JSE, 2019).

2018 ; Caster, Massey, & Wright, 2000 ; Tipgos, 1978 ; Blankley, MacGregor, & Mowchan, 2021 ; Adnyani, Latrini, & Widhiyani, 2020) these do not cover South Africa specifically or are focused on the fraud component of unidentified material misstatements. What is missing from the literature is an assessment in the South African context of which factors increase the likelihood of a material misstatement going undetected with a focus on factors under the control of auditors. Understanding factors which can potentially contribute to auditors missing material misstatements in the South African context will make it possible to implement remedial actions tailored to South Africa. This should enhance audit quality and ensure that errors are identified in the year that they occur before the financial statements are signed off by the auditors. This increases confidence in the South African capital market (SAICA, 2017) and may lead to lower cost of capital demands of South African companies (SAICA, 2017).

The results of this study will be useful for regulators, auditors and the International Auditing and Assurance Standards Board (IAASB). Local auditors and regulators will be better able to introduce context-specific remedial actions to reduce the likelihood of material misstatements going undetected. International bodies will be in a better position to understand the extent to which the local context affects the likelihood of material misstatements being undetected.

1.5 Assumptions

This research assumes that respondents will be honest in all responses as they were assured that their identities would be concealed and that responses will be kept confidential (Simon & Goes, 2013). This research also assumes that respondents met the criteria for one of the participant categories (auditor, preparer, member of a regulator or academic). This is because participants were asked to select one of the relevant categories and as noted, the research assumes that participants were honest in their responses (Simon & Goes, 2013).

1.6 Limitations and delimitations

Only already identified factors extracted from the prior literature were considered. This allowed the research to focus on gauging the importance of each factor in the South African context. Secondly, the survey in itself also posed a limitation as respondents' answers may only have reflected their perceptions

and not their true behaviours. For example, they might have indicated that professional scepticism has an impact on whether misstatements are detected or not because the perception is that it is the right option to choose, although their practical experience and behaviour might have shown that it does not necessarily play a big role in whether misstatements are detected or not. Respondents might also have been hesitant to share their true behaviours (Rubenfeld, 2004). Lastly, the study did not consider fraud. The factors considered were limited to the factors identified in prior literature. Please refer to Chapter 5 for recommendations regarding future research.

1.7 Structure of the report

This research report is divided into five chapters. Chapter 1 includes a discussion of the background to material misstatements in financial statements and provides the significance and an overview of the research. Chapter 2 discusses the literature on the potential factors contributing to auditors overlooking material errors. Chapter 3 discusses the research methodology adopted for this study. Chapter 3 further sets out the procedure for the data collection process and analysis to ensure that the research has been carried out appropriately. Chapter 4 discusses the findings of the survey responses. Chapter 5 provides a conclusion and a summary of the results obtained.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Prior period errors are omissions from, and misstatements in, an entity's financial statements for one or more prior periods arising from a failure to use, or misuse of, reliable information which was either available or could have been expected to be obtained (IASB, 2021). "Failure to use" reliable information (IASB, 2021, p. A1257) can also include misusing or misapplying IFRS. The objective of International Accounting Standard 8: *Accounting Policies, Changes in Accounting Estimates and Errors* (IAS 8)[2] is to strengthen the relevance and reliability of an entity's financial statements, together with the comparability of those financial statements over time, as well as with the financial statements of other entities (IASB, 2021).

The literature review is laid out, firstly to describe audit failures. While this thesis is not testing audit failures directly, it relies on past failures to identify factors which increase the chances of a material misstatement being overlooked. The reasonableness gap is then discussed as it highlights the expectation of the public to have error-free financial statements while there are still numerous factors contributing to these errors not being picked up. Lastly, the various factors which can potentially contribute to auditors not picking up material misstatements are discussed in detail.

2.2 Material misstatements and audit failure

Audit failure has been highlighted as a significant problem as it results in financial losses, as well as the loss of confidence in capital markets by investors (Okaro & Okafor, 2013). Capital markets and the economy suffer when investor trust and confidence are lost because these hinder the inflow of funds which promote rapid economic growth (Okaro & Okafor, 2013).

A misstatement can be viewed as a signal of audit failure, whether it occurred because of fraud or error (Rahman, Ying, Zhu, & Ji, 2020). Audit failure occurs when there is a material misrepresentation which

[2] IAS 8 provides the requirement to state, explicitly, that there was a prior period error (IASB, 2021). If there was a prior period error, it makes sense to ask the question, "Why did the auditors not pick this error up?," which is the focus of this thesis.

is not described in the audit report, or when the auditor has made a significant error in the conduct of the audit (Tackett, Wolf, & Claypool, 2004).

If the prior period error is material, the auditors might request the error to be corrected by restating the following year's financials or for the incorrect set to be re-issued. The more frequent these occurrences become, the lower the level of audit quality (Rahman, Ying, Zhu, & Ji, 2020). The auditor has the responsibility to evaluate the risk of material misstatement and gather sufficient audit evidence to determine whether a material error exists or not. The objective of an audit is primarily to express reasonable assurance on whether the financial statements are free from material errors (IAASB, 2009). A material error in the most recently issued financial statements indicates an audit failure in the preceding year's audit (Rahman, Ying, Zhu, & Ji, 2020).

When audit failures occur, investors and the public always raise the question of where the auditors were while the misstatements were made – they are surprised that the auditors did not detect the errors (Okaro & Okafor, 2013). This highlights the phenomenon of the expectation gap and, more specifically, the reasonableness gap which is discussed next.

2.3 Reasonableness gap

Users of financial statements have an expectation that the auditor will detect material misstatements (Porter, 1993). There is often a difference between the expectations and perceptions of the public and those of auditors relating to the obligations and responsibilities of the auditor. This can be described as the audit expectation gap (Akther & Xu, 2020). The reasonable gap forms part of the audit expectation gap (Porter, 1993) and is elaborated on below. The performance gap represents the disconnect between what is expected as the acceptable standard of performance and the auditors' performance as perceived by the public. The standard gap can be described as the difference between what can reasonably be expected from auditors, and auditors' existing duties as outlined in legislation or professional auditing standards (Akther & Xu, 2020).

The reasonableness gap is the difference between what the public believe auditors are responsible for and what is possible to achieve in practical term. There will be a difference because of the cost-benefit

relationship (Porter, 1993). If the public reasonably expects certain duties from the auditors, these duties must be cost-beneficial for auditors to perform (Porter, 1993). Costs cause conflicting interests among parties. Auditees want to limit audit costs and may lean towards limiting the duties assigned to auditors. Users rely on the audit opinion and audited financial statements and want to extend the auditors' duties (Porter, 1993). If auditor duties meet the cost-benefit criterion, they can be described as duties which are reasonable (Porter, 1993).

Despite the expectations of the public and the responsibility of auditors to detect material errors, there seem to be various factors which can contribute to auditors still missing these errors (Caster, Massey, & Wright, 2000). These factors are discussed below and have been used to develop survey questions for this research study.

2.4 Professional scepticism and objectivity

One of the potential causes of audit failure is a lack of professional scepticism[3]. When applied in the audit environment, the term implies that auditors should have a questioning mindset when assessing audit evidence (Nelson, 2009). They should observe their environment carefully and not be afraid to ask probing questions in their search for the correct answer. The prior literature suggests that auditors should presume that there is a high risk of misstatement until they have appropriately verified the information and proven the opposite (Glover & Prawitt, 2014).

Scepticism can be illustrated on a continuum so that auditors can determine the appropriate level of scepticism to apply in a particular scenario. The continuum includes the following behavioural areas: complete trust, neutral, presumptive doubt and complete doubt (Glover & Prawitt, 2014). When there is a situation of complete doubt, the auditor will adopt a forensic mindset. It is important to note that although the continuum includes four attitudes, professional scepticism does not include the area of complete trust. Professional scepticism only includes the areas of "neutral", "presumptive doubt" and "complete doubt" (Glover & Prawitt, 2014).

[3] The term 'professional scepticism' has its origin in the Greek word "skeptikos," which means "inquiring" or "reflective."

Auditors should maintain the appropriate level of professional scepticism so that they do not fall victim to undue influence from the client, which may include fraud (Carpenter, Durtschi, & Gaynor, 2002). As an example, the auditor might be reluctant to push back on an accounting adjustment for fear of losing the client. The client might also put pressure on the auditor to overlook certain errors in exchange for a bribe (Tackett, Wolf, & Claypool, 2004).

Okaro and Okafor (2013) examine the potential drivers of audit failures in Nigeria. The research project used the Cadbury (Nigeria) Plc scandal as a case study. The study found that the lack of professional scepticism was one of the potential key factors which can contribute to audit failure in Nigeria (Okaro & Okafor, 2013). In order to provide reasonable assurance over a company's financial statements, the auditor must uphold the relevant professional standards which include the application of professional scepticism (Glover & Prawitt, 2014). Professional scepticism is essential to promote audit quality, as it can influence both the auditor's judgement and actions (Ciolek, 2017). As audit quality is inversely related to audit failure (Francis, 2004), it can be inferred that if audit quality is enhanced, the incidence of undetected material misstatements will be reduced (Knechel, Krishnan, Pevzner, Shefchik, & Velury, 2013).

In addition to professional scepticism, auditors should also remain objective and not allow conflicts of interest or bias to influence their judgement (Zahmatkesh & Rezazadeh, 2017). Objectivity can be described as an ethical principal which requires auditors not to allow their professional or business judgement to be compromised because of bias, a conflict of interest or undue influence from third parties (IRBA, 2018). If auditors are able to act fairly and free from undue influence from third parties, audit quality will be enhanced (Zahmatkesh & Rezazadeh, 2017).

With the above points in mind, the following questions are included in the research instrument:

- Q7: Rate the extent to which you think the following factors contribute to unidentified misstatements by auditors:
    - Lack of objectivity
    - Lack of professional scepticism

- Q8: Rate your agreement with the following statements:
    - There is a culture among auditors of wanting to avoid conflict with clients which may increase the risk of undetected errors
    - There is a culture among auditors of wanting to avoid identifying issues during an audit engagement

While audit team members should exercise professional scepticism, it is also important that they feel comfortable to speak up about problems or errors that they have detected (Pratt & Jiambalvo, 1982). Senior team members should encourage professional scepticism and be approachable (Swani & Isherwood, 2020). An environment that encourages professional scepticism and voicing concerns will contribute positively to audit quality (Ciolek, 2017 ; Francis, 2004).

2.5 Overconfidence and the interaction with gender and age

Auditor characteristics, such as overconfidence, have been found to play a role in the way tasks are executed as well as risk appetite (discussed below). Research into the social phenomena of the link between gender and overconfidence is growing and argues that, generally, men are more prone to being overconfident than women (Bengtsson, Persson, & Willenhag, 2005). This has especially been found in finance roles (Barber & Odean, 2001). To assess this, this paper's survey includes questions which link gender and confidence to each other to determine to what extent participants agree with the proposed statements:

- Q8: Rate your agreement with the following statements:
    - Age contributes positively to partner confidence
    - Confident partners conduct less audit work resulting in a higher risk of unidentified misstatements
    - Experience on a particular client contributes positively to partner confidence
    - Experienced female partners have confidence in their inherent ability to identify misstatements
    - Experienced male partners have confidence in their inherent ability to identify misstatements

- Partners with more experience are more confident partners
- Technical IFRS or auditing skills contribute positively to partner confidence
- I only reach out to my firm's audit or accounting technical department as a last resort

It should be noted that asking a participant about his / her own or someone else's overconfidence is inherently subjective and that these conclusions and findings should be treated with caution.

Overconfidence can be described as the tendency of individuals to overestimate their skills, knowledge, or the accuracy of their information. Overconfident individuals often experience the phenomenon of self-attribution bias where they will attribute success to their own competence or abilities. In addition, failures are attributed to circumstances beyond their control or even to chance. The characteristic of overconfidence is relevant for this study as overconfidence can bring about less than favourable outcomes (Bhandari & Deaves, 2006) suboptimal audit quality or ineffective audits (Hardies, Breesch, & Branson, Male and female auditors' overconfidence, 2011). In the audit world, this can manifest in auditors overlooking issues or underestimating the amount of work required or the level of professional scepticism required to draw appropriate conclusions (Owhoso & Weickgenannt, 2009).

Audit quality, effectiveness and efficiency can be compromised when too little audit evidence is gathered. Auditors may also take unnecessary risks, disregard contradictory or suspicious evidence, or overlook obvious issues. An overconfident auditor may also fail to consult or seek assistance because they believe they have the skills and competence to address the situation themselves (Hardies, Breesch, & Branson, 2011; Owhoso & Wieckgenannt, 2009).

Many studies provide evidence that men tend to be more overconfident than are women (Dahlbom, Jakobsson, Jakobsson, & Kotsadam, 2011). This phenomenon has been identified in a variety of fields, for instance, mathematics, science and technology (Hardies, Breesch, & Branson, 2011). Research about investor confidence also suggests that overconfidence arises from self-attribution bias, and that men are more prone to this form of bias than are women (Mishra & Metilda, 2015). If the level of overconfidence can be linked to the level of audit quality, it becomes important to investigate the extent to which overconfidence linked to gender can impact the detection of material errors.

Existing studies have produced mixed results on the link between auditor overconfidence and the effectiveness of an audit engagement. One study noted that no significant difference was observed in the levels of overconfidence between men and women but acknowledges that, although the population consisted of auditors, the tasks performed were not auditing tasks (Hardies, Breesch, & Branson, 2011). It is noted that sex differences in overconfidence may be present in a real-life setting compared to an experimental setting (Hardies, Breesch, & Branson, 2011). Another study found that female auditors deliver higher audit quality as they are more conservative and independent (Hardies, Breesch, & Branson, 2016).

Berggren and Gonzalez (2010) examined the relationship between risk aversion, overconfidence and gender in financial decision making and found that, in general, men tend to take more risks that women. Overconfidence was observed in both men and women but men showed a tendency to be slightly more overconfident than women. Women appeared to approach decisions more conservatively. Financial decisions made by either a male or female would therefore have been very different, especially with regards to the risk profile of the investment (Berggren & Gonzalez, 2010). Garcia-Blandon, Argilés-Bosch and Ravenda (2019) conducted a study across a sample of Spanish-listed companies from 2008 to 2015 and found that female auditors are associated with higher levels of financial reporting quality (Garcia-Blandon, Argilés-Bosch, & Ravenda, 2019). Although overconfidence is not necessarily listed as the reason for this finding, it might be possible to infer that some of the characteristics mentioned (for example, a more conservative nature) may contribute to the observation regarding female auditors and the quality of financial reporting.

Apart from gender, the relationship between age and overconfidence can also be investigated. Existing literature discussing this relationship appears to be scant and studies are often limited to a specific country or discipline (Hassan, Khalid, & Habib, 2014). Hassan, Khalid and Habib (2014) found that investment decisions in Pakistan suggested that age and overconfidence are positively correlated, in other words older people tend to be more overconfident. Knowledge and experience gained through age are put forward as potential reasons for this observation because older people might feel more confident in their abilities (Hassan, Khalid, & Habib, 2014). In contrast, a study among Tunisian

investors did not identify a significant relationship between age and self-confidence (Zaiane & Abaoub, 2010) (although the term self-confidence is specifically used in this study, there is still relevance to confidence in general). Age is still noted as a factor which can potentially impact overconfidence (Tyynelä & Perttunen, 2002), and is included in this study.

2.6 Competence and experience of team members

Competence and experience are other characteristics which can impact the detection of material errors. Professional competence can be described as the ethical principle of acquiring and maintaining professional skills and knowledge at the appropriate level to ensure that professional services can be rendered appropriately (IRBA, 2018). If auditors are competent and they analyse financial results carefully, it will increase the chances of their identifying anomalies. Auditors' professional competence should be at the required level. If they do not have the required skillset, they must receive training to improve their professional competence and judgement (Hehong, 2019). Competent auditors are less likely to depend on the opinions of others (especially management) due to a lack of knowledge on their end. Competence also enhances the level of audit quality (Iryani, 2017) as auditors will be more likely to execute the audit in line with the required standards and regulations (Kertarajasa, Marwa, & Wahyudi, 2019).

Experience in a work environment can be described as the knowledge gained over time that is relevant to a specific job or profession. Prior research has documented a positive relation between job performance and work experience (Che, Langli, & Svanström, 2018).

Kangtao, Yingli and Jingyu (2014) found that more audit experience reduces the likelihood of audit failure, and experience proved to have a more significant impact than does education. Put differently, experience had a more significant impact on audit quality than education. Experience also leads to more industry knowledge, which helps auditors identify areas which are typically more risky either due to fraud or error (Caster, Massey, & Wright, 2000). Experience is important as it impacts audit judgement, especially as the complexity of the audit task grows (Alissa, Capkun, Jeanjean, & Suca, 2014). Experienced auditors should also be better at maintaining audit quality (Kuntari, Chariri, & Nurdhiana, 2017) because of their enhanced ability to detect errors, to understand the errors fully and

to decide on corrective actions (Kertarajasa, Marwa, & Wahyudi, 2019). Experience also has a positive impact on knowledge and ability (Bonner & Lewis, 1990), also enhancing competence at the same time.

Seniority (an auditors' age and not his/her role on the audit in this context) and the number of years an auditor has served in the professional services environment are often considered to be proxies for experience (Che, Langli, & Svanström, 2018). As experience is knowledge gained over time (Che, Langli, & Svanström, 2018), it can be inferred that more senior auditors or auditors who have worked more audit hours, have more experience. If experience and audit quality are positively correlated (Kuntari, Chariri, & Nurdhiana, 2017), it can also potentially be inferred that more senior auditors are more likely to detect material errors.

With the above points in mind, the following questions are included in the research instrument:

- Q7: Rate the extent to which you think the following factors contribute to unidentified misstatements by auditors:
    - Lack of understanding of the client or industry
- Q8: Rate your agreement with the following statements:
    - A lack of sufficient training regarding professional skills is a bigger concern at non-Big-4 audit firms than at Big-4 audit firms
    - Manager accounting technical competence is not at the level it should be
    - Partner accounting technical competence is not at the level it should be
    - Trainee (audit clerks) accounting technical competence is not at the level it should be
    - Training on how to apply professional judgement is important for preventing undetected material misstatements
    - Training on how to apply professional scepticism is important for preventing undetected material misstatements
    - Training on how to conduct suitable risk assessment procedures and how to respond to audit risk using tests of controls and/or substantive tests is important for preventing undetected material misstatements

2.7 Time constraints, resourcing and audit costs

Apart from auditor characteristics, there are various other factors which may impact an auditor's judgements. These include accountability, time budgets, justification and audit costs (Caster, Massey, & Wright, 2000). Time budgets represent the amount of time allocated to work on a client and is used to motivate staff to work efficiently (Caster, Massey, & Wright, 2000). These time budgets will impact the nature, timing, and extent of audit procedures and also impact the detection of errors. Time pressure normally has a negative impact on quality. But, moderate time pressure can enhance performance as there is a better focus on the core issues while task-irrelevant information is excluded. (Caster, Massey, & Wright, 2000).

Although there may be differences in the audit methodology and approach followed by audit firms, they generally organise procedures in a similar way to include substantive tests, test of detail and other routine procedures. Most of the work is performed by more junior staff members to enable senior team members like the audit partner to exercise judgement and draw conclusions. Time worked is then charged and billed to the client which effectively makes the audit fee, among other things, a function of time spent by audit team members (Willett & Page, 1996).

Staff must work according to the time budgets set out as targets for the audit engagement. These targets are aligned with reporting dates to ensure that all deadlines are met. To reduce the time spent on certain tasks, team members might take short-cuts, for example reducing sample sizes, ignoring sample items which present issues or even ignoring errors. Given that the work performed by junior team members supports the final opinion, failures at the foundational level can result in overall significant audit failure (Willett & Page, 1996).

Audit fee pressure has prompted audit firms to reduce costs on audit engagements by reducing staff, making audit procedures more efficient and tightening audit time budgets. To meet time budgets, staff can either choose to work unrecorded overtime or to circumvent proper procedures and take shortcuts. These actions can lead to irregular auditing (Willett & Page, 1996) and reduce audit quality. Consistent with findings in existing literature that human judgement may not be optimal under stress, the judgement of senior audit team members may also be impaired by time pressure. This is because time

pressure impacts both the precision and efficacy of judgement and the decision-making process (Ahituv, Igbaria, & Sella, 1998).

On the other hand, there are studies suggesting that moderate levels of time pressure can enhance performance (Pratt & Jiambalvo, 1982). In a specific study, the effects of time pressure on reading comprehension were examined. Results showed that the best comprehension occurred for participants reading under mild time pressure (Walczyk, Kelly, Meche, & Braud, 1999). Another study conducted among university students in the southwestern United States showed that students who had less free time achieved better academic results in terms of their grade point average than students who had more free time (Ackerman & Gross, 2003).

In a military environment, there is research suggesting that time pressure more adversely affects less-experienced individuals (in this case commanders in the Israeli Air Force). This is because individuals with less experience may require more time to evaluate the information and finalise their decisions. Experienced commanders processed information better and were calmer during the decision-making process. The study notes that this is possibly because they were able to mitigate the time pressure by falling back on prior experience and they were also more confident in their abilities (Ahituv, Igbaria, & Sella, 1998).

Together with time pressure, resource constraints and the resulting work allocation increases the individual workload of team members. Audit workload can be used as an indicator of audit quality and heavy or excessive workload may potentially be the root cause for audit shortfalls. These shortfalls could come in the form of inadequate audit procedures, reduced professional scepticism and impaired audit judgement (Persellin, Schmidt, Vandervelde, & Wilkins, 2018).

Audit cost is another matter which should be considered. There are heavy costs associated with an auditor's investment in knowledge of the client and audit competencies in staff. Smaller firms might not be able to keep up-to-date with changes in reporting frameworks which can lead to potential non-compliance with accounting, auditing and statutory requirements. Although it cannot be stated that audit costs directly impact the detection of errors, it is reasonable to infer that the extent of testing may

be reduced to control costs. This can lead to the non-detection of certain errors (Caster, Massey, & Wright, 2000).

Audit firms also often experience fee pressure (Willett & Page, 1996) and engage in a practice called "lowballing" where unacceptably low audit fees are charged. This may impact audit quality as more attention is paid to the commercial side of the business than to the professional side (SAICA, 2020). The SAICA Code of Professional Conduct (Revised 2018) also notes that a lower fee is not unethical but might impact an individual's ability to comply with the principle of professional competence and due care. This is because a fee might be so low that it will be challenging to execute the engagement in line with the required technical and professional standards (SAICA, 2018). In an effort to keep fees low, audit firms might try to reduce costs by cutting back on staff or taking unapproved shortcuts to reduce time charged (Willett & Page, 1996). Higher audit fees, in turn, could have a positive effect on audit quality as they can improve performance and increase auditor motivation (Adnyani, Latrini, & Widhiyani, 2020).

Apart from potential financial constraints and lowballing experienced by smaller firms, more time and resources are often allocated to clients where the perceived risk is higher, for example listed entities. More available time on listed audits might reduce the number of errors for these clients as more audit effort is spent on detecting errors (Caster, Massey, & Wright, 2000). Auditors will plan to spend most costs on risky and complex areas. The same amount of effort might not go into less complex or risky areas where the errors might then occur and go undetected (Caster, Massey, & Wright, 2000).

With the above points in mind, the following questions are included in the research instrument:

- Q7: Rate the extent to which you think the following factors contribute to unidentified misstatements by auditors:
    - Time constraints due to a lack of available audit resources
    - Time constraints due to starting the audit late
    - Time constraints due to tight audit deadline

- Q8: Rate your agreement with the following statements:
    - Resource constraints are a bigger concern at non-Big-4 audit firms than at Big-4 audit firms
    - Senior engagement team members do not spend sufficient time on audits
    - If auditors are given more time to audit, this time will be used efficiently to prevent undetected misstatements
    - If auditors are given more time to audit, the audit will be more likely to identify material misstatements

2.8 Use of prior year working papers

In order to save time, auditors make use of prior year working papers as a decision aid to inform current year procedures and sample sizes (Caster, Massey, & Wright, 2000 ; Tipgos, 1978). Prior year working papers are a useful audit tool. New staff members can use these working papers as a training aid to provide essential knowledge about the client and to guide staff through the audit strategy for the particular section. In turn, reviewers can use the prior year working papers as a quality control benchmark to evaluate whether the audit procedures performed were adequate and reasonable. There is, however, a danger of overreliance on prior year working papers. The procedures might not be adequate to meet the objective of the current year audit. This results in inefficiencies and time wasted. Using prior year working papers can also create complacency if the auditor does not undertake a new, sceptical examination of the financial information but merely inquires whether there were any changes from last year (Tipgos, 1978).

It is important that the appropriate balance is achieved. Using prior year working papers can result in merely repeating procedures without adjusting for changes in the client's environment or systems. Auditors may also continue to rely on procedures which were not efficient or caused judgement errors in the prior period. Findings and conclusions can even mirror those reached previously. Overreliance on the approach followed in the prior year eliminates the opportunity for creativity and applying professional scepticism when planning and executing audit procedures (Wright, 1988). On the other hand, prior year working papers can highlight risk areas and potential issues to auditors and even assist

in identifying audit adjustments. Training and monitoring time will also be reduced as more junior staff members will be able to refer to examples from the prior year. This will increase efficiency and reduce audit costs (Wright, 1988).

With the above points in mind, the following questions are included in the research instrument:

- Q7: Rate the extent to which you think the following factors contribute to unidentified misstatements by auditors:
    - Overreliance on prior year working papers
- Q8: Rate your agreement with the following statements:
    - Prior year working papers reduce unpredictability in an audit which may increase undetected errors
    - Working paper templates reduce the extent to which audits are specifically tailored for each client, thereby increasing the risk of unidentified material misstatements
    - Working paper templates reduce the risk of important procedures being omitted thereby reducing the risk of unidentified material misstatements

2.9 Complexity

Apart from the challenges outlined above, complexity is another factor which can impact the detection of material errors. Complexity can be defined as being either a quantity or quality. Quantity refers to the fact that there may be many parts to the item, for example, a car is more complex than a bicycle because it contains more physical parts. In terms of quality, complexity can be described as the amount of information required to describe and understand the system, for example, an economy is a more complex system than is a pair of pliers (Standish, 2018). A specific task can also be described as complex when there is ambiguity or when information is poorly structured (Adnyani, Latrini, & Widhiyani, 2020). It is important to understand these principles in order to evaluate the potential impact of complexity on detecting material misstatements.

Clients often have diversified business operations which make the related financial information more challenging to understand and interpret. The complexity caused by diversified operations increases

audit risk. It also increases the probability of audit failure occurring in the form of corporate fraud where complex diversification is used to conceal information (Hung & Cheng, 2018). The nature and complexity of the client and the client's operations are important considerations when accepting a client or putting out a bid for a client. The auditor's competence and capabilities need to be appropriately matched with the key features of the client. Auditors taking on clients with a different profile than their existing client base might also underestimate the risks and complexities associated with the client. This can result in an inaccurate assessment of the amount of work required or inappropriate staffing for the engagement. If staff is not experienced enough to meet the audit needs, this can have a negative impact on audit quality and potentially result in restatements in the financial statements over the long term (Blankley, MacGregor, & Mowchan, 2021).

Audit tasks can also be complex which can inhibit the successful completion of the task. Auditors might put in much additional effort to try and complete the task but the additional effort will not necessarily result in better performance. Lack of knowledge about the task or matter can exacerbate this problem and result in a decline in audit quality (Adnyani, Latrini, & Widhiyani, 2020).

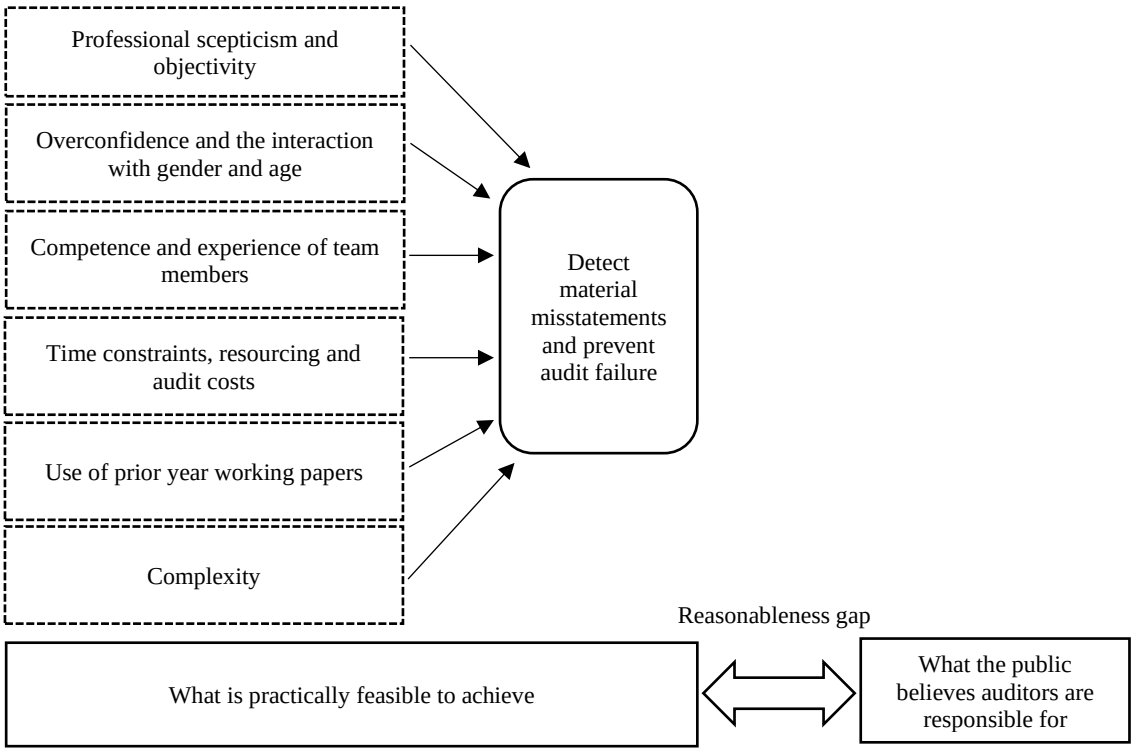
With the above points in mind, the following questions are included in the research instrument:

- Q7: Rate the extent to which you think the following factors contribute to unidentified misstatements by auditors:
    - Complexity of client's operations
    - Complexity of specific transactions or balances

2.10 Summary

Despite the public's perception that auditors have the responsibility to detect all errors on a timely basis, there are numerous factors which contribute to auditors missing these material misstatements. These factors are summarised in Figure 1.

Figure 1 Factors contributing to auditors missing material misstatements



Understanding which factors have the most significant impact in the South African audit environment will make it possible to implement remedial actions suited to South Africa. This should enhance audit quality and ensure that errors are identified on a timely basis. As mentioned in Section 1.4 above, this will increase confidence in the South African capital market and may lead to lower cost of capital demands of South African companies.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Research methodology and overview of method

The purpose of the study was to investigate factors contributing to undetected material misstatements by South African auditors. A quantitative method was adopted. Online surveys were used to collect data (Leedy & Ormrod, 2015). Academic papers were used to identify factors which may contribute to undetected material misstatements by South African auditors. An anonymous online survey was distributed to auditors, preparers of financial statements (corporates), academics and members of professional regulators (SAICA, IRBA and the JSE) via Qualtrics. The survey predominantly used Likert scale questions to assess the respondents' view on the relevance of each factor in unidentified misstatements (Ivankova & Creswell, 2009).

The data were analysed using descriptive and inferential statistics. Descriptive statistics were used to form an initial overview of the data and to evaluate to what extent participants agreed or disagreed with the questions and statements included in the survey. Inferential statistics were used to determine whether differences between the perceptions of different groups of participants was statistically significant or not. Refer to Section 3.6 for details on the tests performed in this regard.

The chosen method is appropriate because the aim was not to identify new factors (which would have required a qualitative method inspired by a grounded theory approach) but to form generalisations about known factors which are most relevant to undetected material misstatements by South African auditors.

3.2 Research population and sample

Primary data were collected by distributing an anonymous online survey to individuals who are knowledgeable in the fields of accounting and corporate financial reporting. There were four population categories: (1) auditors, (2) preparers of financial statements, (3) academics and (4) professional bodies and regulators (SAICA, IRBA and the JSE). For each category, the respondents must have at least held a CA(SA)[4] (or equivalent) qualification. Academics and regulators were

[4] Chartered Accountant South Africa

included in the population as they were reasonably neutral parties (i.e., they are not working as auditors in an audit environment where they might be influenced by the auditor's perspective). The responses from these groups were useful as a corroborative tool because of comparing their responses to those of auditors and preparers (Babin, Ortinau, Herrmann, & Lopez, 2020).

Convenience and snowball sampling was used. These techniques are non-probabilistic[5] or non-random sampling techniques (Alkassim & Tran, 2016). Snowball sampling is a popular sampling method. The researcher commences the data collection process with a small number of initial contacts (seed contacts) which meet the stipulated population requirements, as specified in Section 3.1 above. In addition, members of the target populations were invited to participate in the study via a link to the Qualtrics survey. The link was posted on LinkedIn so that the researchers' networks would have access to the link. In this manner, a snowball effect is achieved as these contacts all become participants in the study and expand the research base (Parker, Scott, & Geddes, 2020).

The online survey was closed after 298 responses had been submitted. Of the 298 responses, 140 were complete. The analysis was based on completed surveys only.

Table 1 Sample sizes by population grouping

Population	Sample size
Auditors working in public practice at small, medium and large audit firms	87
Preparers of financial statements (corporates), Academics, Members of professional regulators in a regulatory role (SAICA, IRBA and the JSE)	24
Academics	7
Members of professional regulators in a regulatory role (SAICA, IRBA and the JSE)	22
Total	**140**

[5] Non-probabilistic sampling is a form of sample selection that uses a non-random way to select a group of participants to participate in research study. This is often because the researcher wants to gain the views of only a targeted group of individuals (Qualtrics XM, 2022).

3.3 Data instrument

A survey has been compiled based on elements which contribute to misstatements going undetected according to the prior research (see Sections 2.4 – 2.9). The survey was administered online via Qualtrics. The survey questions solicited responses on various factors and asked respondents about the extent to which they agree or disagree with statements. A 5-point Likert scale was used ranging from 1 (the factor is unimportant or disagree with the statement) to 5 (the factor is very important or strongly agree with the statement). Question 1 to 6 were aimed at determining the demographics of participants in order to draw meaningful conclusions from the responses in Questions 7 and 8. Questions 1 – 6 were used in combination with Questions 7 and 8 to analyse and interpret the responses provided. The survey information sheet stated the objective clearly and noted that participants should answer based on their experiences and impressions, which scoped the participant pool to only those with relevant experience that meet the research criteria. There were two open-ended questions. Please see Appendix A for a hard copy of the questionnaire.

The following steps were taken to ensure the completeness and accuracy of the survey:

- The survey was proofread multiple times by the researcher and was also reviewed by the University Research and Ethics Committee.
- The survey was tested by the researcher, selecting different options to ensure that all the response options were available depending on the selections made.
- Questions were tested against the factors identified in the literature review to ensure that they were grounded in prior literature and to ensure that the survey was complete.
- There was no time limit to complete the survey and respondents could take their time to provide accurate and well thought-through answers.
- The survey was not restricted to CA(SA)s. As the survey was administered online through Qualtrics and LinkedIn, a wide group of professionals had the opportunity to participate. The survey, however, did make it clear that participants had to meet the criteria for one of the participant categories and also asked them to indicate the relevant category (auditor, preparer, academic or member of a regulator). As there is no way to verify the qualifications of

participants on an online platform where results are gathered anonymously, the study relied on the integrity and ethics of participants who completed the survey.

3.5 Data analysis

Descriptive statistics were used to form an initial overview of the data. Frequency tables (Xiao & Shailer, 2022) were used to summarise the results per population, age, gender as well as for respondents who have experienced an error (Monsoor & Maroun, 2016). Trends are depicted graphically where possible. The descriptive statistics were complimented using bar charts and line graphs to display the results visually (Hardin, Horn, Perez, & Williams, 2012). For example, the average mean, standard deviation and mode for each contributing factor was displayed using a bar chart, line graph and scatter plot graph. The comparison of results for academics and regulators with other respondents was displayed visually using a line graph. A final summary of the average mean for each contributing factor was displayed using a bar chart with a trendline.

3.6 Validity and reliability

Validity refers to the accuracy or truthfulness of a measurement (Leedy & Ormrod, 2015). *Reliability* is synonymous with repeatability or stability (Kimberlin & Winterstein, 2008) and represents the extent to which an instrument yields consistent results when the item being measured has remained unchanged (Leedy & Ormrod, 2015).

For this study, the following controls were used to enhance validity and reliability:

- Convenience and snowball sampling were used to gather responses from the relevant population which consisted of participants who have the required knowledge of the field being researched (Morse, Barrett, Mayan, Olson, & Spiers, 2002).
- The sampling techniques used (convenience and snowball sampling) are non-probabilistic and made it possible to include a wide range of participants who meet the research criteria. The population from which the sample was selected was theoretically informed and relevant to the research questions, enhancing the rigour of the study (Mays & Pope, 1995).

- Participants' responses were stored on the Qualtrics platform which protected the integrity of the data and facilitated reliable analysis (Mays & Pope, 1995).
- Researcher bias in the presentation of results was mitigated by including summarised quantitative data, for example a table showing the results of the statistical analysis. This provides the reader with objective evidence which can be easily understood and interpreted (Mays & Pope, 1995).
- A literature review was conducted and survey questions were grounded in prior literature (Mays & Pope, 1995).
- A pilot study was performed to ensure that questions are not leading, not biased and pose no ethical threats. A pilot study enables the researcher to identify weaknesses in the questionnaire and make modifications if necessary (Leedy & Ormrod, 2015). The survey was pilot tested with expert faculty members (Xiao & Shailer, 2022) who assessed it for any ethical concerns or leading questions.
- The participants were guaranteed confidentiality to enhance the likelihood of their providing accurate and honest responses to the questions (McNeeley, 2012).
- The questionnaire included clear instructions and was structured in a manner easy to understand using a Likert scale and text boxes for open-ended questions. This enhanced participants' willingness to provide accurate and honest responses (McNeeley, 2012).
- A potential concern with questionnaires is the presence of participation bias where participants who have a particular interest in a topic might be more inclined to complete the questionnaire (Xiao & Shailer, 2022). In this survey, a screening question was included to identify respondents who had encountered a prior period error (Question 6: "Have you ever been part of an audit team / corporate / regulator dealing with an IAS 8 prior period error?). This question was included to assess any significant variances or even common themes among participants who had encountered an error before. It was expected though that all interest groups to whom the survey was circulated (as described in Section 3.2 above), whether they had encountered an error or not, would have an interest in the subject matter. Participation bias was not a concern

in this study. 77.9 % and 22.1 % of the respondents, respectively, had or had not personally experienced a prior period error. Consequently, the study includes the perspectives of both.

- A high-level review was performed in which the researched compared the age bracket to the level of experience to identify any possible discrepancies or anomalies where the years of experience do not correlate with the selected age bracket. No such anomalies were identified.
- The median responses and the scores from the principal component analysis were interrogated further to control for the possibility that other variables were impacting the results. More specifically, differences between the median and principal component scores among the following groups were tested using either Mann-Whitney U tests (for 2 independent groups) or a Kruskal-Wallis H test (for more than 2 independent groups):
    - Whether participants have experienced a material misstatement
    - Age brackets
    - Gender
    - Firm type (Big 4 or non-Big 4)

3.6.1 Research ethics

Ethics is an important consideration, especially in qualitative studies. The researcher must be cognisant of the fact that the study is not allowed to aggrieve participants and must respect their basic human rights. Emotional harm can be prevented by implementing appropriate ethical principles and controls (Orb, Eisenhauer, & Wynaden, 2000). The following controls were implemented to support the necessary ethical standards:

- Survey responses will be stored securely for three years and then destroyed.
- Confidentiality and anonymity were guaranteed.
- Participants did not involve vulnerable categories (e.g., minors).
- The survey questions were piloted (as described in Section 3.6 above) to ensure that they do not pose an ethical risk to participants.

- The project only commenced once ethical clearance had been obtained. This authorisation provided the assurance that the appropriate procedures had been followed and that the study had been adjudicated by an independent panel as meeting the required ethical standards.
- Access to survey responses were limited to the researcher and the research supervisors only.

CHAPTER 4: DATA ANALYSIS

4.1 Introduction

Overall, the responses were in line with expectations. The open-ended questions confirmed and even elaborated on the themes presented to participants in the survey. Participants also identified a few additional themes which are included and discussed in Section 4.2.5. The majority of respondents were auditors (62.14%) so this provides a substantial base because they are individuals actively involved in the audit process. As the study is focused on why auditors miss material misstatements, the views of auditors in the field provide valuable insights into the factors contributing. The aim of the study was to determine why auditors miss material misstatements, and how these findings could potentially assist the profession to implement remedial actions. The usefulness of financial statements for the users was not within the scope of this study. Users would not be familiar with the issues that may lead to misstatements, unless they were previously auditors themselves. In the latter case, they would be drawing more on that experience than their experience as a user to provide relevant information. As such, the respondent base is appropriate.

The structure of this chapter is as follows: Firstly, the type of respondents will be discussed to develop the context for further analysis. Secondly, the results for each of the six identified factors will be analysed, followed by a discussion of the impact of prior IAS 8 experience on the results. The impact of demographic effects like age and gender, as well as firm type (Big 4 or non-Big 4), will be evaluated. The chapter concludes with commentary on additional factors identified by respondents and how these responses can potentially be linked with the themes included in the survey.

4.2 Survey results

The types of respondents are depicted in Table 2 below. Individuals with previous IAS 8 experience made up 109 of the 140 responses (77.9%). This adds to the credibility of the results as the respondents have had first-hand experience of the circumstances surrounding the error, as well as the factors which potentially contributed to the initial non-detection of misstatements. There were 66 female respondents and 74 male respondents, providing a balanced view on questions posed to respondents. There were 7

academics and 22 members of professional bodies in a regulatory role. These categories of respondents provide a more objective view and so served as a corroborative tool against which to assess the responses of other respondents (see Section 4.2.1). Age groups and experience levels were well represented, which enhances the credibility of the results by providing a balanced view of the questions and statements included.

Table 2 Characteristics of respondents by respondent categories

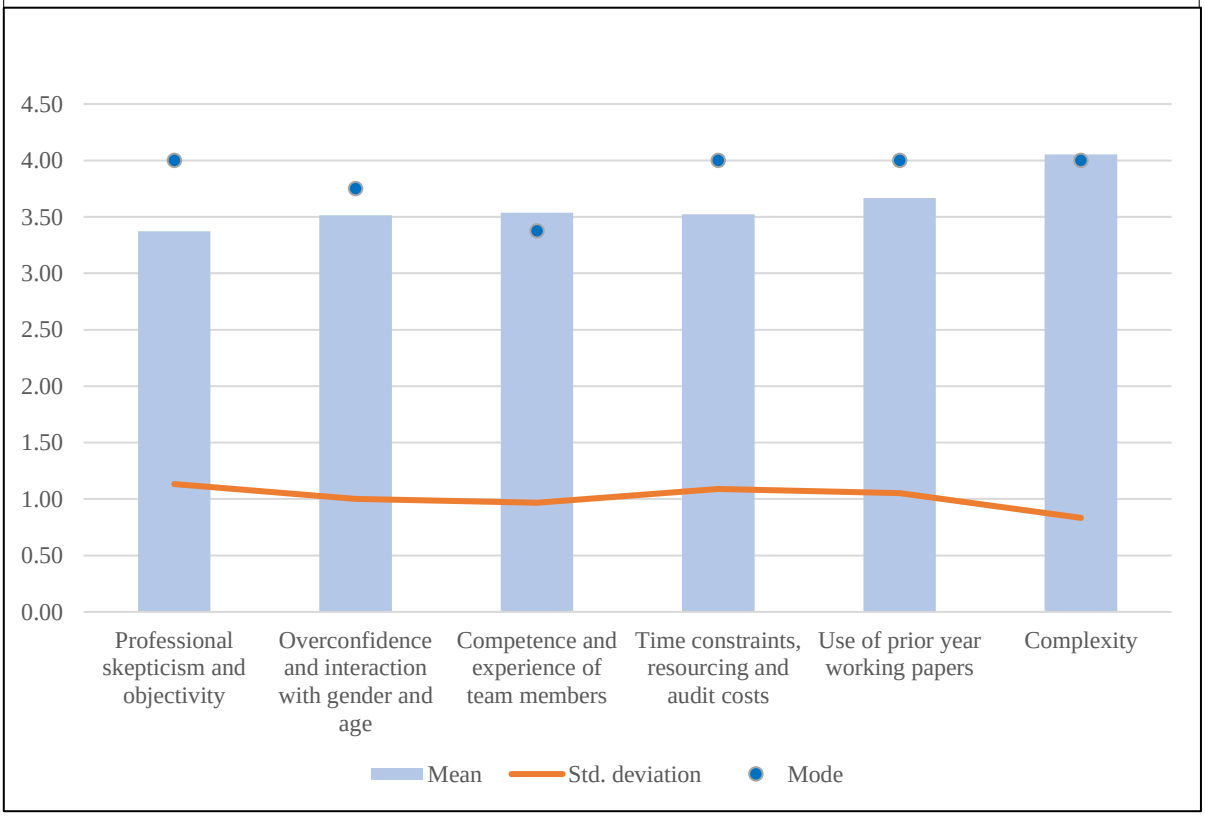
Category	Big 4 or non-Big 4	Gender	No previous IAS 8 experience	Previous IAS 8 experience	Grand Total
Academic		Female		3	3
		Male	1	3	4
Academic Total			**1**	**6**	**7**
Auditor	Working at a non-Big 4 audit firm	Female	5	5	10
		Male	4	11	15
	Working at a non-Big 4 audit firm Total		**9**	**16**	**25**
	Working at one of the Big 4 audit firms (Deloitte, EY, KPMG or PwC)	Female	4	23	27
		Male	9	26	35
	Working at one of the Big 4 audit firms (Deloitte, EY, KPMG or PwC) Total		**13**	**49**	**62**
Auditor Total			**22**	**65**	**87**
Member of a professional regulator in a regulatory role		Female	1	11	12
		Male	3	7	10
Member of a professional regulator in a regulatory role Total			**4**	**18**	**22**
Preparer of financial statements (corporate)		Female	2	12	14
		Male	2	8	10
Preparer of financial statements (corporate) Total			**4**	**20**	**24**
Grand Total			**31**	**109**	**140**

4.2.1 Factors which contribute to auditors missing material misstatements

The detailed results are summarised in Table 3 and depicted visually in Figure 2 below. The individual questions were grouped into the contributing factors as per the literature review to draw meaningful conclusions. The average result[6] for each contributing factor was determined by calculating the average mean, mode and standard deviation for all questions grouped into the specific contributing factor.

Figure 2 below illustrates that the perceived importance of all contributing factors was assessed as fairly equal by respondents (average means between 3 and 4). The average mode ranges from 3.38 to 4 which emphasis that respondents generally agreed with statements made. The average standard deviation ranges between 0.83 and 1.13, indicating that responses were mostly grouped close to the mean.

Figure 2 Visual summary of average descriptive statistics summarised by contributing factor



[6] The average result was calculated by, firstly, grouping all the standalone questions into the categories outlined in Sections 2.4 – 2.9. The mathematical average was then calculated per category for the mean, standard deviation and mode respectively.

Table 3 Detailed descriptive statistics of factors contributing to auditors missing material misstatements

					Averages for each contributing factor					
Category	**Gender**	**IAS 8 experience or not**	**Big 4 or non-Big 4**	**Number of respondents**	**Professional scepticism and objectivity**	**Overconfidence and interaction with gender and age**	**Competence and experience of team members**	**Time constraints, resourcing and audit costs**	**Use of prior year working papers**	**Complexity**
Auditor	Female	No	Non-Big 4	5	3.10	3.48	3.30	3.20	3.05	4.10
			Big 4	4	3.06	3.56	3.34	3.82	3.75	4.13
		No Total		9	3.08	3.51	3.32	3.48	3.36	4.11
		Yes	Non-Big 4	5	3.85	3.55	3.78	3.71	4.50	4.20
			Big 4	23	3.11	3.37	3.48	3.57	3.55	3.93
		Yes Total		28	3.24	3.40	3.54	3.60	3.72	3.98
	Female Total			37	3.20	3.43	3.48	3.57	3.64	4.01
	Male	No	Non-Big 4	4	3.56	3.59	3.47	3.71	3.50	4.25
			Big 4	9	3.33	3.56	3.28	3.81	3.92	3.67
		No Total		13	3.40	3.57	3.34	3.78	3.79	3.85
		Yes	Non-Big 4	11	3.41	3.48	3.39	3.71	3.50	3.73
			Big 4	26	3.04	3.59	3.50	3.43	3.59	4.02
		Yes Total		37	3.15	3.55	3.47	3.51	3.56	3.93
	Male Total			50	3.22	3.56	3.44	3.58	3.62	3.91
Auditor Total				**87**	**3.21**	**3.50**	**3.46**	**3.58**	**3.63**	**3.95**
Non-auditor	Female	No		3	4.50	3.54	4.17	3.90	3.67	5.00
		Yes		26	3.55	3.52	3.76	3.44	3.73	4.23
	Female Total			29	3.65	3.53	3.81	3.49	3.72	4.31
	Male	No		6	3.29	3.58	3.27	3.45	3.29	3.92
		Yes		18	3.74	3.52	3.58	3.35	3.89	4.17
	Male Total			24	3.63	3.54	3.51	3.38	3.74	4.10
Non-auditor Total				**53**	**3.64**	**3.53**	**3.67**	**3.44**	**3.73**	**4.22**
Grand Total				**140**	**3.37**	**3.51**	**3.54**	**3.52**	**3.67**	**4.05**

Std. deviation	**1.133**	**1.001**	**0.966**	**1.090**	**1.052**	**0.833**
Mode	**4.0**	**3.8**	**3.4**	**4.0**	**4.0**	**4.0**

Professional scepticism and objectivity

The majority of participants (average mean of 3.37 and mode of 4) agreed with statements regarding a lack of professional scepticism and objectivity. Although there were participants who disagreed with the statements (minimums of 1 observed for certain statements), the standard deviation (1.133) is close to 1 and the average median for this category was 3.75. The results suggest that a lack of professional scepticism and objectivity reduces audit quality and can therefore result in undetected material misstatements. If the level of professional scepticism and objectivity can be enhanced through training (Hehong, 2019) the number of undetected material misstatements could potentially be reduced (Iryani, 2017).

In the open-ended questions, participants confirmed that objectivity and ethical behaviour are important but noted that audit team members should be able to speak up and question what is being done without fear. Comments suggested that managers should listen to trainees without any bias. As much as professional scepticism and objectivity are encouraged, senior audit team members, as leaders of the engagement, must ensure that the environment is conducive to speaking up and raising concerns (Pratt & Jiambalvo, 1982). The approachability of seniors can be improved by inclusiveness, for example the senior team members making an effort to learn the names of junior team members and considering their opinions. Senior team members should also focus on qualities like friendliness, honesty and calmness (Swani & Isherwood, 2020). If senior members lead by example in raising concerns, this will create the right tone at the top and encourage more junior team members to do the same (Franken, Edwards, & Lambert, 2009).

Overconfidence and interaction with age and gender

The majority of participants agreed with statements that age, experience and technical skills contribute positively to confidence (average mean of 3.51, mode of 3.8). It was interesting to note that the statement *"Confident partners conduct less audit work resulting in a higher risk of unidentified misstatements,"* achieved a mode of 2, indicating that participants did not necessarily agree that more confidence necessarily has an adverse impact on audit quality. This suggests that a healthy level of

confidence will not detract from audit quality and can ensure that audit quality is maintained. Happel, Ennis and Reid-Searl (2014) describe the importance of confidence and a calm, collected approach in a healthcare setting. Although not an audit environment, the characteristics of decision-making, potentially unplanned events and influencing less experienced staff applies to most professional environments. A calm, confident approach can contribute positively to achieving the desired outcome, id est, to uphold audit quality (Happel, Ennis, & Reid-Searl, 2014).

There was little difference in responses to the two gender-related statements *("Experienced female / male partners have confidence in their inherent ability to identify misstatements,"* means of 3.393 compared to 3.557; standard deviations of 0.935 and 0.969 respectively). This indicates that participants do not necessarily agree that gender impacts (over)confidence. Participants rather seem to be of the view that age (Hassan, Khalid, & Habib, 2014), experience (Kangtao, Yingli, & Jingyu, 2014) and technical skills (Hehong, 2019) impact confidence which, in turn, influences audit quality (Hardies, Breesch, & Branson, Male and female auditors' overconfidence, 2011). Given these findings, it is important to have well-balanced audit teams in terms of age and experience. This is naturally achieved by having trainees of different levels on the audit team. With more complex clients, it may be necessary to have two or more managers of varying levels of seniority and experience. This will create the balance of experience and confidence to maintain high levels of audit quality (Ramsay, 1994).

Competence and experience of team members

Participants agreed with statements that training and competence are important in preventing undetected material misstatements (mean of 3.54, mode of 3.4, low standard deviation of 0.966). This is echoed in the open-ended questions in which participants highlighted that there is a lack of critical thinking skills and the ability to apply theoretical knowledge in context. Participants also highlighted that improved information technology (IT) skills will have a positive effect on the detection of misstatements as audit team members will be better placed to perform data analysis and reach successful conclusions. As professional and technical competence correlate with the level of training received (Hehong, 2019), audit firms should ensure that they have a well-functioning Learning and Development department to identify and address skills gaps (Chen, Chang, & Lee, 2008). Cultivating a learning

culture will enhance audit quality and encourage open and honest discussions about potential audit problems (Alberti, Bedard, Bik, & Vanstraelen, 2022).

Participants did not necessarily agree that lack of training is a bigger concern at non-Big 4 audit firms (mean of 2.950 for this statement). The majority of respondents were from Big-4 audit firms (62) which indicates that the results are not necessarily biased as non-Big 4 participants may be more inclined to defend training standards at their respective audit firms because they feel proud of the company they work for (Katzenbach, Steffen, & Kronley, 2012). This result is encouraging as it may indicate that both large and smaller audit firms recognise the importance of training (Hehong, 2019) and endeavour to administer the required level[7] of training to audit staff.

Participants did not agree that manager and partner technical competence were not at the required level (means of 2.971 and 2.779 respectively for these two statements). In contrast, participants felt that the technical competence of trainees is not where it should be (higher mean of 3.350, mode of 4 for this statement). As most respondents working in audit were at junior manager or equivalent level (35/87) this result should be interpreted with caution as managers may potentially be biased in terms of their own versus their trainees' technical competence. Despite the potential bias, the need for training was highlighted by participants. Audit firms which have been accredited to administer training contracts undergo a re-accreditation visit by SAICA depending on the firm's risk rating. This may result in re-accreditation periods of between 6 and 36 months (SAICA, 2022). This visit ensures that the training requirements and interventions are met (SAICA, 2022). To address any additional or remaining skills gaps, the audit firm's Learning and Development department plays an important role in facilitating any additional technical and soft skills training as required (Johnson, 2015).

In terms of experience, responses in the open-ended questions noted that a fresh set of eyes can often detect an error, supporting the regulatory developments around mandatory audit firm rotation (MAFR)[8].

[7] Audit staff in South Africa are trained and assessed in accordance with the SAICA Training Programme Competencies (SAICA, 2015).

[8] MAFR is a regulatory requirement for an audit firm, including a network firm as defined in the IRBA Code of Professional Conduct for Registered Auditors, not to serve as the appointed auditor of a public interest entity for more than 10 consecutive financial years. After this, the audit firm will only be eligible for reappointment as the auditor after the expiry of at least five financial years (IRBA, 2017).

In contrast, other participants highlighted the risks around lack of continuity which fosters a better understanding of the client (Frendy & Takeda, 2021). It appears that a balance should be maintained between audit team members who can assess risks objectively and still have sufficient experience and understanding to identify risk areas and potential misstatements (SAICA, 2016). The normal succession of an audit team will ensure continuity but the role of, for example, an independent engagement quality control reviewer (EQCR) becomes important to serve as the objective set of eyes (Schneider, Church, & Ramsay, 2003). Audit firm policies often only require EQCRs on high risk or listed clients (in line with ISA 220) (IAASB, 2009). The policy can be extended to include lower risk or non-listed clients on an ad-hoc or randomised basis to enhance audit quality on these engagements.

Responses in the open-ended questions highlighted coherent, up-front (understood to be well in advance of the audit commencing) planning between team members, as well as a workshop on an entity's balance sheet with technical teams as a potential additional mitigating factor for undetected errors. This emphasises that participants view technical competence as significant in preventing undetected material misstatements (Hehong, 2019; Iryani, 2017). This is further confirmed by a suggestion made to include technical accounting references in work performed, in this way linking work performed to a sound technical base. It is interesting to observe the willingness and support from audit team members to mitigate undetected errors. Support and commitment from audit teams will enhance audit quality (Nasrabadi & Arbabian, 2015) which can further reduce the number of undetected material misstatements (Rahman, Ying, Zhu, & Ji, 2020).

Time constraints, resourcing and audit costs

Most respondents agreed with statements made regarding time constraints, resourcing and audit costs (mean of 3.52, mode of 4). Similar to observations on Factor 3, participants did not necessarily agree that resource constraints are a bigger concern at non-Big 4 audit firms (mean of 2.943 for this statement). Most respondents were from Big-4 audit firms (62/87) which indicates that the results are not necessarily biased as non-Big 4 participants would be more inclined to defend resourcing at their respective audit firms. If resource constraints are linked to budgets and audit fee pressure (Willett & Page, 1996), each size firm might experience its own challenges with their respective clients. For

example, a large audit firm with a listed client might experience the same challenges as a smaller firm with a smaller, unlisted client. Resource availability is matched to client size, meaning that other factors play a more pivotal role in the level of resource constraints, for example, audit fee pressure (Willett & Page, 1996).

The most significant factor identified is the effect of time constraints due to tight deadlines on an audit (mean of 4.114, mode of 5 for this statement). This supports earlier statements that time pressure can potentially have a negative impact on audit quality (Caster, Massey, & Wright, 2000). This is further supported by participants agreeing that more time will be used efficiently to identify material misstatements (means of 3.636 and 3.707 respectively; modes of 4 for these statements). Audit firms should focus on allocating and freeing additional time to enhance audit quality. This can be done by starting the audit earlier, relying on work performed by internal audit and performing a hard-close[9] audit before the actual year-end. This will provide more time to focus on risky areas at year-end and perform additional procedures to detect material misstatements (Caster, Massey, & Wright, 2000).

Participants also agreed strongly with the statement that senior engagement team members do not necessarily spend sufficient time on audits (mean of 3.471, mode of 4). This was echoed in the open-ended questions where participants noted that more regular, random reviews, as well as Engagement Quality Control Reviewer (EQCR) reviews will reduce the risk of undetected misstatements. Participants also felt that excessive review notes should be replaced by meaningful discussions to resolve matters more efficiently. As the majority of audit work is often performed by junior team members (Willett & Page, 1996), it is important for senior team members to perform thorough reviews to mitigate audit failures at the foundational level (Willett & Page, 1996). This will also ensure that the audit benefits from the experience and knowledge of more senior team members (Che, Langli, & Svanström, 2018).

[9] A hard close audit means that certain procedures are performed before year-end. For example, if the year-end is 30 June, a hard close audit could be performed at 31 May. At year-end it would then only be necessary to audit the June income/expense movements and the 30 June balance sheet (ifawalacatacas.com, 2014).

In the open-ended questions, participants highlighted the potential negative impact of the "profit-motive" and audit firms being afraid of losing the client. This can also be observed in responses to the question regarding a culture of wanting to avoid conflict with the client, which may increase the risk of undetected errors (mean of 3.493, mode of 4). A suggestion was made for an independent party to determine the audit fees to mitigate independence threats for the audit firms. This can also potentially mitigate the risk of "lowballing" which could impact audit quality (SAICA, 2020). This study does not further investigate the role of an independent party in audit fee determination but it is noted as a recommendation for future research.

Use of prior year working papers

Participants agreed with statements which both supported and criticised the use of prior year working papers (mean of 3.67, mode of 4). This indicates that participants acknowledged the advantages and disadvantages of using prior year working papers and it emphasises that these working papers should be used with caution to ensure that auditors strike the right balance (Wright, 1988). Prior year working papers can be both a decision aid (Caster, Massey, & Wright, 2000) and a blind spot that reduces professional scepticisms and innovative thinking (Tipgos, 1978). Audit teams must ensure that prior year working papers do not undermine their professional scepticism. They should maintain a questioning mindset (Glover & Prawitt, 2014) and reassess the appropriateness of audit procedures, even if they seem mundane and straightforward.

The open-ended questions confirmed some of the advantages described above: One participant noted that it is potentially risky not having working paper templates for routine transactions, and although it would not necessarily be possible to design a working paper which will be helpful to all types of businesses, it can still be used as a completeness check to alert the audit team to risk areas they may not have considered. In doing so, the number of unidentified misstatements can possibly be reduced. Another participant supported this statement and noted the standardisation[10] (of working papers) as a potential mitigating factor to reduce the possibility of auditors missing material errors. Although

[10] To bring into conformity with a standard especially in order to assure consistency and regularity (Merriam-Webster, 2022).

standardised working papers may ensure that the minimum required audit work is completed, this does not facilitate a tailored, risk-based approach. Audit teams will still have the responsibility to apply professional scepticism and perform additional procedures required to reduce the risk of undetected material misstatements (Glover & Prawitt, 2014 ; Francis, 2004).

Complexity

Participants agreed that the complexity of clients' operations, as well as the complexity of specific transactions or balances can contribute to unidentified misstatements by auditors (mean of 4.05, mode of 4). The standard deviation (0.833) is below 1, indicating that responses were grouped close to the mean. These findings confirm that complex, diversified operations increase audit risk (Hung & Cheng, 2018). It also highlights the fact that audit tasks can be complex and that audit team members should have the appropriate skills to prevent misstatements and maintaining audit quality (Blankley, MacGregor, & Mowchan, 2021; Adnyani, Latrini, & Widhiyani, 2020). Complex client operations or industry-related complexities may require specialist involvement. Audit teams should pro-actively assess the need for a specialist (IAASB, 2009) to assist with gaining an understanding, performing risk-assessment procedures and testing of the complex areas.

In the open-ended questions, participants noted that management must involve auditors earlier in complex transactions (already in the negotiation phase) so that inconsistencies can be avoided later. Participants also noted that client relationship management is very important: clients must check with auditors more regularly about changes in their business as auditors are often only read in after the fact which makes it difficult to address or correct the issue.

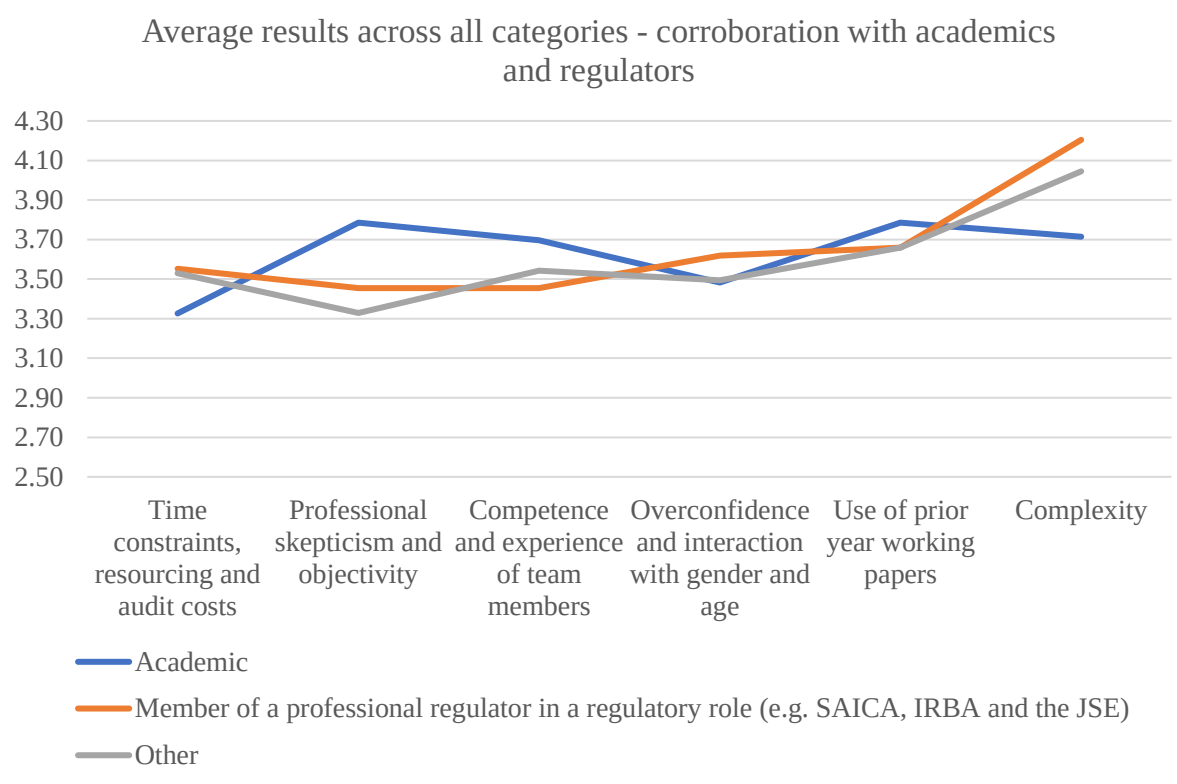
Corroboration of results with responses from academics and regulators

The responses from academics and regulators were used to corroborate the results from other respondents and has been illustrated in Figure 3 below. Academics and regulators are not actively involved in audit on a day-to-day basis and are considered to be independent, objective parties for purposes of this study. The responses from regulators were in line with other respondents with small deviations occurring on professional scepticism and objectivity, overconfidence and complexity. The

responses from academics deviated from other participants' response on professional scepticism and objectivity, competence and experience of team members and complexity.

The small deviations noted above indicate that academics and regulators may have a theoretical perception of the impact of certain factors but are perhaps not privy to how easy or difficult it is to implement these factors in practice. These results enhance the credibility of the study as they mitigate the potential limitation of auditors and preparers being biased when it comes to the factors contributing to auditors missing material misstatements.

Figure 3 Average results across all categories: corroboration with academics and regulators



Summary

Across all factors and questions, the average medians range between 3 and 4. This indicates that half of the respondents' answers were either 3, 4 or 5 which indicates a marked level of agreement with almost all statements. The fact that the median is so high across most of the questions and factors suggests that very few respondents completely disagreed with the statements made. This confirms the

findings from the literature review that all the identified factors can potentially contribute to auditors missing material misstatements.

4.2.2 Effect of previous IAS 8 encounters on the responses

Respondents were asked whether they had ever been a part of a team dealing with an IAS 8 prior period error. This question was included to determine if the responses from those participants who answered in the affirmative were significantly different from those who did not have previous experience with IAS 8 errors. Results have been summarised in Table 4 below, and commentary has been included on statistically significant differences or other noteworthy results.

Table 4 Impact of previous IAS 8 encounters on responses

Contributing factor	Mann-Whitney U	Asymp. Sig. (2-tailed)
Professional scepticism and objectivity		
Lack of objectivity	1636.5	0.783
Lack of professional scepticism	1465.5	0.240
There is a culture among auditors of wanting to avoid conflict with clients which may increase the risk of undetected errors	1465.5	0.224
There is a culture among auditors of wanting to avoid identifying issues during an audit engagement	1617.0	0.704
Overconfidence and interaction with gender and age		
Age contributes positively to partner confidence	1467.0	0.245
Confident partners conduct less audit work resulting in a higher risk of unidentified misstatements	1313.5	0.050
Experience on a particular client contributes positively to partner confidence	1556.5	0.450
Experienced female partners have confidence in their inherent ability to identify misstatements	1421.5	0.148
Experienced male partners have confidence in their inherent ability to identify misstatements	1302.0	0.037
Partners with more experience are more confident partners	1680.5	0.962
Technical IFRS or auditing skills contribute positively to partner confidence	1689.0	0.998
I only reach out to my firm's audit or accounting technical department as a last resort	1340.0	0.069
Competence and experience of team members		
A lack of sufficient training regarding professional skills is a bigger concern at non-Big-4 audit firms than at Big-4 audit firms	1403.0	0.132
Lack of understanding of the client or industry	1561.0	0.489
Manager accounting technical competence is not at the level it should be	1507.5	0.345
Partner accounting technical competence is not at the level it should be	1550.0	0.463
Trainee (audit clerks) accounting technical competence is not at the level it should be	1494.5	0.310
Training on how to apply professional judgement is important for preventing undetected material misstatements	1542.0	0.411
Training on how to apply professional scepticism is important for preventing undetected material misstatements	1598.0	0.603
Training on how to conduct suitable risk assessment procedures and how to respond to audit risk using tests of controls and/or substantive tests is important for preventing undetected material misstatements	1581.5	0.542
Time constraints, resourcing and audit costs		
Resource constraints are a bigger concern at non-Big-4 audit firms than at Big-4 audit firms	1362.0	0.090
Senior engagement team members do not spend sufficient time on audits	1639.5	0.790
Time constraints due to a lack of available audit resources	1565.0	0.516
Time constraints due to starting the audit late	1473.0	0.259
Time constraints due to tight audit deadline	1519.5	0.357
If auditors are given more time to audit, this time will be used efficiently to prevent undetected misstatements	1467.0	0.230

Contributing factor	Mann-Whitney U	Asymp. Sig. (2-tailed)
If auditors are given more time to audit, the audit will be more likely to identify material misstatements	1619.5	0.705
Use of prior year working papers		
Overreliance on prior year working papers	1628.5	0.743
Prior year working papers reduce unpredictability in an audit which may increase undetected errors	1405.0	0.122
Working paper templates reduce the extent to which audits are specifically tailored for each client, thereby increasing the risk of unidentified material misstatements	1476.0	0.265
Working paper templates reduce the risk of important procedures being omitted thereby reducing the risk of unidentified material misstatements	1541.5	0.430
Complexity		
Complexity of client's operations	1612.5	0.670
Complexity of specific transactions or balances	1522.0	0.351

Professional scepticism and objectivity

There were no statistically significant differences in the questions asking participants about professional scepticism and objectivity (p-values were >5%). The result suggests that participants who have not experienced an error acknowledge the preventative role of professional scepticism and objectivity, whereas participants who have experienced an error acknowledge the detective role this factor plays as it could have been the reason the error was detected (Ciolek, 2017 ; Francis 2004).

Based on these responses, audit firms can endeavour to utilise professional scepticism more as a preventative tool, rather than trying to detect a problem after the fact (Lartey, Kong, Bah, Santosh, & Gumah, 2019). For example, auditors can perform a forward-looking risk assessment during the current year audit based on budgets and forecasts for the next financial year. This advance view of anticipated risks can be kept on file and referred to during the next year's audit. It can potentially assist audit teams to target areas which are susceptible to misstatements more efficiently (Chang, Tsai, Shih, & Hwang, 2008).

Overconfidence and interaction with age and gender

There were statistically significant differences on the statements addressing whether confident partners conduct less audit work ($U = 1313.5$, $p < 5\%$), and whether male partners have more confidence in their abilities to identify misstatements ($U = 1302.0$, $p<5\%$). This is possibly because respondents who have had first-hand experience of the above have either directly observed the statements to be true or false, differing from respondents who have not experienced an error and are merely providing their views.

This can potentially be described as an anchoring effect where respondents' assessment regarding confidence on an audit might be based on previously presented information or an "anchor" (McElroy & Dowd, 2007): in this case their first-hand experience with a prior period error and the relevant audit partner. The effect of this psychological phenomenon is exacerbated in individuals who are more inclined to adjust their beliefs and practices when exposed to new external ideas or information (McElroy & Dowd, 2007). Differences in responses might also be caused by the propensity of audit

team members to adjust their views based on their first-hand experience, which may be different from their previous familiar, conventional ideas and views (McElroy & Dowd, 2007).

It is important for audit firms to take note of the lessons from previous IAS 8 experiences. Depending on the observations, the appropriate mitigating action plans can be put in place to prevent the same from reoccurring. For example, if male audit partners were observed to have more confidence in their abilities and there is the potential risk of overconfidence, audit firm policies for engagements with a male lead partner can require a mandatory consultation with a specialist (IAASB, 2009) on judgemental issues, or key working papers can be reviewed by a second, objective audit partner for any irregularities (IAASB, 2009).

4.2.3 Demographic effects: age and gender

Respondents were asked to select their age and gender if they felt comfortable doing so. These questions were included to determine the statistical significance of different responses from male and female participants, as well as different age groups. Results have been summarised in Table 5 below, and commentary has been included on statistically significant differences.

Table 5 Demographic effects on results

#	Contributing factor	Age[11]		Gender[12]	
		Average of Kruskal-Wallis H	Average Asymp. Sig. (2-tailed)	Average of Mann-Whitney U	Average Asymp. Sig. (2-tailed)
1	Professional scepticism and objectivity	6.152	0.146	2372.125	0.766
2	Overconfidence and interaction with gender and age	3.597	0.564	2238.938	0.486
3	Competence and experience of team members	3.437	0.572	2213.875	0.372
4	Time constraints, resourcing and audit costs	6.856	0.169	2211.214	0.400
5	Use of prior year working papers	2.025	0.723	2102.250	0.200
6	Complexity	5.842	0.061	2107.750	0.137

[11] These scores were generated by running either a Kruskal Wallis H-test or Mann Whiteny U-test for each question and then averaging the responses per theme area. Statistical significance was confirmed by running the tests for each of the responses. These tables are un-tabulated.

[12] These scores were generated by running either a Kruskal Wallis H-test or Mann Whiteny U-test for each question and then averaging the responses per theme area. Statistical significance was confirmed by running the tests for each of the responses. These tables are un-tabulated.

Age

Within the Complexity category (H = 5.842) (Table 5) there was a statistically significant difference between the perceived impact of the complexity of specific transactions or balances (H = 8.200, p<5%) (Table 6). This could possibly be because older individuals with more experience (Che, Langli, & Svanström, 2018) found it easier to deal with complex transactions or balances (Blankley, MacGregor, & Mowchan, 2021). This emphasises the importance of having a well-balanced audit team in terms of age and experience to ensure that team members have adequate competence to deal with complex transactions (Che, Langli, & Svanström, 2018 ; Kuntari, Chariri, & Nurdhiana, 2017). Audit teams should remain vigilant of potential overconfidence. Failure to consult on a complex transaction or balance because team members believe that their view or interpretation is correct can potentially result in undetected material misstatements (Bhandari & Deaves, 2006 ; Hardies, Breesch, & Branson, 2011).

Within the time constraints, resourcing and audit costs category (H = 6.856) (Table 5), there were four statistically significant differences between the perceived impact of time pressure on the detection of material misstatements. Table 6 below shows the breakdown of the relevant statements (H = 8.281, H = 8.891, H = 11.047, H = 8.747 respectively, p<5%). This could be because experienced (older) team members have improved the skill of time management and have learnt to handle time pressure better than more junior team members are able to do (Ahituv, Igbaria, & Sella, 1998). If this is the case, senior team members should lead by example and ensure that they remain calm and teach more junior team members how to handle time pressure effectively (Pratt & Jiambalvo, 1982 ; Franken, Edwards, & Lambert, 2009). If senior audit team members are approachable, more junior team members will also feel comfortable if they are experiencing capacity constraints (Franken, Edwards, & Lambert, 2009).

Table 6 Selected statistically significant differences with regards to age

Statement	Category of contributing factor	Kruskal-Wallis H	Asymp. Sig. (2-tailed)
Complexity of specific transactions or balances	Complexity	8.200	0.011
Time constraints due to tight audit deadline	Time constraints, resourcing and audit costs	8.281	0.013
Time constraints due to a lack of available audit resources	Time constraints, resourcing and audit costs	8.891	0.011
If auditors are given more time to audit, this time will be used efficiently to prevent undetected misstatements	Time constraints, resourcing and audit costs	11.047	0.001
If auditors are given more time to audit, the audit will be more likely to identify material misstatements	Time constraints, resourcing and audit costs	8.747	0.004

Gender

Table 7 Selected statistically significant differences with regards to gender

Statement	Category of contributing factor	Mann-Whitney U	Asymp. Sig. (2-tailed)
Overreliance on prior year working papers contributes to undetected misstatements	Use of prior year working papers	1858.500	0.009
Age contributes positively to partner confidence	Overconfidence and interaction with gender and age	1866.500	0.012
Resource constraints are a bigger concern at non-Big-4 audit firms than at Big-4 audit firms	Time constraints, resourcing and audit costs	1910.000	0.022

Considering individual statements, there were 3 statistically significant differences depicted in Table 7 above ($U = 1858.500$, $U = 1866.500$, $U = 1910.000$, $p<5\%$). 35/74 (47.3%) males agreed with this statement, while only 26/66 (39.4%) females agreed with this statement. The slight difference observed with regards to working papers might be caused by the suggested risk-averse nature (Berggren & Gonzalez, 2010) of female auditors because they may be hesitant to change the status quo and design new working papers. Female auditors may be more comfortable with relying on prior year working

papers, knowing that it serves as a good completeness check of what should be done, as well as the risk areas identified in prior years (Tipgos, 1978; Wright, 1988).

The difference observed with regards to age might be because male and female auditors differ in terms of what factors contribute to overconfidence. 33/74 males agreed with this statement (44.59%), while only 15/66 (22.7%) females agreed with this statement. This might be because men are inherently more confident in their abilities (Bengtsson, Persson, & Willenhag, 2005), which makes them more inclined to agree with positive statements made regarding auditor confidence.

The difference in the perceived resource constraints at Big-4 and non-Big 4 audit firms may also potentially be linked to overconfidence. 22/74 (29.7%) of males agreed with this statement, while only 11/66 (16.7%) females agreed with this statement. As the majority of male auditors work at Big-4 audit firms (35 versus 15), it again supports the statement that men are more confident in their abilities (Dahlbom, Jakobsson, Jakobsson, & Kotsadam, 2011) and potentially do not believe that there is a problem (with for example resourcing), where in reality there might be an issue that is being overlooked.

A potential limitation of the above gender impact is that the survey asked participants to state their gender up front instead of at the end. This might have made their gender identity more noteworthy which could have prompted participants to respond in line with gender norms. It might be useful to avoid up-front gender reminders to test of the sensitivity of these results in future studies (Hardies, Breesch, & Branson, 2013).

4.2.4 Effect of firm type

Table 8 Selected statistically significant differences with regards to firm type (Big-4 or non-Big 4)

Statement	Kruskal-Wallis H	Asymp. Sig. (2-tailed)
Complexity of specific transactions or balances	7.231	0.007
If auditors are given more time to audit, this time will be used efficiently to prevent undetected misstatements	6.013	0.014
If auditors are given more time to audit, the audit will be more likely to identify material misstatements	5.235	0.022
There is a culture among auditors of wanting to avoid identifying issues during an audit engagement	8.015	0.005
There is a culture among auditors of wanting to avoid conflict with clients which may increase the risk of undetected errors	7.015	0.008

Complexity of transactions and balances

The statistically significant difference ($H = 7.231$, $p<5\%$) (Table 8) in the perceived impact of the complexity of transactions and balances in Table 8 above is possibly because auditors at one of the Big-4 firms deal with larger and potentially listed clients (Boone, Khurana, & Raman, 2010). The transactions and balances on these types of clients might be more complex than those of slightly smaller, unlisted entities (Caster, Massey, & Wright, 2000).

Time related issues

The statistically significant differences ($H = 6.013$, $H = 5.235$, $p<5\%$) (Table 8) in the perceived impact of time pressure in Table 8 above is possibly because auditors at one of the Big-4 firms deal with larger and potentially listed clients (Boone, Khurana, & Raman, 2010). These types of clients (especially listed clients) are subject to more stringent deadlines, for example those determined by the JSE. Auditors at these types of clients might feel that additional time will assist in picking up errors and properly understanding complex transactions (Ahituv, Igbaria, & Sella, 1998; Caster, Massey, & Wright, 2000).

Culture[13] related issues

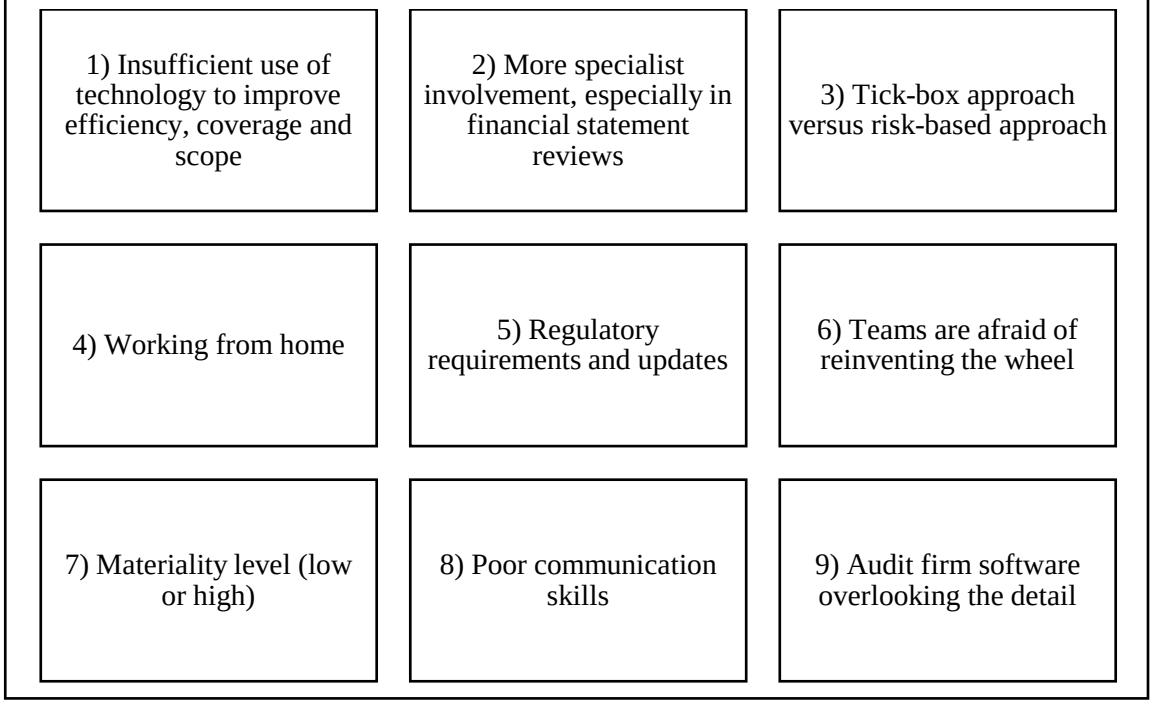
The statistically significant difference (H = 8.015, H = 7.015, p<5%) (Table 8) in the perceived impact of culture in Table 8 above is possibly because auditors at one of the Big-4 firms deal with larger and potentially listed clients (Boone, Khurana, & Raman, 2010). These types of clients put more pressure on auditors to provide clean audit opinions because of regulatory consequences of reporting an error (KPMG, 2019), as well as the impact on stakeholders like lenders in terms of securing funding (IASB, 2018). Auditors of these types of entities might also want to avoid conflict with the client (Tackett, Wolf, & Claypool, 2004) for fear of losing a prestigious client with a significant audit fee (Boone, Khurana, & Raman, 2010).

4.2.5 Qualitative responses: other contributing factors

Respondents were asked two open-ended questions to give them the opportunity to list any other contributing factors they could think of. Respondents were also asked to note a single issue which, if addressed, would result in more errors being picked up. Only key additional factors which have not already been covered in the previous sections have been included below. The selected factors have been summarised in Figure 4 and expanded on in more detail below.

[13] Culture in this context means corporate culture, for example the behaviours and norms that can be observed in an audit environment (Tarver, Brock, & Rathburn, 2021).

Figure 4 Visual representation of selected additional factors contributing to auditors missing material misstatements



Respondents highlighted that the use of technology plays an important role to improve efficiency, coverage and scope on the audit. Some comments also addressed the functionality of auditing software and how it potentially overlooks the detail required to pick up an error. These responses highlight the importance of the effective use of technology to maintain audit quality (Rosli, Yeow, & Eu-Gene, 2013).

Audit teams were also forced to work from home during the COVID-19[14] pandemic and respondents highlighted that audit teams did not have the opportunity to understand fully the client's operations and enjoy the benefit of on-the-job training. This echoes the importance of training and experience as a factor contributing to auditors missing material misstatements (Hehong, 2019 ; Che, Langli, & Svanström, 2018). Others noted that poor communication regarding what the issue really is also contributes to auditors missing material misstatements. Remote working also exacerbated the effect of poor communication and the potentially insufficient use of technology as audit teams, like many other

[14] Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus (World Health Organization, 2022).

businesses during the pandemic, had to rely on technology to complete their work (Akpan, Soopramanien, & Kwak, 2020).

Other respondents noted that specialist involvement plays an important role in detecting material misstatements, especially during the financial statement review process. Some respondents felt that these diverse specialist skills should be embedded in the audit team, for example taxation, valuations, accounting and auditing. Respondents also felt that the auditing standards should be more prescriptive on when specialists are required instead of leaving this decision to the audit partner. In contrast, some participants felt that overly prescriptive standards and a significant amount of regulation could detract from focusing on completing the accounting and auditing work correctly because teams would be spending time on compliance instead of auding risky areas. It appears that a balance of regulation which both maintains audit quality and allows for professional judgment would be most conducive to auditors detecting material misstatements (Bender, 2006).

Respondents also alluded to audit approach and noted that audit teams are often afraid of "reinventing the wheel" and continue to follow a "tick-box" approach instead of applying their minds to the audit work. This point was also linked to the extent of regulation and the minimum required audit work, which reduces the time spent on potentially riskier areas (Bender, 2006). To quote the response of a participant: "Audit time should be spent understanding clients and areas which carry risk instead of on audit files where a tick box approach is followed for fear of failing internal or IRBA file reviews." A further comment on audit approach was made regarding materiality levels: respondents noted that auditing to the appropriate (lower) level of materiality (as would be prescribed by the relevant auditing standards[15]) plays an important role in whether an error is detected or not. Auditors should therefore have the appropriate technical competence to determine correct materiality levels that will maintain audit quality (Hehong, 2019; Iryani, 2017).

[15] For example, the International Standards on Auditing (ISA) 320: Materiality in planning and performing an audit

4.3 Summary

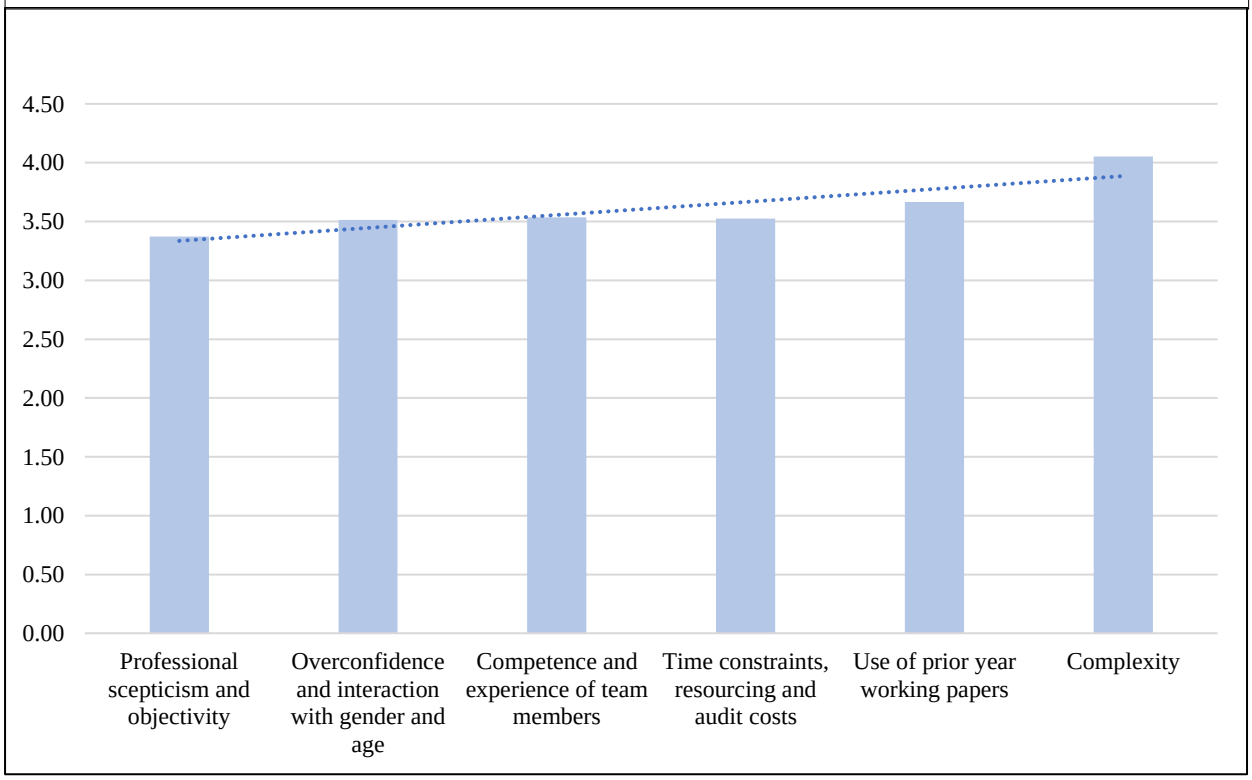
This purpose of this analysis was to determine what factors contributed to auditors missing material errors in a South Africa context. Possible factors were identified through a literature review, and proposed statements were tested via a survey instrument. The various categories of respondents were well represented and there were no concerns regarding the validity or reliability of the data. The identified factors appear to have equal significance when contributing to auditors missing material misstatements. There were only a few statistically significant differences in responses because of previous IAS 8 experience, age, gender or firm type which have been highlighted above. The results were overall in line with expectations. This study made a positive contribution to the profession as understanding which factors are most and least important in the South African context will make it possible to implement remedial actions tailored to South Africa. This should enhance audit quality and ensure that errors are identified on a timely basis.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to investigate which factors increase the likelihood of material misstatements going undetected by South African auditors. To assess the significance of the factors contributing to auditors missing material errors, the researcher used a survey instrument which was distributed using snowball and convenience sampling and asking participants to respond to questions using a Likert-scale. There were also two open-ended questions.

Key findings from this research are that all the identified factors play an important role and can increase the likelihood of auditors missing material misstatements. Previous IAS 8 experience, age, gender and firm type did not have an impact on results in all instances but statistically significant differences were observed in certain contributing factors. The results were overall in line with expectations. Figure 5 below summarises the average means for the six contributing factors and the trendline illustrates that all six theme areas were fairly aligned in terms of their perceived impact.

Figure 5 Average mean for each contributing factor with trendline



The importance of maintaining professional scepticism and objectivity, having the appropriate competence and skillset and using these skills to conduct an efficient audit given time and resource constraints, were highlighted in this study. Prior year working papers should be used as a guideline but not detract from a risk-based audit approach that adequately addresses complexities in both the client's operations as well as the transactions and balances. Throughout the audit, auditors should also be mindful of the risk of being overconfident and should involve specialists in areas of significant judgement or where specific knowledge and skills are required.

Potential areas for future research:

Only already identified factors extracted from the prior literature were considered, for example professional scepticism and objectivity. This allowed the research to focus on gauging the importance of each factor in the South African context. Future research can potentially explore contributing factors not already included in prior literature, for example the impact of technology on the detection of material misstatements.

The survey in itself posed a limitation as respondents' answers may only have reflected their perceptions and not their behaviours. Respondents might also have been hesitant to share their behaviours (Rubenfeld, 2004). Future research can potentially conduct experiments where tests are administered to a group of participants to observe their behaviours and test these against the perceptions collected in this research. All ethical requirements will have to be adhered to if a study of this nature is conducted.

The study also did not consider fraud. Future research can potentially examine the impact of fraud and the integrity of management on the recurrence of undetected material misstatements. Future research can also identify detailed safeguards and solutions for the most prominent issues identified above. As this study did not endeavour to find solutions for these issues (although some suggestions were made), it might be useful to research and examine potential action plans to address the most prevalent contributing factors identified above.

Another potential area for future research is the impact of regulatory requirements and changes in this environment on the detection of material misstatements. This study asked for the views of regulators

as respondents, and participants commented briefly on the impact of regulatory requirements on the audit environment. Detailed analysis was not performed on the potential advantages and disadvantages of regulation, and especially overregulation. Future studies can expand on these aspects and even be linked to studies regarding the impact of MAFR. The role of regulators in fee-setting could also be examined as a potential strategy to enhance the independence of audit firms.

Contributions from this study are that the findings will be useful for audit firms to improve and maintain audit quality, regulators to inform policy making and for preparers to aid identifying potential controls which they can implement to reduce the risk of publishing misstated financial statements.

Recommendations from this study are that professional scepticism and objectivity should be maintained and overconfidence should be managed. Audit team members should be trained to the required level of competence, and time pressure, audit fee pressure and resourcing should be in balance to ensure that audit quality is maintained. Prior year working papers should be used with care to create efficiencies but should not detract from an innovative, risk-based audit approach. Complexity of client operations, transactions and balances must be managed through the correct audit team composition and the involvement of a specialist when required.

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Annexure A: Survey questions

Please refer to the printout from the Qualtrics survey platform on the next page.

Annexure A

Information Sheet

Title: What factors contribute to South African auditors not identifying material misstatements in South African financial statements?

Ethics clearance protocol number: SOA-2021-11-13

Dear Sir/Madam

My name is Rèzanne Neethling and I am a master's student in the School of Accountancy at the University of the Witwatersrand in Johannesburg. As part of my studies I have to undertake a research project. I am evaluating what factors contribute to South African auditors not identifying material misstatements in South African financial statements. We would like to invite you to participate in this research project.

You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish.

Ask us if there is anything that is not clear or if you would like more information.

In this study, we want to investigate the extent to which you think certain pre-determined factors contribute to auditors missing material errors.

If you agree to participate, you will be asked to complete a short anonymous online survey to capture your responses.

There are no material risks posed by participating. Your identity and place of employment will not be captured. No personal information will be collected from you, apart from age (you will be asked to select an age bracket) and gender (you have the option "prefer not to say.")

There are no right or wrong responses – this research is only interested in your own experiences and impressions.

Your responses will be kept on file by the researcher. No personally-identifying information is collected as part of the survey and the thesis will include summaries of, and statistics performed on, the dataset.

You will not receive any compensation for participating in the research. There is no direct benefit from participating or not participating in the research.

Should you be interested, a copy of the final report will be available to you on request.

It is up to you to decide whether to take part or not. If you decide to take part, you are still free to withdraw at any time and without giving a reason. In addition to withdrawing yourself from the study, you may also withdraw any data/information you have already provided up until it is processed and analysed for use in the final report.

If this study has harmed or offended you in any way, you can contact the University Human Research Ethics Committee (non-medical), telephone +27(0)11 717 1408, email hrec-medical.research@wits.ac.za/ Shaun.Schoeman@wits.ac.za. If you require further advice and/or information, the researchers can be contacted using the details below:

Researcher 1: Rèzanne Neethling, +27 82 854 1618, rezanne.neethling@gmail.com
Researcher 2: Prof. Wayne van Zijl, +27 11 717 8227, Wayne.VanZijl@wits.ac.za

Yours sincerely
Rèzanne Neethling

Consent form for participants

Title of Study: What factors contribute to South African auditors not identifying material misstatements in South African financial statements?

- [ ] I agree that my participation will remain anonymous.
- [ ] I agree that the researcher may use anonymous quotes.
- [ ] I understand that if I decide at any time during the research that I no longer wish to participate in this project, I can notify the researcher involved and withdraw from it immediately without giving any reason. Furthermore, I understand that I will be able to withdraw my data up to the point of submission of my responses.
- [ ] I understand that the information I have submitted will be used in a thesis and/or publication and that I can request a copy of the final article.
- [ ] I understand that my personal information will not be collected. I understand that no personally-identifying information is collected as part of the survey and the thesis will include summaries of, and statistics performed on, the dataset.
- [ ] I agree that the information I provide may be used anonymously in other research projects.
- [ ] I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Survey questions

1) Please select the appropriate category - are you a(n):

- ○ Auditor

- Preparer of financial statements (corporate)
- Academic
- Member of a professional regulator in a regulatory role (e.g. SAICA, IRBA and the JSE)

2) Please select the appropriate option:

- Working at one of the Big 4 audit firms (Deloitte, EY, KPMG or PwC)
- Working at a non-Big 4 audit firm

3) Please select the appropriate age bracket for your current age:

- 25 - 31
- 32 - 38
- 39 - 45
- 46 - 52
- 53 - 59
- 60 - 66

4) Please select your gender:

- Male
- Female
- Non-binary / third gender
- Prefer not to say

5a) Please select your current level of experience:

- Partner (or equivalent) for 5 years or more
- Partner (or equivalent) for less than 5 years
- Senior manager (or equivalent) for 5 years or more
- Senior manager (or equivalent) for less than 5 years
- Junior manager (or equivalent)
- Below management level or equivalent
- Not applicable

5b) Please select your current level of experience:

- Over 20 years of experience
- 11 – 15 years of experience
- 6 – 10 years of experience
- 0 – 5 years of experience

- ○ Not applicable

6) Have you ever been a part of an audit team / corporate / regulator dealing with an IAS 8 prior period error?

- ○ Yes
- ○ No

7) Rate the extent to which you think the following factors contribute to unidentified misstatements by **auditors**:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Time constraints due to tight audit deadline	○	○	○	○	○
Time constraints due to a lack of available audit resources	○	○	○	○	○
Time constraints due to starting the audit late	○	○	○	○	○
Lack of professional scepticism	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Lack of objectivity	○	○	○	○	○
Overreliance on prior year working papers	○	○	○	○	○
Partner accounting technical competence is not at the level it should be	○	○	○	○	○
Manager accounting technical competence is not at the level it should be	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Trainee (audit clerks) accounting technical competence is not at the level it should be	○	○	○	○	○
Lack of understanding of the client or industry	○	○	○	○	○
Complexity of client's operations	○	○	○	○	○
Complexity of specific transactions or balances	○	○	○	○	○

8) Rate your agreement with the following statements:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
If auditors are given more time to audit, this time will be used efficiently to prevent undetected misstatements	○	○	○	○	○
If auditors are given more time to audit, the audit will be more likely to identify material misstatements	○	○	○	○	○
Training on how to apply professional scepticism is important for preventing undetected material misstatements	○	○	○	○	○
Training on how to apply professional judgement is important for preventing undetected material misstatements	○	○	○	○	○
Training on how to conduct suitable risk assessment procedures and how to respond to audit risk using tests of controls and/or substantive tests is important for preventing undetected material misstatements	○	○	○	○	○
A lack of sufficient training regarding professional skills is a bigger concern at non-Big-4 audit firms than at Big-4 audit firms	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Experienced male partners have confidence in their inherent ability to identify misstatements	○	○	○	○	○
Experienced female partners have confidence in their inherent ability to identify misstatements	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Confident partners conduct less audit work resulting in a higher risk of unidentified misstatements	○	○	○	○	○
Partners with more experience are more confident partners	○	○	○	○	○
Technical IFRS or auditing skills contribute positively to partner confidence	○	○	○	○	○
Age contributes positively to partner confidence	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Experience on a particular client contributes positively to partner confidence	○	○	○	○	○
Senior engagement team members do not spend sufficient time on audits	○	○	○	○	○
Resource constraints are a bigger concern at non-Big-4 audit firms than at Big-4 audit firms	○	○	○	○	○
There is a culture among auditors of wanting to avoid identifying issues during an audit engagement	○	○	○	○	○
There is a culture among auditors of wanting to avoid conflict with clients which may increase the risk of undetected errors	○	○	○	○	○
Prior year working papers reduce unpredictability in an audit which may increase undetected errors	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Working paper templates reduce the extent to which audits are specifically tailored for each client, thereby increasing the risk of unidentified material misstatements	○	○	○	○	○
Working paper templates reduce the risk of important procedures being omitted thereby reducing the risk of unidentified material misstatements	○	○	○	○	○
I only reach out to my firm's audit or accounting technical department as a last resort	○	○	○	○	○

9) Please list any other contributing factors that you can think of. [Open ended question]

10) What is the one thing that you think, if addressed, will result in more errors being picked up on a timely basis and not only after the fact (i.e. in subsequent years)? [Open ended question]

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