Factors Influencing Internal Control System Effectiveness and Its Impact on Organisational Performance and Audit Outcomes in South African Municipalities

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SIGNATURE

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ABSTRACT

The ineffectiveness of internal control systems in South African municipalities has contributed to persistent governance failures, weakened accountability mechanisms, and service delivery inefficiencies. These deficiencies have exacerbated irregular and wasteful expenditure, weakened financial and performance management practices, and ultimately contributed to deteriorating audit outcomes across municipalities. This study analyses the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes. In particular, the study models organisational performance, conceptualised as a multidimensional construct grounded in the Balanced Scorecard framework, comprising financial, operational, and customer dimensions, as a mediating mechanism through which internal control effectiveness influences audit outcomes.

The study empirically tests an extended model integrating the COSO framework and the Balanced Scorecard by incorporating additional determinants of internal control effectiveness, namely human resource competency, corporate governance, and big data analytics. Prior studies have predominantly examined internal control effectiveness using traditional COSO dimensions while overlooking the combined influence of governance capability, human resource competency, and data-driven analytical capabilities on organisational performance and audit outcomes. Furthermore, the study integrates financial, operational, and customer performance dimensions to assess the impact of internal control systems on a balanced view of organisational performance and audit outcomes. A quantitative, cross-sectional survey design was employed, with data collected from 320 participants. The participants included municipal management teams and internal and external assurance providers involved in designing, implementing, and executing internal controls in South African municipalities. Structural equation modelling (SEM) was employed for all model testing procedures, using AMOS. The study adopted purposive and snowball sampling methods. Validity and reliability thresholds were satisfactorily achieved before all structural model assessments were conducted. The findings confirmed the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and big data analytics as factors influencing internal control effectiveness. Effective internal control was found to positively influence both financial and non-financial aspects of organisational performance within the municipalities. Financial performance was identified as a significant predictor of both operational and customer performance, underscoring its essential role in the success of

municipalities. Additionally, the study validated the positive relationship between audit outcomes and financial and operational performance, suggesting that effective internal control systems enhance financial and operational performance, which subsequently positively influences auditors' assessments.

This study addresses a gap in internal control systems research by empirically validating the factors influencing internal control system effectiveness within South African municipalities. The findings provide actionable insights for public sector managers, auditors, and policymakers in enhancing internal control systems while also improving organisational performance and audit outcomes. The study further contributes to public sector internal control literature by validating an integrated internal control, organisational performance, and audit outcome framework within the context of a developing economy.

KEYWORDS

Internal Control System; Organisational Performance; Audit Outcome; South African Municipalities; Service Delivery; COSO; Balanced Scorecard; Human Resource Competency; Corporate Governance; Big Data Analytics.

ISIFINQO

Ukungasebenzi kahle kwezinhlelo zokulawula zangaphakathi komasipala baseNingizimu Afrika kube nomthelela ekwehlulekeni kokubusa okuqhubekayo, izindlela zokubamba isibopho ezibuthakathaka, kanye nokungasebenzi kahle kokulethwa kwezinsizakalo. Lokhu kuntuleka kuye kwandisa ukusetshenziswa kwemali okungajwayelekile nokuchitha imali, kwanciphisa imikhuba yokuphatha ezezimali kanye nokusebenza, futhi ekugcineni kwaba nomthelela ekuwohlokeni kwemiphumela yokuhlolwa kwezimali komasipala. Lolu cwaningo luhlaziya izici ezithonya ukusebenza kahle kohlelo lokulawula lwangaphakathi kanye nomthelela walo ekusebenzeni kwenhlangano kanye nemiphumela yokuhlola. Ikakhulukazi, ucwaningo lubonisa ukusebenza kwenhlangano, okucatshangwa njengokwakhiwa okunezinhlangothi eziningi okusekelwe ohlakeni lwe-Balanced Scorecard, oluhlanganisa ubukhulu bezezimali, bokusebenza, kanye nobamakhasimende, njengendlela yokuxazulula lapho ukusebenza kahle kokulawula kwangaphakathi kuthonya imiphumela yokuhlola.

Lolu cwaningo luhlola ngokwesayensi imodeli ende ehlanganisa uhlaka lwe-COSO kanye ne-Balanced Scorecard ngokufaka ezinye izinto ezibangela ukusebenza kahle kokulawula kwangaphakathi, okungukuthi ikhono labasebenzi, ukuphathwa kwezinkampani, kanye nokuhlaziywa kwedatha enkulu. Izifundo zangaphambilini zihlole kakhulu ukusebenza kahle kokulawula kwangaphakathi kusetshenziswa izilinganiso zendabuko ze-COSO ngenkathi zinganaki ithonya elihlanganisiwe lamandla okubusa, ikhono labasebenzi, kanye namakhono okuhlaziya aqhutshwa idatha ekusebenzeni kwenhlangano kanye nemiphumela yokuhlola. Ngaphezu kwalokho, lolu cwaningo luhlanganisa izilinganiso zezimali, zokusebenza, kanye nokusebenza kwamakhasimende ukuze kuhlolwe umthelela wezinhlelo zokulawula zangaphakathi embonweni olinganiselayo wokusebenza kwenhlangano kanye nemiphumela yokuhlola. Kwasetshenziswa umklamo wokuhlola obanzi, onezigaba ezahlukene, kanye nedatha eqoqwe kubahlanganyeli abangama-320.. Abahlanganyeli babehlanganisa amaqembu okuphatha omasipala kanye nabahlinzeki bokuqinisekisa bangaphakathi nabangaphandle ababandakanyeka ekuklameni, ekusebenziseni nasekwenzeni izilawuli zangaphakathi komasipala baseNingizimu Afrika. Ukumodela kwe-Structural equation (SEM) kwasetshenziswa kuzo zonke izinqubo zokuhlola amamodeli, kusetshenziswa i-AMOS. Ucwaningo lwasebenzisa izindlela zokuthatha amasampula ezihloselwe injongo kanye neze-snowball. Imingcele yokuqinisekisa kanye nokuthembeka yafezwa ngendlela eyanelisayo ngaphambi kokuba kwenziwe konke ukuhlolwa kwemodeli yesakhiwo. Okutholakele kuqinisekisile indawo yokulawula, ukuhlolwa kwezingozi, imisebenzi yokulawula, ulwazi

nokuxhumana, imisebenzi yokuqapha, ikhono labasebenzi, ukuphathwa kwezinkampani, kanye nokuhlaziywa kwedatha enkulu njengezici ezithonya ukusebenza kahle kokulawula kwangaphakathi. Ukulawulwa kwangaphakathi okuphumelelayo kutholakale ukuthi kuthonya kahle izici zezimali kanye nezingezona ezezimali zokusebenza kwenhlangano ngaphakathi komasipala. Ukusebenza kwezezimali kuhlonzwe njengesibikezelo esibalulekile sokusebenza kanye nokusebenza kwamakhasimende, okugcizelela indima yaso ebalulekile empumelelweni yomasipala. Ngaphezu kwalokho, ucwaningo luqinisekisile ubudlelwano obuhle phakathi kwemiphumela yokuhlolwa kwezimali kanye nokusebenza kwezezimali kanye nokusebenza, okuphakamisa ukuthi izinhlelo zokulawula zangaphakathi ezisebenzayo zithuthukisa ukusebenza kwezezimali kanye nokusebenza, okuthi kamuva kube nomthelela omuhle ekuhlolweni kwabahloli bezimali.

Lolu cwaningo lubhekana negebe ocwaningweni lwezinhlelo zokulawula zangaphakathi ngokuqinisekisa ngobufakazi izici ezithonya ukusebenza kahle kohlelo lokulawula lwangaphakathi komasipala baseNingizimu Afrika. Okutholakele kunikeza ukuqonda okusebenzayo kubaphathi bomkhakha womphakathi, abahloli bamabhuku, kanye nabenzi bezinqubomgomo ekuthuthukiseni izinhlelo zokulawula zangaphakathi ngenkathi futhi kuthuthukisa ukusebenza kwenhlangano kanye nemiphumela yokuhlolwa kwamabhuku. Lolu cwaningo luphinde lunikele ezincwadini zokulawula zangaphakathi zomkhakha womphakathi ngokuqinisekisa uhlaka lokulawula kwangaphakathi oluhlanganisiwe, ukusebenza kwenhlangano, kanye nohlaka lomphumela wokuhlolwa kwamabhuku ngaphakathi komongo womnotho osathuthuka.

AMAGAMA ASEMQOKA

Uhlelo Lokulawula Lwangaphakathi; Ukusebenza Kwenhlangano; Umphumela Wokuhlolwa Kwamabhuku; Omasipala BaseNingizimu Afrika; Ukuhlinzekwa Kwezinsiza; I-COSO; I-Balanced Scorecard; Amakhono Ezabasebenzi; Ukuphathwa Kwebhizinisi; Ukuhlaziywa Kwedatha Eningi.

OPSOMMING

Die ondoeltreffendheid van interne beheerstelsels in Suid-Afrikaanse munisipaliteite het bygedra tot volgehoue bestuursmislukkings, verswakte aanspreeklikheidsmeganismes en ondoeltreffende dienslewering. Hierdie tekortkominge het onreëlmatige en verkwistende uitgawes vererger, finansiële en prestasiebestuurspraktyke verswak, en uiteindelik bygedra tot verslegtende oudituitkomste in munisipaliteite. Hierdie studie analiseer die faktore wat die doeltreffendheid van interne beheerstelsels beïnvloed en die impak daarvan op organisasieprestasie en oudituitkomste. In die besonder modelleer die studie organisasieprestasie, gekonseptualiseer as 'n multidimensionele konstruk gegrond op die Gebalanseerde Telkaart-raamwerk, wat finansiële, operasionele en kliëntdimensies insluit, as 'n bemiddelende meganisme waardeur interne beheerdoeltreffendheid oudituitkomste beïnvloed.

Die studie toets 'n uitgebreide model wat die COSO-raamwerk en die Gebalanseerde Telkaart integreer empiries deur bykomende determinante van interne beheerdoeltreffendheid in te sluit, naamlik menslikehulpbronbevoegdheid, korporatiewe bestuur en groot data-analise. Vorige studies het hoofsaaklik interne beheerdoeltreffendheid ondersoek deur middel van tradisionele COSO-dimensies terwyl die gekombineerde invloed van bestuursvermoë, menslikehulpbronbevoegdheid en datagedrewe analitiese vermoëns op organisasieprestasie en oudituitkomste oor die hoof gesien is. Verder integreer die studie finansiële, operasionele en kliëntprestasiedimensies om die impak van interne beheerstelsels op 'n gebalanseerde beskouing van organisasieprestasie en oudituitkomste te bepaal. 'n Kwantitatiewe, dwarssnit-opname-ontwerp is gebruik, met data wat van 320 deelnemers ingesamel is. Die deelnemers het munisipale bestuurspanne en interne en eksterne versekeringsverskaffers ingesluit betrokke by die ontwerp, implementering en uitvoering van interne beheermaatreëls in Suid-Afrikaanse munisipaliteite. Strukturele vergelykingsmodellering (SEM) is vir alle modeltoetsprosedures gebruik, met behulp van AMOS. Die studie het doelgerigte en sneeubal-steekproefmetodes aangeneem. Geldigheid- en betroubaarheidsdrempels is bevredigend bereik voordat alle strukturele modelassesserings uitgevoer is. Die bevindinge het die beheeromgewing, risikobepaling, beheeraktiwiteite, inligting en kommunikasie, moniteringsaktiwiteite, menslikehulpbronbevoegdheid, korporatiewe bestuur en groot data-analise bevestig as faktore wat die doeltreffendheid van interne beheer beïnvloed. Daar is gevind dat effektiewe interne beheer beide finansiële en nie-finansiële aspekte van organisasieprestasie in

munisipaliteite positief beïnvloed. Finansiële prestasie is geïdentifiseer as ’n beduidende voorspeller van beide operasionele en kliënteprestasie, wat die noodsaaklike rol daarvan in die sukses van munisipaliteite beklemtoon. Daarbenewens het die studie die positiewe verband tussen oudituitkomste en finansiële en operasionele prestasie bevestig, wat daarop dui dat effektiewe interne beheerstelsels finansiële en operasionele prestasie verbeter, wat gevolglik ouditeure se assesserings positief beïnvloed.

Hierdie studie fokus op ’n gaping in navorsing oor interne beheerstelsels deur die faktore wat die doeltreffendheid van interne beheerstelsels in Suid-Afrikaanse munisipaliteite beïnvloed, empiries te valideer. Die bevindinge bied bruikbare insigte vir openbare-sektorbestuurders, -ouditeure en -beleidmakers vir die verbetering van interne beheerstelsels, asook organisasieprestasie en oudituitkomste. Die studie dra verder by tot die literatuur oor interne beheer in die openbare sektor deur ’n geïntegreerde raamwerk vir interne beheer, organisasieprestasie en oudituitkomste binne die konteks van ’n ontwikkelende ekonomie te valideer.

SLEUTELWOORDE

Interne Beheerstelsel; Organisatoriese Prestasie; Oudituitkoms; Suid-Afrikaanse Munisipaliteite; Dienslewering; COSO; Gebalanseerde Telkaart; Menslikehulpbronbevoegdheid; Korporatiewe Bestuur; Grootdata-Analise.

LIST OF ABBREVIATIONS

AGA:	Auditor-General Act
AGFI:	Adjusted Goodness of Fit Index
AGSA:	Auditor-General of South Africa
AMOS:	Analysis of Moment Structures
AO:	Audit outcome
BDA:	Big Data Analytics
BSC:	Balanced Scorecard
CAS_RERC:	College of Accounting Sciences Research Ethics Review Committee
CB-SEM:	Covariance-Based Structural Equation Modelling
CFA:	Confirmatory Factor Analysis
CFI:	Comparative Fit Index
CG:	Corporate Governance
CICA:	Canadian Institute of Chartered Accountants
CoCo:	Criteria of Control
COSO:	Committee of Sponsoring Organisations of the Treadway Commission
CP:	Customer Performance
EFA:	Exploratory Factor Analysis
FCPA:	Foreign Corrupt Practices Act
FP:	Financial Performance
GFI:	Goodness of Fit Index
HRC:	Human Resource Competency
ICIF:	Internal Control-Integrated Framework
ICS:	Internal Control System
IFI:	Incremental Fit Index
KMO:	Kaiser-Meyer-Olkin

M.I.:	Modification Indices
MFMA:	Municipal Finance Management Act
NFI:	Normed Fit Index
OP:	Operational Performance
OrgP:	Organisational Performance
PAA:	Public Audit Act
PCA:	Principal Component Analysis
RFI:	Relative Fit Index
RMSEA:	Root Mean Square Error of Approximation
SALGA:	South African Local Government Association
SAS:	Statement on Auditing Standards
SD:	Standard Deviation
SCI:	Supply Chain Integration
SEM:	Structural Equation Modelling
SMEs:	Small and Medium Enterprises
SPSS:	Statistical Package for Social Sciences
SRO:	Secondary Research Objectives
TLI:	Tucker-Lewis Index
TR:	Treasury Regulations
X^2:	Chi-Square

DEFINITIONS OF TERMS AND CONCEPTS

Adverse audit opinion – There are significant misstatements in financial statements and annual performance reports that are not limited to particular transactions or that account for a sizeable number of financial statements and annual performance reports (Jackson & Stent, 2007:18-9; Nevhutanda & Mamaile, 2020:81).

Audit outcome – refers to the overall results or judgement provided by auditors after evaluating an organisation's financial statements, internal control systems and adherence to pertinent rules and laws (Tian & Xin, 2017:266).

Balanced scorecard (BSC) – translates an organization's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system (Kaplan & Norton, 1996).

Big data analytics – refers to the application of advanced analytical techniques to high-volume, high-velocity, and high-variety data in order to generate actionable insights that support decision-making and enhance organisational performance (Kwon, Lee, Shin, 2014:387).

Citizen – refers to an individual who is officially acknowledged as a member of the Republic of South Africa according to the South African Citizenship Act and who possesses complete rights and obligations (Republic of South Africa, 2000:14).

Clean audit outcome – the financial and non-financial reports are accurate and reliable, with no significant errors or issues, and are prepared according to generally accepted norms and standards, and offer an adequate and fair representation of the organisation's state (Arens, Elder & Beasley, 2008:49).

Committee of Sponsoring Organisations of the Treadway Commission (COSO) – is a joint initiative of the Treadway Commission established in 1987 by the United States Securities and Exchange Commission and the United States Congress to provide frameworks and guidance on internal control, enterprise risk management and fraud deterrence (COSO, 1992).

Corporate governance – is defined as effectual and virtuous leadership that the ruling body demonstrates to attain four governance outcomes: effective controls, legitimacy, ethical culture, and good performance (Nevhutanda & Mamaile, 2020:76).

Customer performance – measures how well an organisation supports and meets customer needs and expectations. It is typically measured through retention, loyalty, satisfaction and feedback metrics (Oliver, 1997:13).

Disclaimer audit opinion – the auditee provided insufficient evidence in the form of documentation on which to base an audit opinion. The lack of sufficient evidence is not confined to specific amounts or represents a substantial portion of the information contained in the financial statements (Nevhutanda & Mamaile, 2020:81).

Financial performance – relates to the effectiveness with which an organisation utilises its resources to generate revenue and profit. It is typically measured via indicators such as profitability, expenses, incomes, cash flow, and return on investment (Mudau, 2021:67).

Fruitless and wasteful spending – refers to spending that was made in vain and could have been prevented if proper diligence and reasonable care had been applied (Republic of South Africa, 2003:8).

Human resource competency – the ability of personnel to execute the tasks assigned to them based on experience, background in education, acquired training, comprehension of their responsibilities, readiness to implement changes in the practice of work, and technology mastery (Dewi & Wirasedana, 2021:31).

Internal controls – refer to a process effected by an organisation's governing body, management, and other personnel designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting and compliance (COSO, 2013:3).

Internal control-integrated framework – a theoretical framework that outlines requirements for internal control effectiveness, comprising the existence and proper operation of all five factors, their incorporation into the system as a whole, preparation for internal and external events impacting objectives, adherence to laws and regulations, and compliance with reporting standards (COSO, 2013:1).

Internal control system effectiveness – refers to the extent to which an organisation's internal control framework is properly designed, implemented, and operating as intended to provide reasonable assurance that the organisation will achieve its objectives, primarily in three areas: reliable financial reporting, compliance with laws and regulations and efficient and effective operations (COSO, 2013).

Irregular spending refers to spending that occurs in violation of or fails to comply with the stipulations set forth by any pertinent legislation, including the Municipal Finance Management Act (Republic of South Africa, 2003:8).

Municipal audit outcomes – are the formal, annual audit opinions based on evaluations of a municipality's financial statements, performance reports, and compliance with key legislation, aimed at ensuring accountability and transparency in local government (AGSA, 2025:11; Tian & Xin, 2017:266; Zhang, 2012:11).

Municipality – is the branch of government closest to citizens of South Africa since it provides the essential services that directly affect their lives (AGSA, 2023:10).

Non-financial performance – pertains to measuring an organisation's effectiveness through indicators that are non-monetary related, encompassing aspects such as customer satisfaction, innovation, service delivery, or environmental or social impact (Mudau, 2021:68).

Operational performance – pertains to the efficiency and effectiveness with which an organisation executes its fundamental activities to achieve strategic objectives. It is typically measured through cost control, quality, productivity and process efficiency (Azim, Ahmed & Khan, 2015:64).

Organisational performance – refers to how effectively and efficiently an organisation attains its objectives. It encompasses productivity, quality, profitability, customer satisfaction, operational efficiency, and innovation (Rolstadas, 1998:9).

Overspending – Refers to a situation where the municipality's capital or operational spending for a financial year exceeds the total amount allocated for such spending in that year's approved budget.

Qualified audit opinion – the financial statements contain material misstatements in specific amounts, or there is insufficient evidence for AGSA to conclude that specific amounts included in the financial statements are not materially misstated (AGSA, 2014:7).

Service delivery – refers to a municipality's ability to provide basic services and fulfil its constitutional and legislative mandate in an effective, efficient, economical, and sustainable manner to meet the needs of its community (AGSA, 2024:25).

Unqualified audit opinion with findings – financial statements are credible, but material findings exist on either performance reporting or compliance with legislation (Arens, Elder & Beasley, 2008:49).

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CHAPTER 1: INTRODUCTION

1.1. BACKGROUND

This study concentrates on South African municipalities, which are geographical areas categorised into three spheres: metropolitan, district and local (Republic of South Africa, 2003, s. 1; AGSA 2024:10). These municipalities are governed under the Constitution of the Republic of South Africa, 1996 (SAG 1996, s. 151). Municipalities are legislatively mandated to formulate and implement socio-economic objectives that satisfy local communities' needs (Binza, 2005:69). They are democratised and regarded as the most accessible sphere to citizens and are known for constitutionally enshrined service delivery (Khasodi, Mahlala & Hofisi, 2023:339). Furthermore, they are responsible for delivering basic public services, such as water, power, and sanitation, and refuse removal to improve the lives of citizens (Pycroft 1999:391). Despite these constitutional obligations, municipalities continue to experience severe governance and accountability failures, raising concerns about their institutional capacity to fulfil developmental mandates.

To improve citizens' lives, municipalities are required to work toward a culture of performance, integrity, openness, and accountability. However, persistent weaknesses in internal control systems have been widely documented as a key contributor to deteriorating service delivery, poor financial management, and adverse audit outcomes within this sector (AGSA 2023:4). Importantly, ineffective internal control systems are often symptomatic of deeper organisational and institutional challenges, including weak leadership and tone at the top, inadequate human resource capacity and competencies, a poor ethical culture, insufficient oversight by governance structures, and limited integration of risk management practices (Chen, Hua, Sun & Zhao, 2023:1-4; Staicu, Tatomir & Lincă, 2019:3-6; Ncgobo & Malefane, 2017:4-6). These underlying deficiencies compromise the design, implementation and sustainability of effective control systems, thereby exacerbating municipalities' inability to manage public resources effectively and resulting in persistent weaknesses in financial discipline, compliance, and performance management (AGSA, 2023:5-6). Consequently, municipalities continue to struggle to establish efficacious structures with the capacity to manage funds and administer services efficiently and effectively (AGSA, 2024:10-12; Ncgobo & Malefane, 2017:7-9). Reports by the Auditor-General of South Africa (AGSA) consistently highlight systemic deficiencies in control environments, risk management, and compliance practices, resulting in widespread irregular, fruitless, and wasteful expenditure, as well as

declining audit performance (AGSA, 2024:98). These systemic challenges demonstrate that ineffective internal control systems remain a central obstacle to sound financial management and improved audit outcomes in South African municipalities.

Recent municipal-level failures further demonstrate the consequences of weak internal control systems and governance (AGSA, 2023:47). For instance, the VBS scandal demonstrates failures in the control environment, monitoring activities, and compliance oversight dimensions of internal control systems. Similarly, recurring instances of procurement irregularities, financial mismanagement, and corruption within municipalities have been linked to ineffective control activities, weak monitoring mechanisms, and inadequate risk assessment processes (AGSA, 2019:12-14; Khasodi, Mahlala & Hofisi, 2023:339). Poor oversight by corporate governance structures and auditors, along with ineffective internal control systems, allowed these deceptive practices to continue undetected (Dibra, 2016:284-285; Li, 2010:38). These challenges have contributed to declining public trust and compromised municipalities' ability to fulfil their constitutional mandate (AGSA, 2023:45).

Against this backdrop, internal control systems play a pivotal role in strengthening governance and improving municipal performance (Hamed, 2023:3). Internal control systems comprise a set of processes effected by an organisation's governing body, senior management and other personnel, designed to provide reasonable assurance regarding the achievement of operational efficiency, reliable financial reporting, compliance with applicable laws and regulations, and the safeguarding of assets (COSO, 2013:3). The importance of these systems in the public sector is particularly pronounced, given the accountability obligations associated with the use of public resources and the direct impact on service delivery outcomes (Hamed, 2023:3). Internal control system has been viewed from the perspective of the control environment, risk assessment, control activities, information and communication, and monitoring (COSO, 2013:4-5). The internal control framework was popularised in 1992 by the Committee of Sponsoring Organisations of the Treadway Commission. The COSO released the original framework on internal control systems as a guideline for developing, implementing, and executing internal controls and assessing the effectiveness of internal control systems. In 2013, COSO released an updated framework to improve its applicability in the more global and complex business industry to better assist organisations globally in designing, putting into effect, maintaining, and assessing internal control systems (COSO, 2013).

However, despite the global acceptance and widespread adoption of the COSO framework, municipalities continue to experience persistent failures in internal control system implementation. This suggests that formal control frameworks alone are insufficient without supporting governance capacity, institutional accountability, and adequate technical expertise (Moji, Nhede & Masiya, 2022:4; Ramutsheli & Janse van Rensburg, 2015:110). In many municipalities, internal control systems exist largely as compliance mechanisms on paper, while weak oversight and institutional accountability, inadequate human resources capacity, and limited monitoring capacity undermine their practical effectiveness (Moji et al., 2022:5-6; Masiya, Davids & Mangai, 2021:104-106). Consequently, the existence of a formal COSO-aligned framework does not automatically translate into improved governance, accountability or service delivery outcomes within municipalities. This highlights the importance of examining not only the design of internal control systems, but also the institutional and administrative conditions that influence their implementation and sustainability within municipalities (Moji et al., 2022:5-7). Implementing effective internal control systems has several benefits, including enhanced operational efficiency, accuracy, reliability, transparency and timeliness of financial and non-financial reporting, proactive risk management, and laws and regulatory compliance (COSO, 2013:8), which fundamentally result in better decisions, cost and time savings and support senior managers in achieving operational and strategic goals (Makgatho, 2013:24-25; Mudau, 2021:1).

Management (often led by the Chief Financial Officer (CFO) and Chief Executive Officer (CEO)/or Municipal Manager, in the context of municipality) bears the primary operational responsibility for establishing and maintaining the organisation's internal control systems (Ncgobo & Malefane, 2017:79). While the governing body provides oversight, senior management is responsible for establishing the specific control policies, procedures, and environment to mitigate risks and ensure operational, reporting, and compliance objectives are met (Arens, Elder, & Beasley, 2017:377; COSO, 2013:3-4). Their role includes ensuring the cost-effective and adequate use of resources, and the reliability and integrity of monetary and non-monetary data (AL-Mashhadi, 2021:16). Furthermore, these managers must ensure compliance with rules and laws, safeguard assets, and achieve the set operational objectives and goals (Vasile & Croitoru, 2011:16-22). This can be achieved through the realisation of the influence and benefits of internal control (Kravet, McVay & Weber, 2018:1390). Management's inability to institutionalise effective internal control systems contributes directly to weak financial governance and declining audit outcomes within municipalities.

Internal control positively affects individual users and organisational outcomes (Mutoharoh & Ifada, 2023:305); however, internal control benefits are not fully realised (Ncgobo & Malefane, 2017:87). Incorporating human resource competencies (knowledge, skills and behaviour), corporate governance and big data analytics into the existing internal control factors may result in comprehensive quality outcomes (Irvan, Mus, Su'un, & Sufri, 2017:38; Romney & Steinbart, 2018:158-160). However, prior studies examining internal control systems excluded human resource competency, corporate governance and big data analytics as factors influencing the effectiveness of internal control (Kazaara & Julius, 2024; Vu, 2016). These additional factors are important for effective internal control systems (Darmayanti, Budianto & Hastuti, 2023:2423). The inclusion of human resource competency, corporate governance, and big data analytics may provide a better comprehension of the factors influencing the effectiveness of internal control. By understanding these factors more deeply, organisations can better justify their efforts in building and maintaining robust internal control systems (Makgatho, 2013:26-27).

Despite the COSO framework being around for years, the effectual implementation of internal control is still a challenge (Makgatho, 2013:61-72). Prior studies have shown various perspectives on the factors influencing the effectiveness of internal control systems (Vulley, 2022:65). One of the reasons is that internal control systems depend entirely on the personnel executing them (Hamed, 2023:18). Personnel with in-depth skills and an understanding of systems and professional norms and standards can execute internal control properly, minimise the possibility of misinterpretation, and ensure that norms and standards are adhered to (Dewi & Wirasedana, 2021:32). Furthermore, most senior managers do not fully understand how to establish and implement robust internal control systems (Ngo, Nguyen, Nguyen, Dao & Vu, 2021:374-375). Therefore, corporate governance practices significantly impact how well risks are assessed and monitored using internal control systems within the organisation (Gouiaa, 2018:21-22). Big data analytics (BDA) is revolutionising internal control systems by offering a more adequate, effective, and holistic strategy for oversight and risk management, particularly through the analysis of large and diverse datasets that support enhanced control design and monitoring (Appelbaum, Kogan & Vasarhelyi, 2017:2-3; Elmashtawy & Salaheldeen, 2023:15). Traditional control mechanisms largely grounded in periodic reviews, sampling techniques, and retrospective financial reporting are increasingly insufficient in complex, data-rich organisational environments characterised by high transaction volumes and rapid operational change (Alles, 2015:441-442). In contrast, BDA enables organisations to process vast volumes of structured and unstructured data in real

time, thereby enhancing the scope, accuracy, and timeliness of control activities (Appelbaum et al., 2017:6-8). BDA refers to the application of advanced analytical techniques to high-volume, high-velocity, and high-variety data in order to generate actionable insights that support decision-making and enhance organisational performance (Kwon, Lee, Shin, 2014:387). BDA has developed into a significant instrument for internal control systems, facilitating the analysis of vast datasets and the identification of patterns, trends, and anomalies that may signify potential risks and fraud activities (Ilori, Nwosu, & Naiho, 2024:932). BDA can assist organisations in identifying and assessing risks by analysing historical data, market trends, and internal performance indicators (Rosnidah, Johari, Hairudin, Hussin & Musyaffi, 2022:9). Effective internal control integrates all internal control factors working together (Ratliff, 2022:17).

Additionally, internal control system effectiveness includes identifying and assessing risks, the control environment, communicating information, controlling and assigning tasks and monitoring (Hung & Tuan, 2019:1800). Kazaara and Julius (2024:83) opine that the constituent factors of the system of internal control effectiveness comprise risk oversight, authorisation protocols, functional segregation and technological systems. The auditing standard, SAS 55, asserts that the internal control systems comprise the information system, control environment, and monitoring procedures. COSO (2013) provides five factors, which include the control environment, control activities, risk management, information and communication, and monitoring activities. Internal control systems may have an impact on organisational performance (Bridget & Catherine, 2024:658).

Additionally, research on the impact of internal control systems on organisational performance is still emerging (Ajala, Ololade, Olaleye & Abass, 2023:66). Organisational performance is a collection of financial and non-financial performance indicators. Prior studies have examined internal control systems and organisational performance focused exclusively on financial performance (Ayamga & Bagina, 2019; Julius & Alex, 2024; Kalvel & Irumba, 2023), such as profitability (asset turnover, net profit, return on assets, and sales turnover) (Mudau, 2021:7), and disregarded non-financial performance indicators, such as operational and customer performance (Wu, Pan, Zhou & Li, 2020:70-71).

Operational performance pertains to the efficiency and effectiveness of an organisation's routine processes and activities, including safeguarding assets and delivering goods and services (Azim, Ahmed & Khan, 2015:64). In municipalities, customer performance reflects service delivery responsiveness, citizen satisfaction, and public trust (Oliver, 1997:13). Focusing solely on financial performance provides a narrow and incomplete picture of an

organisation’s performance because financial performance is just one part of the organisational performance puzzle (Mudau, 2021:7). Examining the impact of internal control systems on a more balanced collection of organisational performance measures will help management justify their efforts in enhancing organisational performance and aiding organisations in adequately measuring their organisational performance and ultimately improving audit outcomes (Jolly, Julius, & Alex, 2023:258).

Prior studies examining internal control and performance and extending to audit outcomes are scarce (Farook & Alex, 2024; Kalvel & Irumba, 2023; Makhele, 2021; Nqala, 2020). There is inadequate empirical evidence to substantiate the impact of internal control and organisational performance on audit outcomes (Chalmers, Hay & Khlif, 2018:25). An audit outcome refers to the overall results or judgement provided by auditors after evaluating an organisation’s financial statements, internal control systems and adherence to pertinent rules and laws. It demonstrates the level of assurance the auditors possess in the reliability of the information presented. In the context of South African municipalities, audit outcomes indicate whether internal control systems and financial management are effective, require enhancement, or are inadequate (Tian & Xin, 2017:266). Furthermore, studies on internal control effectiveness that can be utilised as a determinant of enhanced organisational performance, which influences the audit outcome, are lacking (Khasodi, Mahlala & Hofisi, 2023:338).

The remainder of this chapter discusses the theoretical underpinning of the study, followed by the international and South African literature review; the problem statement; the research aim and objectives; the thesis statement; the underlying assumptions; the research methodology utilised for data gathering and analysis; the research design; the possible limitations and challenges of the study; the quality assurance; the delimitations and limitations; the ethical considerations; and the significance of the study.

1.2. CURRENT STATE OF THE SOUTH AFRICAN MUNICIPAL SECTOR

Municipalities are at the forefront of public service delivery, serving as the primary interface between citizens and the government. Municipal capacity determines the effectiveness and efficiency of service delivery provided to citizens (Ndevu & Muller, 2018:182). After years of service delivery failures, council and administrative instability, financial mismanagement, and disregard for the law, this sphere of government faced greater demands than ever before to regain the trust of South Africans (Khasodi et al., 2023:339). Chronic shortfalls in service delivery raise doubts over municipalities' ability to effectively execute their responsibilities

and constructively alter the socio-spatial-economic conditions of citizens' lives and work (Masiya et al., 2021:99). For several years, AGSA reports have revealed a downwards spiral in municipalities' performance, highlighting issues of irregularities, unreliable financial and non-financial reporting, and misappropriation of public funds due to the absence of adequate financial management disciplines and ineffective internal control environments (AGSA, 2024:129). Despite the resources municipalities have at their disposal to allow robust financial and performance management and reporting, their internal control systems are still inadequate to prevent significant misstatements in annual performance reports and financial statements (AGSA, 2023:124). This persistence suggests that municipalities face structural and institutional barriers that extend beyond procedural compliance deficiencies. It further indicates that weaknesses in municipal governance are not merely technical in nature but are also rooted in deeper challenges such as weak accountability mechanisms, administrative instability, inadequate leadership capacity, and ineffective enforcement of consequence management. Consequently, repeated audit findings by the AGSA point to systemic governance failures rather than isolated administrative shortcomings.

Every year, municipalities lose billions of rand due to poor decisions, incompetence, or inefficiencies. Fruitless and wasteful spending has continued to increase. This spending increased from R4,89 billion in 2021–2022 to R7,41 billion in 2022–2023 (AGSA, 2024:65). Through the material irregularity process, mismanagement of funds and non-compliance have been identified since 2019, resulting in a financial loss estimated at R7,34 billion (AGSA, 2024:86). The constant increase in fruitless and wasteful spending and material irregularities for the past years in audit reports and governance suggests that internal control systems are not operating as they should. The AGSA's reports have shown a decline in municipalities' financial management over the past years. The past four years have seen a regression in audit outcomes, a lack of improvement in internal control systems, and a slow response to requests to strengthen internal control systems (Auditor-General of South Africa, 2023:18). The continued recurrence of these findings despite annual audit recommendations demonstrates a pattern of weak institutional learning and limited corrective action within municipalities. This raises concerns regarding the effectiveness of oversight structures and the extent to which municipal leadership prioritises accountability and governance reform.

Using the multi-disciplinary approaches to define and implement operational strategies supported by robust internal control systems aimed at addressing the sustainable development of municipalities will lead to the unlocking of potential in the local government sector (Khasodi et al., 2023:344). AGSA (2024:98) argued that internal control systems

deeply rooted in action aimed at addressing financial viability, revenue collection, governance, human capital development, and the diversification of service provisions can massively improve municipalities' organisational performance and can also be a catalyst for municipalities to obtain and sustain clean audit outcomes. However, achieving these outcomes requires more than the formal adoption of control frameworks; it depends on the institutional capacity, ethical leadership, and political commitment necessary to enforce and sustain effective internal control systems. In tackling these areas of concern, it becomes possible for the municipal sector to have a tremendous positive impact on the social and economic development of the country, subsequently increasing the quality of life for millions of citizens in South Africa (AGSA, 2023:114).

Table 1.1 presents a synthesis of recent municipal audit outcomes reported by the Auditor-General of South Africa, illustrating persistent deficiencies in internal control systems, governance, and financial management that continue to undermine organisational performance and audit outcomes within municipalities.

Table 1.1: *Summary of Municipal Audit Outcomes and Key Issues (2020/21–2023/24)*

Audit Year	Municipal Audit Outcome Profile	Key Issues Highlighted by AGSA	Systemic / Root Causes Identified	Reference to AGSA report
2023/24 (most recent)	Regression in several municipalities, with only 41 out of 257 municipalities achieving clean audits. Many continued to operate with qualified or disclaimed opinions.	Poor financial management, unreliable reporting, non-implementation of audit action plans, unfunded budgets, and persistent compliance breaches.	Leadership failures, weak accountability cultures, inadequate consequence management, ineffective internal audit and risk management functions, and politicisation of senior appointments.	AGSA, 2025
2022/23	Audit outcomes reflected structural stagnation, with only isolated pockets of improvement and a continued prevalence of qualified and disclaimed opinions.	Weak service-delivery planning and reporting, deteriorating municipal infrastructure, poor financial discipline, and high levels of irregular and wasteful expenditure.	Weak implementation of internal controls, limited organisational performance management maturity, leadership instability, and failure to address repeat audit findings.	AGSA, 2024
2021/22	Marginal improvements were recorded in some	Continued weaknesses in financial reporting,	Ineffective oversight by councils and MPACs, lack	AGSA, 2023

	municipalities; however, most audit outcomes stagnated and several municipalities regressed. Clean audits remained concentrated in a few provinces.	unfunded budgets, non-compliance with the MFMA, ineffective performance management, and infrastructure backlogs.	of consequence management, continued reliance on consultants, and weak monitoring of key controls.	
2020/21	Audit outcomes showed a continuing decline, with most municipalities receiving unqualified opinions with findings, qualified, adverse or disclaimed opinions. Clean audits remained below one-fifth of municipalities.	Poor quality financial statements, weak record-keeping, widespread non-compliance with SCM legislation, and recurring material irregularities.	Weak internal control environments, skills shortages in finance units, political and administrative instability, and slow corrective action on audit findings.	AGSA, 2022

1.3. PRELIMINARY LITERATURE REVIEW

This section focuses on a theoretical review that comprises the theories that contribute to this field of knowledge, and an empirical literature review pertaining to the study follows. The conceptual framework is also highlighted.

1.3.1. Theoretical Review

This study's theoretical review is predicated on two theories that describe the connection between internal control systems, organisational performance, and audit outcomes. The theories are discussed below.

1.3.1.1. Agency theory

Jensen and Meckling (1979) introduced agency theory. This theory is intended to resolve challenges that exist between agents and principals. According to this theory, when decision-making power is provided to someone and the agent and the principal have competing interests, agents focus more on their own interests and neglect the interests of the principal, who is the owner of the organisation, and then, agency challenges emerge (Muchoki, 2020:9-

10). However, these challenges can be reduced by implementing sound internal control systems (Uwingabiye, 2019:8-9). In this study, the agency theory explains the relationship between citizens and council, who are principals and municipal managers, as agents (Legodi, 2021:39).

The Municipal Finance Management Act 56 of 2003 requires all municipalities to implement and maintain effective internal control systems. Effective internal control systems aim to improve municipalities' organisational performance and audit outcomes (Khumalo & Edoun, 2021:151). This theory is employed in this study because of its relevance, as it clarifies how internal control systems contribute to improved organisational performance, which in turn influences audit outcomes. To limit the extent of the agency challenge, another pertinent theory is the stakeholder theory, which is discussed below.

1.3.1.2. Stakeholder theory

Freeman (1984) introduced stakeholder theory, which views an organisation as a group of stakeholders, including any single person impacted by or can impact the accomplishment of an organisation's goals, and the purpose of managing the organisation must be to ensure that the stakeholders' needs, interests, and perspectives are met (Freeman, Harrison, Wicks, Parmer & de Colle, 2010:9). A derivative of stakeholder theory is strategic stakeholder theory. This theory is about balancing stakeholder interests with strategic business objectives (Freeman et al., 2010:102). This perspective is essential in comprehending internal control systems and their wider benefits. It postulates that robust internal control processes should consider stakeholder interests (Zheng, Liu & Sial, 2018:18).

1.3.2. Literature That Informs the Research Gap

The literature review on the effectiveness of internal control systems was conducted by consulting both the international and South African knowledge domains. Owing to the accessibility of large-scale literature and the scarcity of research on systems of internal control in municipalities, the private sector literature was also reviewed.

1.3.2.1. International research

Table 1.2 shows how, during the previous seven years, several international studies have examined the phenomenon and deduced the factors influencing the effectiveness of the internal control system and its impact on organisational performance and audit outcomes.

Table 1.2: *International Studies*

Author(s)	Title	Purpose of the study	Methodology	Theories	Limitations	Findings	Further research
Bužinskienė & Padgureckienė, (2025)	"The role of internal control integration in enhancing organizational performance"	To analyze how the internal control integration contributes to the improvement of organizational performance and to identify success factors and areas for improvement.	Quantitative (Survey, purposive sampling).	Resource-Based theory	The study was limited to Lithuanian organisations.	The findings reveal that effective integration of internal controls significantly improves organisational performance by enhancing risk management, control procedures, and technology integration. strong leadership commitment, continuous monitoring and training improvements are key success factors.	Future studies should extend the scope to the public sector institution.
Ntahondereye, Opuodho & Muigai (2024)	"Effect of Risk Assessment as an Element of Internal Control System on the Quality of Financial Reporting Information in Local Governments of Rwanda"	Evaluated the effect of risk assessment as a component of the internal control system on the quality of financial reporting in Rwandan local governments.	Descriptive research design with a mixed qualitative and quantitative approach.	Positive accounting theory	The study was limited only to risk assessment in Local Governments of Rwanda.	The results revealed that a high level of risk assessment has a significant effect on the quality of financial reporting.	Future studies should be conducted in other public institutions of other nations that have poor quality financial reporting information.
Riza & Kuntadi (2024)	"Factors Affecting the Implementation of the Internal Control System: Control Environment, Risk Assessment and Control Activities"	Examined factors that influence internal control system weaknesses through the components of the Control Environment, Risk Assessment, and Control Activities.	Qualitative approach and library research method.	Agency theory	The study was limited to only 3 components of internal control, which are Control Environment, Risk Assessment, and Control Activities.	Control environment and risk assessment have a positive effect on auditor accountability in the implementation of the internal control system.	Future studies must consider incorporating other components of internal control such as information and communication and monitoring activities.
Darmayanti, Budianto and Hastuti (2023)	"Government Internal Control System and Quality of Financial Statements in West Aceh Regency, Indonesia"	Evaluate how the West Aceh Regency's Internal Control System affects the standard at which financial statements are presented.	Mixed method (Interviews and distributing questionnaire, Document analysis, Purposive sampling)	Agency theory	Low number of respondents and utilization of only systems of internal control as an independent variable.	The systems of internal control positively impact the local government financial reports' quality.	Future studies must consider incorporating additional variables, like human resource competency, and expand the sample size.
Elmashtawy & Salaheldeen (2023)	"Big Data Techniques and Internal Control: Evidence from Egypt"	Examine the impact of using big data techniques on the effectiveness of the internal control for companies listed on the Egyptian Stock Exchange in 2020.	Quantitative (Survey, Cross-Sectional analysis method)	Contingency theory	The study was limited to 6 sectors from from Egypt.	The results revealed a significant effect for the use of big data techniques and the effectiveness of internal control (effective control environment and the provision of effective communication channels between internal management and external parties).	Future research may focus on investigating the impact of various big data techniques on internal control effectiveness.

Author(s)	Title	Purpose of the study	Methodology	Theories	Limitations	Findings	Further research
Oppong, Atchulo, Fofack and Afonope (2023)	"Internal control mechanisms and financial performance of Ghanaian banks: the moderating role of corporate governance"	Assess the way in which corporate governance moderates the connection between financial performance and internal control systems.	Quantitative (Survey, purposive sampling)	Agency theory	The study was limited to Ghanaian banks.	Corporate governance and internal controls directly improve financial performance.	Future researchers can consider employing a cross-sectional study.
Simon (2021)	"The Effect of Internal Control on Organizational Performance in the Telecommunications Industry in South-South and South-East Nigeria"	Examine the internal control environment that affects organizational performance in the telecommunications sector and ascertain the degree of risk assessment.	Quantitative Descriptive (Survey, Random sampling)	Agency theory	The study's scope was restricted to South-South and South-East Nigeria's telecom sector.	The likelihood of improved overall performance is higher for organizations that make greater investments in adequate internal control systems.	Future researchers can consider additional variables such as corporate governance.
Uwingabiye (2020)	"Internal control components and financial performance in public institutions in Rwanda"	Provides an outline of the significance of factors of internal control in enhancing financial performance.	Mixed Methods (Case study, survey, document analysis, purposive sampling).	Contingency & Stewardship theories	This study was limited to Rwanda Social Security Board.	Internal control is insufficient without competent management and employees.	Future research to incorporate all factors influencing internal control that were left out and examine how they affect performance.
Pakurár, Haddad, Nagy, Popp and Oláh (2019)	"The Impact of Supply Chain Integration and Internal Control on Financial Performance in the Jordanian Banking Sector"	To use supply chain integration (SCI) to investigate how various connections between SCI and internal control affect the banking industry's financial performance in Jordan.	Quantitative Descriptive (Survey, Document analysis, Purposive sampling)	Supply chain integration theory	The financial performance of the banking industry in Jordan was the sole focus of the study.	The efficacy of internal controls significantly affects financial performance.	Future research must test this finding on populations of different sizes in another country.

The literature reviewed adopted a quantitative approach with purposive sampling and focused only on Lithuanian organisations (Bužinskienė & Padgureckienė, 2025). Bužinskienė and Padgureckienė (2025) suggested that future studies extend the scope of internal control and organisational performance to the public sector. Riza and Kuntadi (2024) examined factors influencing the implementation of an internal control system and focused only on the control environment, control activities, and risk assessment. This study suggests that future studies consider incorporating other components of internal control, such as information and communication, and monitoring activities. Ntahondereye, Opuodho and Muigai (2024:44) focused only on risk assessment and ignored other components of internal control, and the study was based on the local governments of Rwanda. The study also recommended that studies should be conducted in other public institutions of other nations that have poor-quality financial reporting information. Darmayanti, Budianto and Hastuti (2023:2423) suggested that further research on internal control systems should increase the number of samples and consider adding other variables, such as human resource competency. Elmashtawy and Salaheldeen (2023:22) recommended further research to investigate the influence of big data techniques on the effectiveness of internal control. Pakurár, Haddad, Nagy, Popp, and Oláh (2019:18) recommended further research to test this finding on populations of different sizes in other countries. Simon (2021:87) recommended that future researchers consider additional variables such as corporate governance. Oppong, Atchulo, Fofack and Afonope (2023:100) recommended that future researchers consider employing a cross-sectional study. Uwingabiye (2020:58) recommended that future research incorporate all the factors influencing internal control and examine how they affect performance.

1.3.2.2. South African research

Table 1.3 shows how, during the previous seven years, several South African studies have examined this phenomenon and deduced the factors influencing the effectiveness of the internal control system and its impact on organisational performance and audit outcomes.

Table 1.3: *South African Studies*

Author(s)	Title	Purpose of the study	Methodology	Theories	Limitations	Findings	Further research
Klein, Lubinga & Masiya (2024)	"Implementation of internal controls in supply chain management: A case study"	Examined the factors influencing internal controls within the SCM function in the Department of Social Development (DSD), South Africa.	Qualitative research approach and a case study design	No theory applied	The study was restricted to the Department of Social Development and disregarded other departments and municipalities.	Effective internal controls are crucial for organisations to compete successfully in the supply chain environment.	Further research to be extended to the other departments and municipalities using quantitative method.
Pillay (2024)	"The effect of internal control systems on the monitoring of financial resources at a higher education institution"	Assessed the effectiveness of internal control systems in monitoring financial resources at the Durban University of Technology and identify areas for improvement.	Quantitative (Case study, Survey, census sampling)	Agency theory & Contingency theory	The study was based on a case study of one unique institute of higher education, DUT, in South Africa.	Internal control mechanisms have significant and positive impact on the monitoring of financial resources	Future studies can include other public institutions in South Africa. Studies can consider human resource competency to address the human-related inherent limitations of internal controls.
Kgwete (2023)	"The impact of governance on the financial performance of local municipalities in Gauteng"	Determine if Gauteng local municipalities' financial performance is impacted by governance.	Quantitative (Case study, Document analysis, Purposive sampling)	Resource dependency theory	Not every local municipality in Gauteng was included in the sample. The study focused on financial performance and ignored non-financial performance.	Corporate governance can influence financial performance.	Other local authorities should be included in future studies on how governance affects performance.
Monnatlale (2023)	"Strengthening of internal controls to ensure compliance with the local government MFMA no 56 of 2003 in municipalities: a case of the city of Tshwane municipality"	Investigate the challenges facing the internal control implementation to ensure adherence to the MFMA in municipalities.	Qualitative (Case study, Interviews, Document analysis, Quota sampling)	No theory applied	The research study was limited to the City of Tshwane Municipality. Investigated a limited number of cases. Audit outcome was not considered, even though non-compliance may have an impact on it.	The study reported Challenges with ineffective leadership that drive governance.	"Future research to adopt quantitative research with a large number of research participants"

Author(s)	Title	Purpose of the study	Methodology	Theories	Limitations	Findings	Further research
Makhele (2021)	"The relationship between compliance of internal controls and corporate governance system in the South African public sector"	Examine the South African public sector's corporate governance system's overall efficacy.	Qualitative (Field study, Interviews, Document analysis, Stratified random sampling)	Descriptive stakeholder theory	The study was restricted to departments and disregarded municipalities.	Corporate governance can improve internal control effectiveness.	Further research on the efficacy of internal controls and corporate governance is required.
Nevhutanda and Mamaile (2020)	"Internal Controls Underpinning Audit Outcomes in South African Municipalities"	To set up the internal controls supporting the audit results in municipalities of South Africa.	Qualitative (Criterion and simple random sampling, document analysis)	No theory applied	The study disregarded organizational performance even though it may have an impact on Audit Outcomes.	Internal controls are inadequate without competent leadership.	"Future research can cover areas such as corporate governance and policy development and implementation process.
Bruwer, Coetzee and Meiring (2019)	"The perceived adequacy and effectiveness of internal control activities in South African small, medium and micro enterprises"	Examine whether the adoption of internal control initiatives by SMMEs in South Africa impacts the perceived efficacy of their overall systems of internal control.	Quantitative (Case study, Survey, Purposive and convenience sampling)	Agency theory	The study was limited to SMMEs in Cape Metropole.	Internal control activities have limited influence on internal control system adequacy and effectiveness.	Future research to concentrate on factors such as why systems of internal control are influenced by only a few internal control initiatives.

The literature reviewed was limited to the Department of Social Development and excluded other departments and municipalities (Klein, Lubinga, & Masiya, 2024). Klein, Lubinga, and Masiya (2024) focused solely on the supply chain management function, overlooking other functions within the department. Focusing solely on the supply chain management function provides a narrow and incomplete picture of the department's performance. The study recommended that further research be extended to other departments and municipalities using a quantitative method. Pillay (2024) focused solely on a distinctive institution of higher education, Durban University of Technology (DUT), in South Africa. The study recommended that future studies extend to other public institutions in South Africa and consider human resource competence to address the inherent human-related limitations of internal control systems. Kgwete (2023) focused only on Gauteng local municipalities' financial performance and ignored non-financial performance. Makhele (2021) focused only on departments using qualitative methods and disregarded municipalities. The researcher highlighted that there is a necessity for subsequent research on internal control effectiveness and corporate governance. Monnatlale (2023) adopted a qualitative approach with quota sampling using data from 12 senior managers of the City of Tshwane municipality. The research was limited to the City of Tshwane Municipality. The audit outcome was not considered, even though noncompliance may have an impact on it. The study reported challenges with ineffective leadership that drives governance. The researcher recommended that future research adopt quantitative research with a large number of research participants, extending to other municipalities in other provinces. Bruwer, Coetzee and Meiring (2019) adopted a quantitative approach with purposive and convenience sampling and focused only on SMMEs. Nevhutanda and Mamaile (2020) adopted a qualitative design with criteria and simple random sampling. The study disregarded organisational performance, even though it may have an impact on audit outcomes.

The aforementioned studies reveal a significant research gap that is noteworthy in the limited comprehension of factors influencing internal control effectiveness and its impact on organisational performance and audit outcomes in municipality settings. This gap is addressed in this study.

1.4. PROBLEM STATEMENT

Khasodi, Mahlala and Hofisi (2023:339) state that South African municipalities face the challenge of improving their performance to effectively deliver on their mandate to dispense essential public services and development projects to local communities. For several years,

AGSA reports have revealed a downward spiral in municipalities' performance, highlighting irregularities, unreliable financial and non-financial reporting, and misappropriation of public funds due to inadequate financial management disciplines and ineffective internal control environments (AGSA, 2024:129). Despite having adequate resources at their disposal to allow robust financial and performance management and reporting, municipalities do not have adequate internal control systems to prevent significant misstatements in annual reports and financial statements (AGSA, 2023:124). Every year, municipalities lose billions of rand due to poor decisions, incompetence, or inefficiencies. Fruitless and wasteful spending has continued to increase. This spending increased from R4,89 billion in 2021–2022 to R7,41 billion in 2022–2023 (AGSA, 2024:65). Through the material irregularity process, mismanagement of funds and non-compliance have been identified since 2019, resulting in a financial loss estimated at R7,34 billion (AGSA, 2024:86).

While the persistent increase in fruitless and wasteful expenditure and material irregularities suggests weaknesses in internal control systems, the specific mechanisms through which internal control effectiveness influences organisational performance and audit outcomes within South African municipalities remain insufficiently understood (Mamve, 2021:12; AGSA, 2022:15). In particular, it is not empirically clear which underlying factors most significantly explain variations in internal control effectiveness and how these factors interact to determine the overall effectiveness of internal control systems across different municipalities (Boufounou, Eriotis, Kounadeas, Argyropoulos & Poulopoulos, 2024:4-6; Nevhutanda, 2019:30-35). Furthermore, there is limited evidence on whether effective internal control systems directly improve audit outcomes, or whether their impact is mediated through improvements in organisational performance and financial management practices (Nevhutanda, 2019:40-43). This lack of clarity presents a critical research gap, as municipalities continue to demonstrate declining audit outcomes and persistent service delivery challenges despite the existence of regulatory frameworks and resources intended to support sound governance (AGSA, 2024:10-12).

Accordingly, the core problem addressed by this study is the insufficient empirical understanding of the factors influencing internal control system effectiveness and the pathways through which such effectiveness influences organisational performance and audit outcomes in South African municipalities. Addressing this gap is essential not only to inform targeted interventions aimed at strengthening internal control systems, enhancing the credibility of performance reporting, and improving service delivery and audit outcomes, but

also to advance scholarly understanding of internal control system effectiveness in developing public sector environments. This study, therefore, seeks to extend internal control literature by empirically validating an integrated framework linking internal control effectiveness, organisational performance, and audit outcomes within the municipal context.

1.5. RESEARCH AIM AND OBJECTIVES

Given the research problem discussed above, the primary aim of this study is to analyse the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. The subsequent secondary research objectives (SROs) will be undertaken to fulfil the study's primary aim.

SRO1: To analyse the factors influencing internal control system effectiveness.

SRO2: To analyse the impact of internal control effectiveness on both financial and non-financial aspects of organisational performance within municipalities.

SRO3: To analyse the impact of effective internal control on the audit outcomes of municipalities, with organisational performance serving as a mediating factor, and test the indirect effect of internal control on audit outcomes via performance.

1.6. RESEARCH QUESTIONS

RQ1: What are the key factors that significantly influence the effectiveness of the internal control system?

RQ2: To what extent does internal control effectiveness impact both financial and non-financial aspects of organisational performance in municipalities?

RQ3: To what extent does internal control system effectiveness influence municipal audit outcomes directly and indirectly through organisational performance?

1.7. UNDERLYING ASSUMPTIONS

The study assumes that internal control systems are interconnected with organisational performance and audit outcomes. It also assumes that the study's results will provide a clear comprehension of critical factors of the internal control system that remarkably influence municipalities' performance and audit outcomes.

1.8. RESEARCH METHODOLOGY

Research methodology is a theory about how a study should proceed (Schwardt, 2007:195). It outlines the appropriate methods for carrying out research and the procedures the researcher uses in conducting research (Botlhale, 2019:110). The approaches, principles and procedures of the study are discussed below.

1.9. RESEARCH DESIGN

The study design is a plan for executing the project and responding to the project research questions (Creswell, 2014:43). This research study adopted a quantitative method that is linked to the positivist research perspective and deals with analysing gathered data statistically, mathematically, or numerically (Bahari, 2010:19). Its distinct features include objective measurement, hypothesis testing, causality, and reproducibility (Williams, 2007:66). The adoption of the quantitative method facilitated the data that were collected for this study to be subjected to multifarious statistical analyses (Williams, 2007:69). By employing a quantitative approach, numerical data were gathered, analysed and utilised to generalise the views of particular individuals or to furnish an overarching comprehension of a specific phenomenon (Mohajan, 2020:3). Consistent with positivism, this research followed a deductive method and relied on theory to specify hypotheses and ruled out competing theories to explain observations and draw causal conclusions (Bahari, 2010:21).

This study, therefore, sought to establish relationships between variables. It can consequently be termed an “explanatory study” (Bakri & Nee, 2020:88). An explanatory study is carried out to recognise the nature and extent of cause–and–effect relationships between the independent and dependent variables. It tests whether an event generates another and attempts to find clarifications of the nature of particular correlations. The researcher adopted hypothesis testing in this study to provide an understanding of the correlations between variables (Welch, Piekkari, Plakoyiannaki & Paavilainen-Mantymaki, 2011:746).

The research strategy adopted for this study is a survey, which is frequently utilised in deductive research within commercial and management disciplines to answer questions linked to "how," "why," and "what," rather than just "yes" or "no" (Mudau, 2021:92). The researcher collected primary data from municipal managers, executive directors, middle managers, lower-level managers, auditors and staff members directly involved in designing, implementing and executing internal controls in all 257 South African municipalities via a

cross-sectional survey with a sample of 1200 employees. The questionnaire employed a 7-point Likert scale (1 denoting “strongly disagree” and 7 denoting “strongly agree”) to ascertain the insights and attitudes of the respondents regarding these constructs to obtain meaningful responses (Moodley, 2019:21). The survey approach enabled the researcher to gather data efficiently and cost-effectively (Khan, 2024:76). The questionnaires were distributed to the participants via LinkedIn inboxes. The researcher analysed the data acquired statistically, utilising statistical software version 30 of the Statistical Package for Social Sciences (SPSS) Analysis of Moment Structures (AMOS).

The comprehensive methodology of the study is discussed in detail in Chapter 3, “Research Methodology”.

1.10. PILOT STUDY

A pilot study is a brief research merit and viability determination intended to assess different facets of the approaches planned for more comprehensive, in-depth, or confirmatory studies (Maxwell, 2013:66). To identify and develop the measures, previous research was utilised to ensure content validity. Pilot testing was carried out to determine whether the survey was comprehensible for participants and if there were any ambiguous or bewildering measurements in the questionnaire items. The survey items also ensured that they were appropriate for individual users of internal control systems. This ensured the instruments' face validity. The pilot test was conducted utilising a sample of a minimum of five senior managers who employ internal control systems and were sourced from the same demographic as the primary research study. The individuals selected to participate in the pilot study were not the same individuals who evaluated the instruments. Their responses facilitated the determination of the measures’ face validity. They enabled initial screening of each scale’s descriptive statistics, comprising variation in responses, one-dimensionality, and overall measures of scale reliability.

1.11. QUALITY ASSURANCE

Quality assurance is essential in this research study to ensure the validity, reliability, and reproducibility of the results. The following outlines how this study ensures these important aspects:

The study employed robust conceptual frameworks such as COSO and BSC to steer the research design and ensure methodological rigour and theoretical validity. The study employed these frameworks to create a solid basis for formulating the study questions and hypotheses and ensured that the study was based on sound theory. Purposive and snowball sampling methods were utilised to increase the representativeness of the sample. Purposive sampling was adopted to improve the study's internal validity (content validity, face validity and construct validity) by ensuring the inclusion of specified subgroups pertinent to the research objectives (Tongco, 2007:154). Snowball sampling was adopted to improve the study's representative credibility (Dusek, Yurova, & Ruppel, 2015:282-283). Using a mixed-mode technique for collecting data helped minimise nonresponse bias and increased the validity of the results. Maintaining the respondents' confidentiality and anonymity is critical to ensure respondent honesty and increase data reliability (Roberts, 2007:21; Wilkinson & McTiernan, 2020:6). The survey questions were grounded in the COSO and BSC constructs, improving the construct validity. To uncover any ambiguity or misapprehension and enhance the instrument's clarity and face validity, the survey was pre-tested with a limited sample of respondents.

1.12. BOUNDARY STATEMENT (DELIMITATIONS AND LIMITATIONS)

This study is bounded within the context of South African municipalities, specifically focusing on metropolitan, district, and local municipalities as defined in the Municipal Finance Management Act (Act 56 of 2003). The unit of analysis is the municipality as an organisational entity, with data collected from key municipal decision-makers and assurance providers. These respondents include municipal managers, executive and middle management, audit committee members, chief audit executives, risk and compliance managers, internal and external auditors, and officials directly involved in the design, implementation, and monitoring of internal control systems. This respondent group was selected due to their direct involvement in governance, risk management, and internal control processes, thereby ensuring informed and contextually relevant responses.

The study is conceptually delimited to analysing the internal control system effectiveness and its impact on organisational performance (incorporating both financial and non-financial dimensions) and audit outcomes in South African municipalities. While the study extends traditional internal control frameworks by incorporating human resource competency, corporate governance, and big data analytics, it does not explicitly analyse broader

information technology systems beyond their relevance to big data analytics, nor does it extend to national or provincial government institutions.

Methodologically, the study is confined to a quantitative research approach employing a cross-sectional survey design. Data were collected at a single point in time, which limits the ability to establish temporal precedence and causal inference. The study further utilises Structural Equation Modelling (SEM) to test the hypothesised relationships and mediation effects, thereby focusing on statistically derived associations rather than longitudinal dynamics. The reliance on perceptual data introduces the possibility of common method bias; however, this is mitigated through the use of multiple respondents per municipality and instrument design procedures. Sampling constraints, including purposive and snowball sampling, may introduce self-selection and non-response bias, potentially affecting the generalisability of findings across all municipalities (local, district, and metropolitan).

1.13. ETHICAL CONSIDERATIONS

Research ethics is perceived as a collection of permissible norms that prescribe and control what is permissible during the research process (David & Resnik, 2015:1). The study was conducted with ethical approval (reference number: 6405) obtained from the Ethics Research Committee at the University of South Africa's College of Accounting Sciences. The researcher adhered to the following general ethical principles:

1.13.1. Informed Consent

A fundamental standard of ethical research study is that potential participants can decide for themselves whether to accept participation. Informed consent forms the basis of ethical research (Monnatlale, 2023:10; Fleming & Zegwaard, 2018:210). In this context, the principles of informed consent were emphasised. The participants were prominently informed about the research study in a perspicuous, detailed, and factual manner using an informed consent form. Before participation, the researcher fully explained the study's overview and purpose to all participants and provided an explanation of what was required of them, how the collected data would be utilised, and what, if any, consequences this might have.

1.13.2. Risk of Harm, Confidentiality, and Anonymity

Participants' identification must remain secret or anonymous (Hammer, 2017:158). The respondents were assured that participating in the research study would not have any

negative consequences or would cause any harm to them. The researcher complied with confidentiality and anonymity by allocating a pseudonym to each name mentioned in this study to protect the study participants. As part of an academic programme, this study was designed not to cause harm to research participants. The participants were not coerced, intimidated, or manipulated to participate in this research study.

1.13.3. Plagiarism

As a researcher, it is of utmost importance to avoid plagiarism, as it compromises integrity. The ethical guidelines require that the author avoid using another person's work, data, images, ideas, or other original creations as his interpretation of the work, without consent or acknowledgement (Kintoki, 2017:58). However, researchers are permitted to cite or interpret other people's work and then acknowledge it by mentioning their publications/details in the reference list. All sources used by the researcher have been acknowledged as full references. The researcher also used Turnitin software to check, detect, and prevent plagiarism.

1.13.4. Participant Bias

While the adoption of a quantitative method within a positivist paradigm is appropriate for the survey design and statistical analysis employed in this study, the potential for participant-related biases is acknowledged as a limitation. To mitigate this risk, several measures were implemented. Firstly, anonymity and confidentiality were assured to respondents to reduce social desirability bias and encourage honest responses. Secondly, the questionnaire was carefully designed using clear, neutral, and unambiguous wording to minimise response bias and misinterpretation. Thirdly, where possible, items were adapted from previously validated instruments to enhance reliability and reduce measurement error. In addition, a pilot study was conducted to identify and correct potential sources of bias and ambiguity before full data collection. Finally, statistical techniques, such as reliability and validity testing (e.g., Cronbach's alpha and factor analysis), were employed to assess the consistency and robustness of the data. These measures collectively contributed to reducing the impact of participant bias and enhancing the credibility of the study findings.

1.14. SIGNIFICANCE OF THE STUDY

South African municipalities continue to experience deteriorating service delivery, weak financial management, and adverse audit outcomes, despite the existence and adoption of

comprehensive regulatory frameworks and established internal control guidelines such as the COSO framework. Persistent deficiencies in internal control systems have been identified by the Auditor-General of South Africa as a central contributor to these challenges, resulting in recurring irregular and fruitless expenditure, mismanagement of public resources, weak governance, and accountability. Therefore, this study is needed to provide a comprehensive understanding of the factors influencing internal control effectiveness and how these, in turn, shape organisational performance and audit outcomes.

Although prior studies have examined internal control systems, significant gaps remain in the literature. Existing research has largely focused on isolated dimensions of internal control or has predominantly examined financial performance outcomes, often neglecting non-financial performance indicators such as operational efficiency and customer-related outcomes. Furthermore, limited empirical evidence exists on the integrated relationship between internal control effectiveness, organisational performance (as a multidimensional construct), and audit outcomes, particularly within the South African municipal context. Additionally, key factors such as human resource competency, corporate governance, and big data analytics have been insufficiently incorporated into existing internal control models, thereby limiting a holistic understanding of the system's effectiveness.

To address these gaps, this study develops and empirically tests a comprehensive model that integrates traditional internal control components with extended factors, including human resource competency, corporate governance, and big data analytics. The study further analyses the direct and indirect relationships between internal control effectiveness, organisational performance (encompassing both financial and non-financial dimensions), and audit outcomes, with organisational performance positioned as a mediating variable. By employing a quantitative research design and structural equation modelling (SEM), the study provides robust empirical evidence within the specific context of South African municipalities.

The value of this study is both practical and theoretical. Practically, the findings will assist municipal managers, chief audit executives, audit committees, and policymakers (including National and Provincial Treasury and AGSA) in strengthening internal control systems, enhancing organisational performance, and improving audit outcomes. The study offers evidence-based insights that can inform policy formulation, governance practices, and capacity-building initiatives within municipalities. Theoretically, the study contributes to the body of knowledge by extending internal control literature through the incorporation of

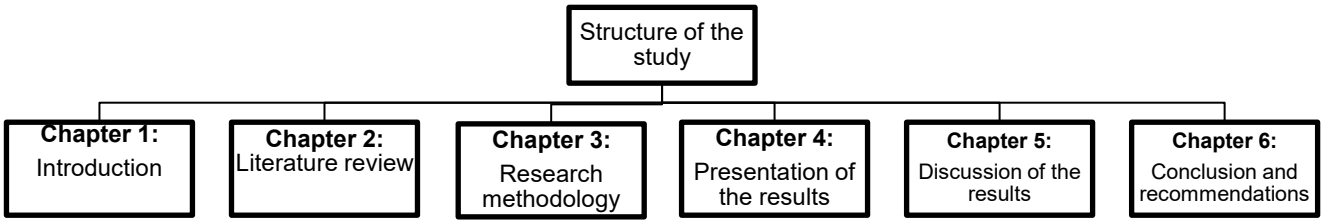
additional factors and by validating the mediating role of organisational performance in the relationship between internal control effectiveness and audit outcomes.

This study is confined to South African municipalities and adopts a quantitative approach, utilising structured survey data and advanced statistical techniques to test the proposed relationships.

1.15. CHAPTER OVERVIEW

This study is structured into six chapters, each addressing a distinct component of the research.

Chapter 1 introduces the study by outlining the background, research problem, objectives, research questions, and outlining the scope, delimitations, limitations, ethical considerations, and significance of the study. Chapter 2 reviews the relevant theoretical and empirical literature on internal control systems, organisational performance, and audit outcomes, and develops the conceptual framework and hypotheses guiding the study. Chapter 3 outlines the research methodology, including the research design, sampling strategy, data collection procedures, measurement of variables, and data analysis techniques employed. Chapter 4 presents the results of the study, including data preparation, descriptive statistics, measurement model assessment, and structural model testing of the hypothesised relationships. Chapter 5 discusses and interprets the findings in relation to the existing literature and theoretical framework, highlighting key insights, implications, and contributions of the study. Chapter 6 concludes the study by summarising the key findings, presenting recommendations for practice and policy, outlining the study's contributions, and suggesting areas for future research.



1.16. CHAPTER SUMMARY

In this chapter, the study topic, presentation of the problem, and research objectives are introduced. The chapter also introduces the preliminary literature review, which identifies the necessity of the study, research gap, summary of the research methodology, and ethical considerations, and highlights the study's significance. The next chapter provides a literature review of the factors influencing the effectiveness of the internal control system, organisational performance, and audit outcomes.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

In Chapter 1, the study's problem statement was established: the absence of effectual internal control systems within municipalities has led to progressively worsening financial and performance management, which has adversely affected organisational performance and, in turn, adversely affected the accomplishment of positive audit outcomes. Chapter 2 reviews the literature on the effect of internal control system and performance issues on South African municipalities. It focuses on pertinent literature in the South African municipal context, paying particular attention to the shortcomings of literature on the factors influencing internal control system effectiveness. This chapter explores the potential impact of internal control systems on the organisational performance and audit outcomes of South African municipalities and the balanced scorecard. This contextualised the problem statement, revealing information that supports the rationale for this research study. Additionally, reviewing academic debates, arguments, and conclusions poses crucial concerns that need to be uncovered, examined, and understood, offering informed comprehension and insight into the current study topic.

2.2. APPROACH TO THE LITERATURE REVIEW

The literature review was conducted using a variety of sources, including Google Scholar, ResearchGate, ScienceDirect, EBSCOhost, Scopus, Emerald, CINAHL, and other online scholarly databases. The following key terms were used in developing search phrases to conduct the review: internal control system, control environment, risk assessment, control activities, information and communication, monitoring, human resource competency, corporate governance, operational performance, customer performance, financial performance, organisational performance, audit outcome, COSO, balanced scorecard, and municipality.

Keywords were optimised to conduct the review. In the first stage, the researcher collected a list of keywords and terms from the selected studies and matched them to the research aim, objectives, and questions. In the second stage, alternative attributes and synonyms were defined. The researcher skimmed through the articles that were accessible in full text, written in English, and published in peer-reviewed journals to assess the studies' quality and eligibility and considered journal articles and books published by reputable publishers to be

high-quality research and included them in the review. The study was further restricted to empirical research utilising surveys, experiments, field research, and correlations.

2.3. THEORETICAL REVIEW

This study's theoretical review is predicated on two theories that describe the connection between internal control system, organisational performance, and audit outcomes. The theories are discussed below.

2.3.1. Agency Theory

Jensen and Meckling (1979) introduced the agency theory to resolve challenges that exist between agents and principals. In this theory, when decision-making power is provided to someone and the agent and the principal have competing interests, the agent focuses more on their own interests and neglects the interests of the principal, who is the owner of the organisation, and then, agency challenges emerge (Akbar & Choiriah, 2025:185; Muchoki, 2020:9-10). In this study, the agency theory explains the relationship between citizens and council, who are the principals, and municipal managers, who are agents (Kartika & Ningsih, 2024:27). In the public sector, particularly within municipalities, the agency relationship is more complex. In this context, citizens and council serve as principals, delegating the task of managing public funds and providing essential services to municipal managers who act as agents (Nyman, Nilsson & Rapp 2005:125-127). However, owing to information asymmetry, goal conflict, and limited capacity for direct citizens' oversight, municipal managers can act opportunistically through corruption, non-compliance with laws and regulations, and mismanagement of public resources (Legodi, 2021:36-38). This misalignment of interests frequently results in unsatisfactory organisational performance, failure in service delivery, and negative audit outcomes (Kartika & Ningsih, 2024:27; Legodi, 2021:38).

However, the challenges can be reduced by implementing sound internal control systems that align the interests of agents with those of principals. Internal control systems such as proper approval and authorisation processes, regular audits, segregation of duties, and financial reporting standards serve as governance mechanisms to guide, restrict, and monitor agent behaviours, thereby mitigating the risk of opportunistic conduct and protecting the resources of the organisation (Pillay, 2024:10-11). The Municipal Finance Management Act 56 of 2003 requires all municipalities to put in place and maintain effective systems of internal control. Effective internal control systems aim to improve municipalities' organisational

performance and audit outcomes (Khumalo & Edoun, 2021:151). This theory is employed in this study because of its relevance, as it clarifies how internal control systems contribute to improved organisational performance, which in turn influences audit outcomes. To limit the extent of the agency challenge, another pertinent theory is the stakeholder theory, which is discussed below.

2.3.2. Stakeholder Theory

Freeman (1984) introduced stakeholder theory, emphasising that an organisation is not merely an entity focused on shareholders but rather a network of relationships involving various stakeholders, a view further reinforced by Freeman et al. (2010:9), who conceptualise the firm as a constellation of cooperative and competitive stakeholder relationships. Stakeholder theory views an organisation as a group of stakeholders, including any individual or group who can affect or is affected by the achievement of the organisation's objectives, and argues that management must ensure that stakeholders' needs, interests, and perspectives are addressed (Freeman, 1984:52; Freeman et al., 2010:11). This theory promotes a holistic view of organisational management, positing that decision-making and effective governance ought to seek a balance and alignment among the varied interests of stakeholders (Freeman, 1984:52-53). Instead of perceiving stakeholders as obstacles to profitability, the theory views them as vital collaborators in the process of value creation (Freeman, 1984:64; Freeman et al., 2010:28). By recognising the interconnectedness among stakeholders, organisations can improve their legitimacy, sustainability, and long-term performance (Frans, 2024:14; Freeman et al., 2010:31). A derivative of stakeholder theory is strategic stakeholder theory, which emphasises the importance of aligning stakeholder interests with the overarching strategic objectives of the organisation (Mainardes, Alves & Raposo, 2011:227; Freeman et al., 2010:102). This perspective indicates that managing stakeholders is not just an ethical obligation but also a strategic imperative (Freeman, 1984:91; Freeman et al., 2010:6). By recognising and responding to the interests and needs of stakeholders, organisations can foster stronger relationships, reduce risks, and establish competitive advantage (Freeman et al., 2010:65). Therefore, the alignment of stakeholder expectations with strategic objectives is a critical factor in achieving sustainable organisational performance (Freeman et al., 2010:66).

Stakeholder theory provides a valuable lens through which internal control systems can be understood in relation to broader organisational and societal goals (Boatright, 2014:108;

Freeman et al., 2010:74). In addition to being methods for ensuring compliance and protecting organisational assets, internal control systems are instruments for fostering accountability, openness and trust among stakeholders (COSO, 2013:3). According to this viewpoint, the expectations and interests of various stakeholders should be considered when designing and implementing robust internal control systems. These stakeholders include employees who demand fair treatment, stakeholders who seek financial integrity, and regulators who demand compliance and moral behaviour (Freeman, 1984:89). When stakeholders perceive that an organisation's internal control systems are strong and transparent, their confidence and trust in the organisation increase, thereby strengthening the organisation's efficiency and reputation, which will improve its performance (Freeman, 1984:139; Freeman et al., 2010:78-80).

2.4. INTERNAL CONTROL SYSTEM

The internal control system is a series of actions, effected by an organisation's governing body, senior managers, and other staff, designed to provide an acceptable level of assurance regarding the accomplishment of operational effectiveness and efficiency, reliability of reporting, adherence to pertinent laws and regulations, and safeguarding of assets (COSO, 2013:3; Hamed, 2023:3). Akbar and Choiriah (2025:184) defined an internal control system as a strategy and other coordinated methods employed by the organisation to protect its resources, ensure data reliability and confidentiality, enhance its effectiveness, and enforce management policies. Molu and Jagongo (2025:559) characterised the internal control system as a crucial mechanism for accomplishing organisational objectives by functioning continuously with efficiency and effectiveness while also preventing resource waste, protecting the organisation's assets, ensuring reliable accounting data, and adhering to legal and regulatory requirements. Oppong et al. (2023:88) defined an internal control system as a system that comprises the policies and procedures implemented by an organisation's executives and management to help the organisation accomplish its objectives.

In the context of this study, internal control is defined as the system of controls put in place by senior management for the purpose of effectively and efficiently carrying out the operations of municipalities and ensuring the accuracy of their financial and non-financial reports and adherence to pertinent legal and regulatory requirements. Government assets can be protected and secured by means of strengthened internal control systems (Pillay, 2024:1). Internal control encompasses the policies and procedures implemented by an

organisation's executives to realise their defined objectives (Molu & Jagongo, 2025:559). The control systems are responsible for identifying, mitigating, assessing and managing risks that may prevent an organisation from achieving its objective of managing its financial and related resources effectively, efficiently and cost-effectively (Uwingabiye, 2019:9). Internal control is focused on achieving goals in one or more areas, such as compliance, reporting, and operations (Simon, 2021:80).

2.5. HISTORY OF INTERNAL CONTROL

Since the early 1960s to the mid-1970s, numerous high-profile businesses collapsed due to financial embezzlement or mismanagement through fraudulent activities (Bruwer, 2016:38; COSO, 2013:i). To address this problem, the Committee of Sponsoring Organisations of the Treadway Commission (COSO) was founded in 1987 as a result of the initiatives of the Treadway Commission, which was established by the United States Securities and Exchange Commission and the United States Congress in accordance with the Foreign Corrupt Practices Act of 1977 (Bruwer, 2016:58). COSO's mandate was to offer comprehensive recommendations aimed at mitigating the effects of various risks concerning financial embezzlement or mismanagement within organisations, irrespective of their specific characteristics (Rezaee, 1995:5-6). Since 1987, COSO has explored various cases of fraudulent financial reporting and recommended an internal control system as an appropriate official mechanism for preventing and detecting all forms of risk (COSO, 1999:8; Miller, Proctor & Fulton, 2013:3).

In 1992, COSO formally introduced and popularised the internal control-integrated framework (COSO, 2013:i). During this period, there were notable fraudulent practices in organisations, which necessitated the enhancement of internal control processes (Dickinson, 2001:361; Trang, 2022:3096). Since 1992, the COSO framework has been widely recognised as a guideline for developing, implementing, executing internal controls and assessing the effectiveness of internal control systems (COSO, 2013:i; Petersen, 2020:31). After the original framework was released in 1992, business and operational environments evolved tremendously, becoming more complex and information technology driven (Chang, Yen, Chang & Jan, 2013:187; COSO, 2013:i;). Nevertheless, stakeholders became more engaged, demanding more transparency and accountability regarding the integrity of internal control systems that underpin business decisions and organisational governance (Aziz, Rahman, Alam & Said, 2015:165; COSO, 2013:i;).

In 2013, COSO released an updated framework to improve its applicability in the more global and complex business industry to better assist organisations globally in effectively and efficiently designing, putting into effect, maintaining, and assessing internal control systems (Rija & Rubino, 2018:21). The framework incorporates improvements and elucidations designed to facilitate its utilisation and implementation (COSO, 2013:i; Fleak, Harrison & Turner, 2010:712). This framework provides a foundational basis for several key aspects: a) internal control definition, b) the characteristics of robust internal control within an organisation, and c) the methodologies for implementing a robust internal control system within an organisation (Moeller, 2007:4-10). The framework is presented in Figure 2.1.

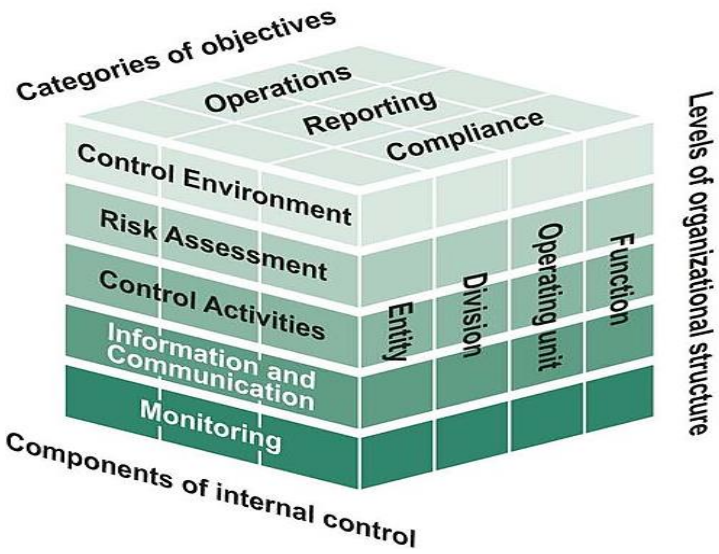


Figure 2.1: The COSO Internal Control-Integrated Framework

Source: Moeller (2014)

2.5.1. Internal Control Objectives

The COSO framework delineates three categories of objectives, enabling organisations to concentrate on various dimensions of internal control (Pillay, 2024:16). Despite their distinctiveness, the objectives of these categories are interrelated (Ngcobo, 2016:16). The three objectives are unpacked below:

2.5.1.1. Operations objectives

Operations objectives relate to the accomplishment of the organisation's basic missions and the effectiveness and efficiency of its operations. They comprise financial and operational performance goals, ensuring the reliability of information used in decision-making, optimised

efficiency, elevated quality, improved customer contentment, and safeguarding assets and other resources against loss (Pillay, 2024:16). The establishment of standard principles and monitoring indicators is crucial for the proper operation of all processes. Management must adopt a vigilant and proactive stance to avert fraudulent activities and asset misappropriation (Simon, 2021:86).

2.5.1.2. Reporting objectives

This objective focused on ensuring the quality of financial and non-financial reports, both internally and externally. These objectives aim to ensure the accuracy and reliability of the reports and that they are clear, understandable and free from bias and provided in a prompt and timely manner (Pillay, 2024:16).

2.5.1.3. Compliance objectives

These objectives entail ensuring that an organisation adheres to applicable laws and regulations (Molu & Jagongo, 2025:559). They include ensuring that the organisation operates in accordance with pertinent laws and regulations and that it maintains compliance with industry standards and best practices (Simon, 2021:80). The laws and regulations are established to govern the organisation. Enforcing them is vital to organisational integrity, as it ensures adherence to conduct norms and standards that the organisation integrates into the organisation’s compliance objectives (Julius & Alex, 2024:56).

2.5.2. Components of the Internal Control

The framework outlined five interrelated components of an internal control system, which are rooted in management’s approach to operating a business (Molu & Jagongo, 2025:559; Nevhutanda, 2019:28-29; Sityata, 2020:47). These five interconnected components are further elaborated below:

2.5.2.1. Control environment

The control environment delineates a set of norms and standards, structures and processes that serve as the basis for executing and implementing internal control systems throughout the organisation (Munira, Hazmi, Ramadhani & Syahira, 2024:168). The internal control environment determines an organisation's tone and quality, shaping its employees' behaviour and accountability (Akinleye & Kolawole, 2020:406; Petersen, 2018:31-32). As the foundation

of the internal control system, it establishes a framework of discipline and structure that guides all other factors of internal control (Uwingabiye, 2019:15). The internal control environment of an organisation comprises, inter alia, the organisation's ethical values and integrity, parameters allowing those charged with governance to exercise their governance oversight duties, philosophy and management style of management, organisational structure and delegation of authority and duties, robust human resource policies and performance measurement and incentive systems that promote accountability (Molu & Jagongo, 2025:559). As depicted in Figure 2.2, the control environment lays the foundation for all other internal control components, influencing and shaping their effectiveness across the entire system (Otoo, Kaur, & Rather, 2023:120; Petersen, 2018:32). In the absence of a robust control environment, the other components are unlikely to produce effective internal control, irrespective of their quality (Pillay, 2024:16).

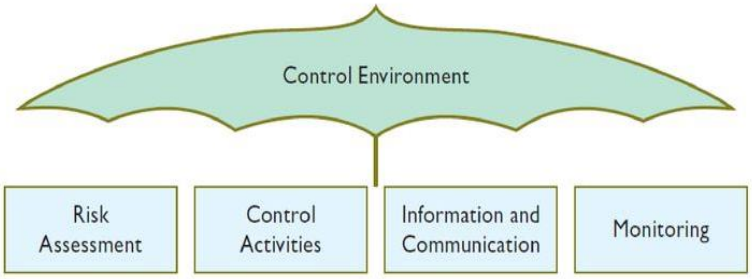


Figure 2.2: Control environment component

Source: Author's elaboration

2.5.2.2. Risk assessment

This component entails the identification and analysis of risks that may hinder the organisation from attaining its objectives (Munira et al., 2024:168). It assists management in determining appropriate strategies for managing and mitigating these risks (Sityata, 2020:115). All organisations face various risks from both external and internal sources that can hinder the accomplishment of their objectives (Trang, 2022:3099). Risk refers to the probability of an adverse event occurring, which can negatively impact the objectives' accomplishment (Hopkin, 2017:16). Risk assessment is an ongoing and interactive process that identifies and assesses potential risks to accomplish objectives (Simon, 2021:81). This process considers risks from across the organisation, weighing them against established risk tolerance levels (Bruwer, 2016:66). Risk assessment results inform risk management strategies (Umar & Dikko, 2018:19). To conduct a risk assessment, an organisation should

first establish clear objectives aligned with its operations, reporting, and compliance goals (Hung & Tuan, 2019:1802). Management should define these objectives clearly, consider their appropriateness, and assess potential risks (COSO, 2013:4). Furthermore, management should consider the potential impact of external and internal changes on the effectiveness of internal control systems (Molu & Jagongo, 2025:560).

2.5.2.3. Control activities

Control activities are the specific actions outlined in policies and procedures ensuring that management's risk mitigation strategies are executed, supporting the accomplishment of organisational objectives (Molu & Jagongo, 2025:559; Muchoki, 2020:14). Control activities are implemented and executed organisation-wide, integrated into business processes, and applied to information technology systems (Munira et al., 2024:169). Control activities can be inhibitory or detective in nature and can include a variety of automated and manual activities, such as verification and reconciliation processes, business performance assessments, authorisations, and approvals (Akinleye & Kolawole, 2020:407; Molu & Jagongo, 2025:560). The segregation of responsibilities is usually embedded in the establishment and implementation of control activities (Ngcobo, 2016:19). In situations where the segregation of responsibilities is impractical, management puts in place alternative control activities to alleviate risks (Pillay, 2024:18). Control activities involve putting in place effective controls to mitigate identified risks, focusing on prevention rather than correction (Nqala, 2020:84). By doing so, organisations can proactively address anticipated issues and avoid unwanted opinions (Joseph, Albert & Byaruhanga, 2015:49).

2.5.2.4. Information and communication

Information and communication involve the timely and effective exchange of pertinent information from identification and collation to dissemination and sharing (Munira et al., 2024:169). Relevant and accurate information is vital for effective internal control and accomplishing organisational objectives (Molu & Jagongo, 2025:560). Management acquires or generates and utilises high-quality and relevant information from various internal and external sources to assist the operation of other internal control factors (Trang, 2022:3100). Communication is an ongoing process of exchanging and updating information, ensuring that necessary knowledge is shared, received and clearly understood (Uwingabiye, 2019:18). Internal communication is a process of sharing information throughout the organisation,

facilitating a free flow of information in all directions, both upwards and downwards (Munira et al., 2024:169). It ensures that employees receive adequate and unambiguous messages from leaders about the importance of internal control responsibilities (Pillay, 2024:19). External communication has a dual function: it facilitates the receipt of pertinent external information, and it disseminates information to pertinent stakeholders as needed (Makgatho, 2013:24).

2.5.2.5. Monitoring

Monitoring involves a continuous review process that involves evaluating the effectiveness and reliability of the internal control system over time (Molu & Jagongo, 2025:560; Uwingabiye, 2019:18). The internal control system evolves due to factors such as the arrival of new employees, resource limitations, changing circumstances and inconsistent supervision or procedure implementation (Umar & Dikko, 2018:21-22). Monitoring evaluates and addresses potential risks such that the system of internal control may fail to provide an acceptable level of assurance that the organisation's operational, financial and non-financial reporting and compliance objectives are accomplished (Asiligwa & Rennox, 2017:96; Kartika & Ningsih, 2024:29). Continuous evaluations, periodic evaluations, or a blend of both are used to ascertain that all five factors of internal control, along with their underlying principles, are properly established, implemented and operating effectively (Umar & Dikko, 2018:22). Continuous evaluations are integrated into the various business processes across the organisation, providing real-time insights and feedback (Ncgobo & Malefane, 2017:78). The scope and frequency of the periodic evaluations, which will be carried out periodically, will depend on the risk assessment, the effectiveness and efficiency of the continuous evaluations and other pertinent management factors (Pillay, 2024:19). Assessment results are benchmarked against the standards established by governing bodies, management, industry authorities or regulatory bodies, with any identified deficiencies reported to the governing body or management as required (Trang, 2022:3100).

2.6. BEST PRACTICES FOR DESIGNING AND IMPLEMENTING INTERNAL CONTROL SYSTEMS

To ensure the effectiveness of internal control systems, organisations should adopt the following best practices:

- **Establish a robust control environment:** This involves setting the tone at the top, demonstrating commitment to internal control, and establishing clear policies and procedures. Fostering a culture of integrity, ethical conduct, and accountability (Yulianti, Maryam, Hamdiah, Mahdi, & Khairuna, 2024:41).
- **Identify objectives and related risks:** Management should identify the organisation's objectives and assess the risks that may prevent the achievement of these objectives and take appropriate steps to cope with those risks (Nevhutanda, 2019:43-44).
- **Design and implement appropriate control activities:** Based on the identified risks, management should design and implement adequate control activities to mitigate those risks (Nqala, 2020:84).
- **Ensure effective information and communication:** Effective communication is essential for successfully implementing an internal control system. Management should establish clear channels of communication to ensure all relevant information is shared among personnel (Umar & Dikko, 2018:20).
- **Implement robust monitoring and adjusting the system:** Continuous monitoring and periodic assessments should be conducted to ensure that the internal control system remains effective and relevant and can adapt to changes in the business environment (Yulianti et al., 2024:46).
- **Provide adequate training:** Train employees on their roles and responsibilities related to internal control (Hung & Tuan, 2019:1810).
- **Leverage technology:** Utilise technology to automate and improve internal control processes (Mudau, 2021:215).

2.7. BENEFITS OF AN EFFECTIVE INTERNAL CONTROL SYSTEM

An effectual internal control system yields numerous benefits, including enhanced financial reporting reliability; reduced vulnerability to fraud and errors; improved operational efficiency and productivity; compliance with regulatory requirements; effectual asset safeguarding; streamlined and optimised business processes; and resource allocation (Molu & Jagongo, 2025:560; Sujana, Saputra & Manurung, 2020:100). Organisations can realise a multitude of benefits by effectively implementing and maintaining a robust internal control system (Hoai, Hung & Nguyen, 2022:1-2). The benefits are presented in Figure 2.3.

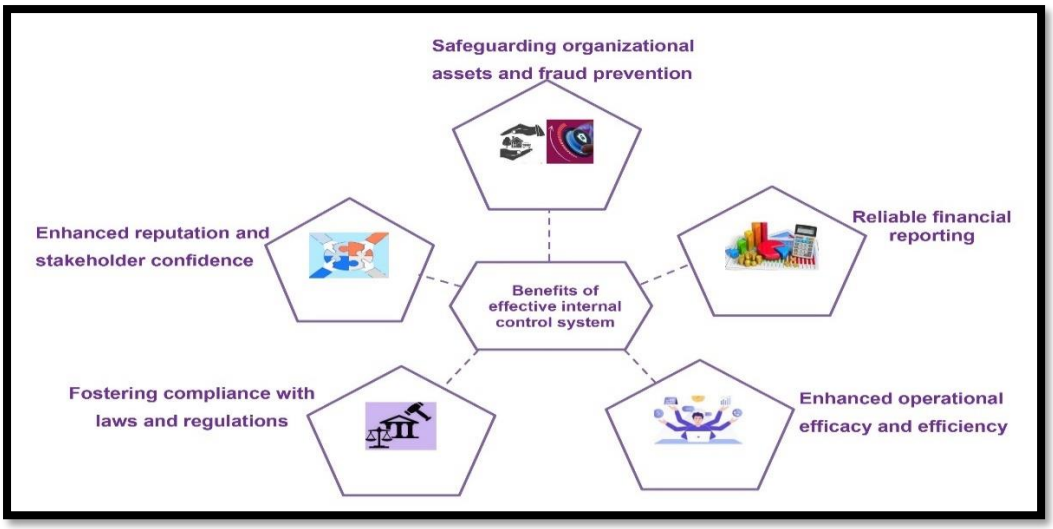


Figure 2.3: Benefits of an effective internal control system

Source: Author's elaboration

1. **Safeguarding organisational assets and fraud prevention**

   Safeguarding assets involves protecting an organisation's critical assets from loss, theft, misuse, or compromise through various actions and strategies (Ajala et al., 2023:66). The safeguarding of organisational assets is one of the main benefits of an internal control system (Trang, 2022:3097). The separation of duties, systems of authorisation, and physical security are internal control systems that diminish the chances of theft, misappropriation, and misuse of assets (Ghanem & Awad, 2023:71).

   - **Separation of duties:** the separation of duties in the organisation can be facilitated, in which key obligations and practices can be distributed among different personnel to reduce the likelihood of mistakes and fraudulent activities (Igbojioyibo, 2024:69). Frequent audits and reconciliation operations can further strengthen the safeguarding of assets by independently verifying financial and non-financial data and assets records (Akinleye & Kolawole, 2020:407).
   - **Authorisation procedures:** Authorisation requirements ensure that only authorised personnel can initiate or execute specific transactions or activities. This minimises the possibility of improper or unlawful behaviour that can result in the loss of assets (Igbojioyibo, 2024:66).
   - **Physical safeguards:** Physical assets can be protected from theft or damage through security measures, such as access controls, surveillance systems, and

locked safes. In addition, frequent reconciliations and inventory counts assist in loss and discrepancy detection (Nqala, 2020:111).

Effective implementation of these controls can reduce organisational asset vulnerability to internal and external threats, enhancing overall protection (Nandaula, 2022:17).

2. **Reliable financial reporting**

For stakeholders, such as creditors, investors, and management, accurate and reliable financial reporting is essential for making well-informed decisions. A well-established system of internal control is fundamentally important for increasing accountability and ensuring that financial information is accurate and reliable (Anaenyi, 2022:18; Pillay, 2024:16). Internal control systems improve openness, increase confidence, and help support good decision-making by encouraging accurate and dependable financial reporting (Handoyo & Bayunitri, 2021:46; Khumalo & Edoun, 2021:151).

- **Maintaining accurate records:** Transaction controls and record-keeping ensure financial data accuracy and integrity. This covers safeguards against improper application of accounting principles, data entry, and reconciliation (Ouko & Atheru, 2022:16). Internal control systems are vital in accomplishing reliable financial reporting by establishing a framework for overseeing financial transactions, averting irregularities, and ensuring financial integrity (Chawla, Shalini & Singh, 2023:2; Handoyo & Bayunitri, 2021:46).

3. **Enhanced operational effectiveness and efficiency**

Internal control systems improve operational effectiveness and efficiency while also assisting in the prevention of fraud and ensuring financial reporting accuracy (Igbojioyibo, 2024:66).

- **Streamlined processes:** standardised operating procedures along with comprehensive documentation can reduce uncertainty and inconsistencies in operations, thus increasing overall efficiency (Trang, 2022:3108). Internal control systems can bring structure and uniformity to the organisation and clear protocols and standards that promote order, consistency, and operational coherence (Dichabe, 2020:37).
- **Performance monitoring:** internal control provides a framework for tracking and evaluating performance in relation to predetermined goals and targets (Adejuwon & Hassan, 2022:3380). Variance analysis and ongoing performance reviews help

identify areas for improvement, guide the organisation's resources in the right direction, and ensure the adequate utilisation of resources (Handayani, Afiah & Yudianto, 2020:18).

- **Reduction of errors:** implementing controls over data entry, processing, and review reduces the likelihood of mistakes, resulting in better accuracy and less rework. This leads to cost savings and enhances customer satisfaction (Otoo et al., 2023:137).
- **Risk Management:** Internal control systems assist in identifying, evaluating, and managing operational risks, enabling organisations to proactively address potential issues before they develop into larger problems. This minimises the chances of disruptions and supports business continuity (Chawla et al., 2023:1; Adejuwon & Hassan, 2022:3380).

By refining operational processes and reducing inefficiencies, internal control systems enable organisations to meet their strategic goals more successfully (Mochoki, 2020:10-11).

4. **Fostering compliance with laws and regulations**

Adhering to relevant laws and regulations is crucial for retaining a licence to operate and preventing fines, penalties, and damage to reputation. Internal control systems offer a structure for ensuring that organisations comply with legal and regulatory obligations (Alemu, 2020:14).

- **Policy enforcement:** Developing unambiguous policies and procedures and implementing controls to ensure their consistent application supports compliance with both internal and external regulations (Simon, 2021:81).
- **Monitoring and reporting:** consistent tracking and documentation of compliance activities assist in identifying possible infractions and ensure that corrective measures are implemented promptly. This ultimately enables the organisation to thrive and maintain its competitive edge in complex and ever-changing business environments (Farida & Setiawan, 2022:1-2).
- **Training and Awareness:** offering training and resources to staff regarding applicable laws and regulations cultivates a culture of compliance and ensures that individuals grasp their responsibilities (Uwingabiye, 2019:57).

By nurturing a culture of compliance, internal control systems aid organisations in minimising legal and regulatory risks while maintaining a favourable reputation (Muslim, 2025:20).

5. **Enhanced reputation and stakeholder confidence**

   An effectively designed and executed internal control system can greatly improve an organisation's reputation and foster confidence among its stakeholders. Investors, creditors, customers, and employees are more inclined to trust and support organisations that are dedicated to robust internal control systems and ethical business conduct. A positive reputation leads to improved access to capital, enhanced customer relationships, and greater employee morale (Muslim, 2025:25).

2.8. THE SHORTCOMINGS OF THE INTERNAL CONTROL SYSTEM

Although the internal control system has benefits, some shortcomings can be encountered, as the internal control system can provide only an acceptable level of assurance, not absolute assurance, to organisations where the objectives are accomplished (Kashona, 2019:11; Koivisto, 2019:26). Notable shortcomings include the following:

1. **Cost-intensive and time-consuming**

   While an internal control system can keep operations aligned with organisational objectives, it may impose significant financial and human resource costs (Makgatho, 2013:29). Establishing and implementing a robust internal control system requires substantial investment in system design, staffing, monitoring, and continuous improvement. This may be particularly burdensome for smaller municipalities with limited resources. However, despite the initial costs, the long-term benefits often outweigh these constraints (Mudau, 2021:29).

2. **Human error**

   The effectiveness of internal control systems is inherently limited by human judgement and behaviour. Decision-makers may misinterpret procedures, act negligently, or succumb to pressure, thereby compromising control effectiveness (Irfan, Haliah & Kusumawati, 2024:8; Pillay, 2024:24). Human factors are frequently identified as a critical weakness in compliance with supply chain management regulations within municipalities (Musyoki, 2023:174). Even well-designed systems remain vulnerable to

error, which is why automation and system-based controls are often recommended to reduce reliance on manual processes (Anyim, 2021:54; Stephens, 2021:38).

3. **Collusion**

Internal control systems may be circumvented through collusion, where two or more individuals cooperate to override established procedures (Pillay, 2024:24). For example, one employee may initiate a transaction while another authorises it, allowing fraudulent transactions to be processed if they act in concert (Koivisto, 2019:48). Although segregation of duties is designed to mitigate this risk, it cannot fully eliminate the possibility of coordinated misconduct (Irfan et al., 2024:10).

4. **Override of controls by management**

Management override represents a significant limitation of internal control systems, as those in positions of authority may deliberately bypass controls for personal or organisational gain (Alemu, 2020:13; Koivisto, 2019:26). This may involve manipulating financial records or circumventing established procedures to produce misleading financial reports (Pillay, 2024:25). Employees responsible for enforcing controls may be unwilling to challenge management due to fear, intimidation, or organisational hierarchy (Anyim, 2021:54).

5. **Inadequate segregation of duties**

A fundamental weakness in internal control systems arises when there is inadequate separation of duties. Segregation of duties is a key control principle that ensures no single individual has control over multiple stages of a transaction (e.g., initiation, authorisation, and recording) (Aytaç & Çabuk, 2020:361). In many municipalities, limited staffing or poor control design results in overlapping responsibilities, increasing the risk of fraud, errors, and unauthorised activities (Dauda & Baba, 2024:81). Where segregation is weak or improperly implemented, the effectiveness of the entire control system is significantly undermined, as it creates opportunities for both intentional and unintentional misstatements (Sewsankar, 2024:1013).

6. **Obsolete controls**

Internal control systems may become ineffective when they are not regularly updated to reflect changes in organisational processes, technology, or regulatory requirements (Makgatho, 2013:30). Obsolete controls, such as manual procedures in highly digitised environments, may fail to address current risks adequately. As municipalities adopt new

technologies and systems, controls that were once effective may become redundant or misaligned with operational realities. Continuous review and adaptation are therefore essential to ensure that controls remain relevant and effective in a dynamic environment (Lebese & Motubatse, 2025:16-17).

7. **Weak ethical culture**

   The effectiveness of internal control systems is strongly influenced by the ethical environment within an organisation. A weak ethical culture, characterised by low integrity, lack of accountability, and tolerance of misconduct, can significantly undermine even well-designed controls (Ncgobo & Malefan, 2017:79). When employees and management do not prioritise ethical behaviour, compliance with controls becomes superficial, increasing the likelihood of fraud, corruption, and non-compliance. Conversely, a strong ethical culture reinforces internal controls by promoting transparency, accountability, and adherence to organisational policies (Makgatho, 2013:31).

2.9. ORGANISATIONAL PERFORMANCE

Organisational performance has been subject to varying definitions in public sector research because of its different meanings (Mudau, 2021:67). Sigilai and Njiru (2016:1009) and Moumin (2024:1-2) defined organisational performance as the ability of an organisation to effectively acquire, employ, allocate and manage resources to generate revenue and profit, reflecting the organisation's overall financial health. Organisational performance was further defined as an organisation's ability to capitalise on environmental opportunities and optimise the utilisation of limited resources to generate revenue while managing its debts and financial stability (George, Walker & Monster, 2019:812). These latter definitions focus exclusively on financial performance, such as profitability (asset turnover, net profit, return on assets, and sales turnover) (Mudau, 2021:7), and disregard non-financial performance indicators, such as operational and customer performance (Wu, Pan, Zhou & Li, 2020:70–71).

Operational performance pertains to the efficiency and effectiveness of an organisation's routine processes and activities, including safeguarding assets and delivering goods and services (Azim, Ahmed & Khan, 2015:64; Moumin, 2024:3; Naidoo, 2024:22). Operational performance is an essential aspect of organisational performance that encompasses various constituents of performance, such as increased productivity, quality, effectiveness and efficiency of internal business processes (Adeboye, 2019:09). It evaluates how effectively

and efficiently an organisation regulates its internal business processes and operations (Niittumaa, 2022:14). Enhanced operational performance can improve overall organisational performance by reducing fruitless and wasteful expenditures, streamlining processes and improving service delivery efficiency and quality (Joshua & Umoh, 2022:301-302).

Customer performance pertains to measuring how well an organisation supports and meets customer needs and expectations (Moumin, 2024:3; Naidoo, 2024:22; Oliver, 1997:13). Customer performance is an essential determinant of organisational performance (Mudau, 2021:253). Customer feedback and engagement can provide valuable insights into service delivery gaps and areas for improvement, leading to more responsive and effective service delivery, which ultimately results in improved customer satisfaction (Nguyen, 2021:13). Improved customer satisfaction leads to increased loyal customers, higher repurchase rates, increased revenue, and more positive word-of-mouth (Ngole, 2024:9). Therefore, a well-established customer performance plan can drive business growth and enhance overall organisational performance (Hanif, Ahsan, Bhatti & Loghari, 2020:145).

Focusing solely on financial performance provides a narrow and incomplete picture of an organisation's performance. Financial performance is just one part of the organisational performance puzzle (Mudau, 2021:7). An organisation's prosperity hinges on its organisational performance, which comprises the effective implementation and execution of strategies to accomplish its organisational goals (Adeboye, 2019:09). Organisational performance is a multifaceted concept that encompasses several variables, such as business model effectiveness, efficiency level, and the accomplishment of intended opinions (Almatrooshi, Singh & Farouk, 2016:844).

Therefore, Kaplan and Norton (1996:8) further explain the organisational performance concept as a balanced collection of opinions that encompasses both financial and nonfinancial performance, which are illustrated in Kaplan's balanced scorecard (BSC) framework, as shown in Figure 2.4. Organisational performance is defined primarily as a collection of financial and non-financial metrics that gauge an organisation's progress in accomplishing its objectives (Drury, 2008:576; Moumin, 2024:1-2).

Kaplan and Norton (1992) developed the BSC approach, recognising that financial performance alone is insufficient to measure organisational performance (Nair, 2004:17-19; Niven, 2003:8). Consequently, the BSC framework presents four comprehensive viewpoints on performance (Mudau, 2021:68). These viewpoints include financial, internal business

process, learning and growth, and customer viewpoints (Figure 2.4) (Kaplan and Norton, 1996:9; Niven 2003:32). Financial performance is gauged through measures such as return on investment and profitability (Kaplan & Norton, 2006:153-154), whereas non-financial performance is measured through indicators such as customer satisfaction, labour efficiency, quality enhancements, and business process optimisation (Kaplan & Norton, 2006:214). Furthermore, the BSC serves as a comprehensive tool that not only measures financial and non-financial performance but can also facilitate the setting and accomplishment of both short-term and long-term organisational goals (Mudau, 2021:68; Niven, 2003:25).

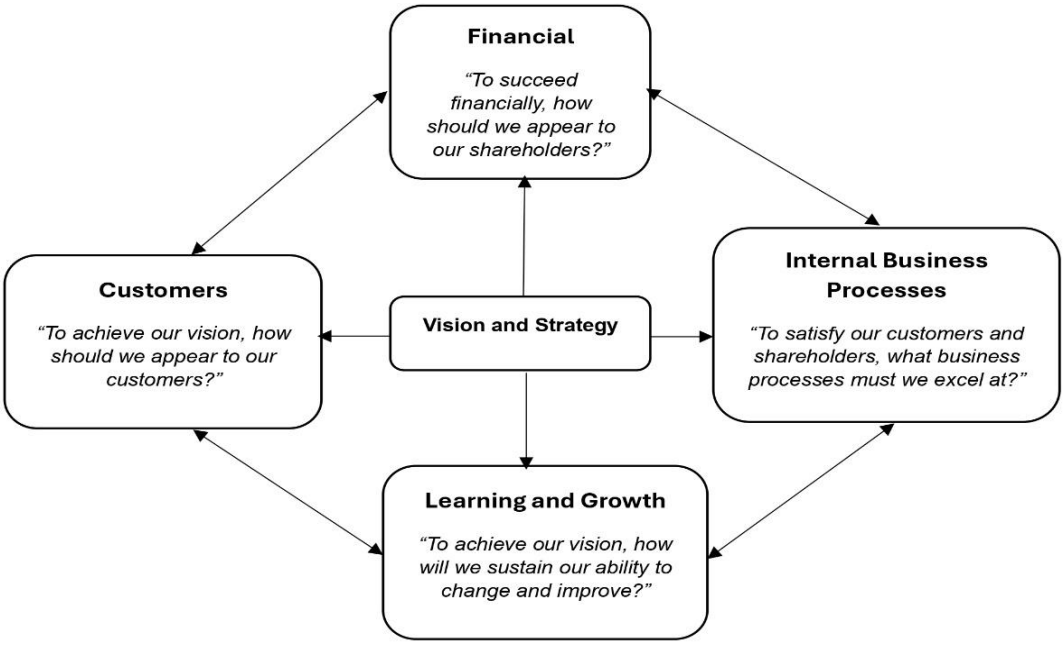


Figure 2.4: Balanced Scorecard

(Source: Kaplan & Norton, 1996:9)

2.9.1. Financial Viewpoint

This pertains to the effectiveness of the selected strategy and the organisation's ability to create lasting value for its shareholders (Bshayreh, Qawqzeh, Al-Momany, Saleh, & Al-Qallap, 2024:246). Financial performance metrics demonstrate whether a company's strategy, along with its implementation and execution, enhances its profitability (Zorek, 2020:29). An organisation's financial perspective centres on creating long-term value for its shareholders by focusing on profitability metrics such as operating income and return on investment (Tuan, 2020:73). Financial success is achieved by increasing revenue, either through growth or increased productivity, and cutting costs (Nafari & Rezaei, 2022:2). By optimising operations and strengthening customer relationships, organisations can attain

greater financial stability through improved efficiency and productivity gains (Bshayreh et al., 2024:246). In essence, robust financial performance stems from executing fundamental practices effectively (Trang, 2022:3097). For public institutions, financial factors revolve around accomplishing organisational goals efficiently and effectively. Financial metrics reflect overall organisational performance and are a logical outcome of well-managed operations (Khomba, 2011:83; Naidoo, 2024:42).

2.9.2. Internal Business Processes Viewpoint

The internal processes perspective emphasises recognising and enhancing the essential internal processes that contribute to customer satisfaction and financial success (Mudau, 2021:69). These include the processes that generate and provide value to customers, such as operations management, innovation management, and adherence to regulations (Tuan, 2020:74). This viewpoint strives to fulfil the goals of the financial and customer perspectives for both customers and shareholders. It covers the entire value chain of the company's internal processes, aiming to address the current and future needs of customers while creating and identifying the necessary solutions to achieve these objectives (Bshayreh et al., 2024:246).

2.9.3. Learning and Growth Viewpoint

This viewpoint prioritises establishing a strong base for future achievements through investments in employee development, organisational competencies, and technological resources. It highlights the importance of ongoing learning, creativity, and enhancement (Tuan, 2020:74). A driven and proficient workforce, supported by efficient systems and technologies, is crucial for fostering innovation and responding to evolving market dynamics (Ajala, 2023:30).

2.9.4. Customer Satisfaction Viewpoint

This viewpoint pertains to understanding the requirements, preferences, and expectations of customers. It underscores the importance of cultivating robust customer relationships, enhancing customer satisfaction, and increasing client loyalty (Tuan, 2020:74). Cultivating a loyal customer base is crucial for driving revenue growth and long-term profitability (Bshayreh et al., 2024:246).

The practical effectiveness of the BSC approach depends heavily on the internal control systems that organisations are utilising to support their implementation (Mudau, 2021:69). Internal control systems, such as the control environment and risk assessment, have started to influence the balanced collection of organisational performance measures (Wisutteewong & Rompho, 2015:129). This is because internal control systems are designed to provide timely, pertinent and appropriate information, enabling management to track and enhance both financial and non-financial performance (COSO, 2013:3; Uwingabiye, 2019:10). By leveraging internal control systems, organisations can transform data into actionable insights, leading to enhanced non-financial performance (Safira, 2023:283; Mudau, 2021:69). For example, internal control system adoption may help organisations better understand customer needs, re-engineer internal business processes and procedures based on operational performance metrics and enhance employee skills through targeted feedback and learning opportunities (Ndungu, 2013:19). This could, in turn, lead to improvements in the organisation's strategic planning and budgeting processes (Hoai, Hung & Nguyen, 2022:1-2; Omondi, 2021:140-141). For example, if management learns what their customers need in communities, they may utilise this knowledge to develop strategic objectives and set accomplishable targets (Mudau, 2021:69).

Additionally, internal control systems enhance transparency in internal processes, enabling the identification of areas for improvement, which can inform continuous refinement and optimisation of the organisational strategy (Hoai, Hung & Nguyen, 2022:2). Thus, internal control systems should promote enhanced organisational performance while considering both financial and nonfinancial performance (Bridget & Catherine, 2024:658; Mudau, 2021:7). While the literature that links internal control systems and performance has focused primarily on financial performance, this study delves deeper into the relationships between internal control systems and overall performance by considering non-financial metrics.

2.10. IMPACT OF INTERNAL CONTROL SYSTEMS ON ORGANISATIONAL PERFORMANCE

Bužinskienė and Padgureckienė (2025:28) emphasise the increasing importance of strategic internal control systems in the current complex and dynamic business landscape. Organisations are moving towards a more holistic approach, integrating internal control systems with sustainability initiatives, broader risk management, and corporate governance. Internal control systems are increasingly vital for regulatory compliance and service delivery

beyond financial reporting (Igbojioyibo, 2024:77). Numerous facets of organisational performance can be significantly improved by efficient and robust internal control systems (Rehman, Mohamed & Ayoup, 2019:23). Effectual internal control systems are crucial for accurate and reliable financial reporting (Igbojioyibo, 2024:66). Through the implementation of controls such as appropriate authorisation procedures, frequent reconciliations, and adequate segregation of responsibilities, organisations can alleviate financial risk, strengthen financial stability and improve stakeholders' trust and customer satisfaction (Rachmad, Bakri, Irdiana, Waromi & Sinlae, 2024:267).

Robust internal control systems can improve operational efficiency and effectiveness through streamlining processes, minimising waste, and optimising workflows (Chidi, Onwuzuligbo, Tochukwu & Ukamaka, 2024:107-108). Effective internal control systems enable organisations to accomplish greater levels of operational effectiveness and efficiency by promoting a culture of continuous improvement (Igbojioyibo, 2024:66). Robust internal control systems are also essential in managing risks by identifying, evaluating, and mitigating potential risks (Netshifhefhe, Netshifhefhe, Mupa & Murapa, 2024:447). Proactive risk management through robust internal control systems helps organisations safeguard assets and prevent losses and costly disruptions (Igbojioyibo, 2024:66). Furthermore, effective internal control systems can enhance an organisation's resilience to evolving environmental conditions and emerging risks (Wang, Cui & Jin, 2023:15). Effective internal control systems enable organisations to navigate and comply with complex regulatory requirements, including environmental regulations and financial reporting guidelines and standards, reducing reputational risks, legal liabilities, and costly fines and penalties (Nwachukwu, Oladepo & Avickson, 2024:737).

Akinleye and Kolawole (2020) employed the COSO framework to examine the effect of internal control systems on the performance of Ekiti State tertiary institutions in Nigeria. The research study revealed a significant positive relationship between COSO internal control elements and performance in Ekiti State tertiary institutions. A study with a similar scope was conducted in Rwanda by Uwingabiye (2019), who examined the influence of internal control elements on the financial performance of Rwandan public institutions. The study employed the COSO framework. The results of the study demonstrated that internal control dimensions, comprising the control environment, control activities, risk assessment, information and communication, and monitoring activities, significantly impact the financial performance of Rwandan public institutions.

Umar and Dikko (2018) examined the impact of internal controls on Nigerian commercial banks' performance. Using a survey approach and stratified random sampling, they reported a significant positive relationship between four internal control elements (the control environment, control activities, risk management, and monitoring activities) and bank performance. However, information and communication had a non-significant positive relationship with bank performance. Yangklan (2022) reported that effective internal control systems positively contribute to improved firm performance, as measured by the balanced scorecard. Adegboyegun et al. (2020) employed the COSO framework to evaluate the relationship between the system of internal control and the operating performance of small and medium enterprises (SMEs) in Ondo State. The study results demonstrated a significant positive correlation between the system of internal control and control activities and the control environment in SMEs. Oyedokun and Muhammad's (2023) additional data support the beneficial impact of internal control systems on SMEs' financial performance. Their research in Nigeria's Kebbi State highlights the importance of crucial control elements and shows that these systems strengthen SMEs' financial stability. This relationship between internal control implementation and financial performance highlights the importance of a thorough internal control framework, which not only protects assets but also improves the accuracy and reliability of financial statements.

Research on internal control systems has given more attention to private sector performance, leaving a gap in understanding their impact on the public sector, notably municipalities in the South African context (Ajala et al., 2023:65). Achieving and maintaining consistent, favourable performance remains a persistent challenge for municipalities. Many municipalities have failed to meet the expectations of their beneficiaries and stakeholders (Maaroufi, 2022:251). Therefore, management across all sectors has always been striving to implement measures that can enhance organisational performance. As a result, it is essential to research organisations' performance measures (Castelo & Gomes, 2024:400). To this end, this study analyses how internal control systems influence the organisational performance of South African municipalities. This study differs from other previous studies in that it analyses the factors influencing the effectiveness of internal control systems and the relationship between effective internal control systems and organisational performance, which is measured by three proxies: operational performance, customer performance, and financial performance.

2.11. AUDIT OUTCOME

Audit outcome refers to the overall results or judgment provided by auditors after evaluating an organisation's financial statements, internal control systems and adherence to pertinent rules and laws. In the context of South African municipalities, audit outcomes indicate whether internal control systems and financial management are effective, require enhancement or inadequate (Tian & Xin, 2017:266; Zhang, 2012:11). It is based on audit procedures performed by an auditor on the organisation's financial and non-financial records and processes; the outcome of this procedure is an opinion concerning the fairness of the presentation of financial statements and non-financial reports (Tian & Xin, 2017:265). Nurhidayah, Sudarma, Djamhuri, and Atmini (2024:2) argued that audit outcomes evaluate the fairness and adequacy of an organisation's financial statements and performance reports rather than the veracity of these reports. An audit outcome is drawn from audited information, providing a fair assessment (Budiman & Amyar, 2021:117). Sambo (2019:116) asserts that audit outcome refers to a broad range of outcomes, including the detection of significant material misstatements in financial accounts and the identification of operational process inefficiencies that ultimately affect organisational governance and strategic decision-making. Audit outcomes are determined by audits of organisations' financial statements, annual performance reports, and compliance with pertinent laws and regulations (Budiman & Amyar, 2021:117).

Every South African municipality undergoes an audit, and the results are determined by the municipality's performance during the fiscal year (Aadnesgaard & Willows, 2016:547). Audit outcomes are broadly classified into qualified opinion, unqualified (clean) opinion, adverse opinion, and disclaimer of opinion (AGSA, 2014:7; Rangwato, Shopola & Molepo, 2024:3). Various audit outcomes are described below.

2.11.1. Unqualified (Clean Audit) Opinion With No Findings

The financial and non-financial reports are accurate and reliable, with no significant errors or issues, and are prepared according to generally accepted norms and standards and offer an adequate and fair representation of the organisation's state (Arens, Elder & Beasley, 2008:49; Rangwato et al., 2024:3).

2.11.2. Unqualified Opinion With Findings

Sambo (2019:116) defined this opinion as when the auditee's financial and non-financial reports are accurate with no significant errors or issues, but they faced challenges in one or more of the following areas:

- Aligning performance reports with set objectives.
- Setting clear performance indicators and targets.
- Reporting reliably on performance targets.
- Identifying and complying with pertinent regulatory requirements and implementing necessary internal control systems.

2.11.3. Qualified Opinion

The financial statements contain material misstatements in specific amounts, or there is insufficient evidence for AGSA to conclude that specific amounts included in the financial statements are not materially misstated (AGSA, 2014:7; Rangwato et al., 2024:3).

2.11.4. Adverse Opinion

There are significant misstatements in financial statements and annual performance reports that are not limited to particular transactions or that account for a sizeable number of financial statements and annual performance reports (Jackson & Stent, 2007:18-9; Rangwato et al., 2024:3). The auditor's disagreement with financial statements and annual performance reports is so significant and pervasive that a qualified opinion would not adequately convey the inaccurate and incomplete nature of financial statements and annual performance reports (Sambo, 2019:116).

2.11.5. Disclaimer of Opinion

Additionally, the auditee provided insufficient evidence in the form of documentation on which to base an audit opinion. The lack of sufficient evidence is not confined to specific amounts or represents a substantial portion of the information contained in the financial statements (Nevhutanda & Mamaile, 2020:81; Rangwato et al., 2024:3).

Audits encompass independent, methodical reviews of internal control systems, business processes, and financial records (Mnguni & Subban, 2022:148). They serve as a pillar of assurance and trust, offering stakeholders, comprising managers, regulators, investors, and

other personnel, confidence in the veracity and dependability of the information reported (Nyamita, Dorasamy & Garbharram 2015:28). Contemporary audits have developed from merely evaluating compliance to becoming a strategic instrument that drives improvements, enhances organisational performance, and contributes to long-term sustainability (Netshifhefhe et al., 2024:447). The outcomes of audits have far-reaching impacts on financial stability, risk management, operational efficiency, and overall organisational performance (Budiandru, 2024:702). The existing body of literature (Khasodi, Mahlala & Hofisi, 2023; Mnguni & Subban, 2022; Motubatse, Ngwakwe & Sebola, 2018; Sambo, 2019) indicates that municipal audit outcomes in the South African context are extensively studied. However, few studies have extended organisational performance to audit outcomes. Studies on internal control effectiveness, which can be utilised as a determinant of enhanced organisational performance and influences audit outcomes, are also lacking.

2.12. IMPACT OF INTERNAL CONTROL SYSTEMS ON AUDIT OUTCOMES WITH ORGANISATIONAL PERFORMANCE SERVING AS A MEDIATING FACTOR

Prior studies have focused on the relationships between internal control systems and the quality of reporting, both financial and performance (Adejuwon & Hassan, 2022; Ajala et al., 2023; Darmayanti, Budianto & Hastuti, 2023; Kalvel & Irumba, 2023; Muchoki, 2020). Such studies have shown greater accuracy in performance reporting and financial statement preparation, lower fraud incidence, better compliance with regulations, and overall control when there are effective internal control systems in place. These favourable impacts ultimately influence audit outcomes, resulting in more efficient audits, fewer significant issues identified, and overall enhanced audit quality (Nevhutanda & Mamaile, 2020:78).

Nonetheless, the effectiveness of an internal control system is not only affected by its design and implementation. Elements such as organisational culture, the willingness of leaders to engage, and resource scheduling can greatly affect how efficiently these controls operate in practice (Nevhutanda & Mamaile, 2020:79; Khumalo & Edoun, 2021:151). This current research contends that organisational performance, perceived as a comprehensive indicator of an organisation’s operational effectiveness towards goal achievement, interplays most dominantly with internal control systems and audit outcomes by morally mediating both variables (Nevhutanda, 2019:38). While more effective internal control systems would lead to improved audit outcomes, it is reasonable to assume that this organisational performance would have the strongest influence on the effectiveness of such controls (Nevhutanda &

Mamaile, 2020:70). This study maintains that organisational performance serves as a mediator that could intensify or reduce the relationship between internal control systems and audit outcomes (Ncgobo & Malefane, 2017:82).

Well-performing organisations are often in possession of strong leadership, good operational efficiency, a smooth flow of communication, and an ingrained culture of ongoing enhancement. These elements can exacerbate the benefits of a potent internal control system to achieve more favourable audit results (Akpa, Asikhia & Nneji, 2021:367). On the other hand, less effective organisations tend to have weak leadership, resource allocation issues, conflicting priorities, and relaxation of compliance enforcement, which may deactivate the lever of internal control systems' effectiveness and the quality of audit controls (Khumalo & Edoun, 2021:144).

2.13. CONTEXTUAL LITERATURE

The statutory framework that shapes internal control practices in municipalities is discussed below:

2.13.1. Constitution of the Republic of South Africa 1996

Section 216(1) of the Constitution of the Republic of South Africa 1996 mandates that national legislation institute a national treasury and prescribes methods to promote transparency and expenditure control across all government spheres. To accomplish this, national legislation must introduce standardised accounting practices, uniform spending classification, and consistent treasury norms and standards (South African Government (SAG) 1996, s. 216(1)).

2.13.2. Municipal Finance Management Act 56 of 2003

The Municipal Finance Management Act (MFMA) adopts a flexible approach, providing municipal managers with independence while reducing the number of strict procedures and regulations set by the former Exchequer Act. Municipal managers, on the other hand, are held accountable for ensuring effective, efficient, and transparent financial and risk management and internal control systems, as stipulated in MFMA Section 62(1)(c)(i). MFMA also tasks municipal managers with reporting on financial management matters and controlling all related activities (SAG 2003, s. 62(1)). The act assigns four responsibilities to municipal managers:

- Implementing robust internal control systems and financial management within municipalities.
- Implementing preventative measures to avoid budget overruns.
- Submitting annual financial statements within two months after the financial year-end.
- Publishing annual reports in a standardised format.

The MFMA establishes a conventional legislative procedure norm for performance-driven municipalities capable of delivering excellent service delivery to foster a development-oriented local government. It is undeniable that managing finances effectively and efficiently within municipalities is a difficult part of governance in South Africa. Consequently, promoting robust financial governance systems is crucial in reforming municipalities' budgetary mechanisms (Khasodi, Mahlala & Hofisi, 2023:342).

Section 65(2)(a) of the MFMA requires all municipalities to put in place effective systems for controlling expenditure, detailing the approval, authorisation, withdrawal, and distribution of funds. Additionally, Section 65(2)(b) mandates that systems be established to acknowledge expenses incurred and account for creditors and municipal payments. Section 165 of the MFMA mandates that all municipalities establish an internal audit function that should report to the audit committee on issues pertaining to internal control systems, internal audits, risk and performance management and legal compliance (SAG 2003, s. 65(2)). Section 166(1) also mandates that every municipality establish and maintain an independent audit committee whose purpose is to identify risks that could endanger the municipality and to support the council and management in their oversight roles. Essentially, the audit committee promotes good governance, enabling municipalities to fulfill their responsibilities and enhance executive accountability (SAG 2003, s. 166(1)).

2.13.3. Public Audit Act, 25 of 2004

The purpose of this legislation is to formally establish the Constitution's requirements for external audits of the public sector (SAG 2004, s. 2). This Act mandates that all South African municipalities submit an annual report detailing the performance of their institutions in relation to the predetermined goals of the office of the Auditor-General as stipulated by the law. Additionally, the act governs and delineates the duties carried out by the Auditor-General's office in such cases (SAG 2004, s. 4(1-2). Municipal auditing was incorporated into laws in an effort to increase accountability and establish a framework for evaluating municipalities' performance (Khasodi, Mahlala & Hofisi, 2023:342). This Act establishes and assigns

responsibility for the Auditor-General to conduct audits of public sector institutions, providing accountability within the Auditor-General's office, repealing certain outdated legislation, and addressing related issues (SAG 2004, s. 2).

2.13.4. Treasury Regulations of 2005

Treasury Regulations govern internal control through internal audits and audit committees as mandated by the PFMA. The PFMA offers guidelines that public institution heads must follow when handling specific financial management matters. Effective internal control systems facilitated by pertinent stakeholders, comprising audit committees, internal audit functions, the Auditor-General, and other stakeholders, improve risk management and good governance in the public sector. Treasury Regulations mandate that the audit committee examine the effectiveness of the institution's internal control systems and ensure adherence to pertinent legal and regulatory requirements (SAG 2005, S. 3).

The audit committee and accounting officer have a vital relationship, particularly regarding exchanging reliable and important information about organisational systems. Additionally, this relationship is built on the level of accountability, with the audit committee reporting to the council officer. Furthermore, Treasury Regulations permit the accounting officer to collaborate with the chief financial officer in areas such as financial management, although ultimate accountability remains with the accounting officer, as it cannot be transferred (SAG 2005, S. 27).

2.14. ANALYTICAL FRAMEWORK

The chapter's previous sections reviewed the literature, revealing gaps in understanding the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes, thereby underscoring the necessity for further exploration. The following sections of this chapter focus on the secondary research objectives SRO1, SRO2, and SRO3 by examining the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes. The study is grounded in the combination of COSO's internal control-integrated framework and a balanced scorecard (BSC). To address the gaps identified, human resources competency, corporate governance, and big data analytics (BDA) constructs are introduced to extend the COSO's internal control-integrated framework. These constructs are analysed in depth, highlighting their significance

in influencing the effectiveness of the internal control system and its impact on organisational performance and audit outcome.

This theoretical foundation informs the creation of a conceptual framework underpinned by hypotheses aimed at addressing the research objectives. This approach systematically analyses the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes.

2.14.1. Conceptual Framework

This study uses the internal control-integrated framework and the BSC to construct its model. The internal control-integrated framework provides a comprehensive framework for designing and implementing internal control systems, which were originally established by COSO in 1992 (COSO, 1992). The 1992 COSO Internal Control-Integrated Framework established the groundwork for defining internal control, determining effective internal control components, and guiding its implementation in organisations (Fleak et al., 2010:712; Moeller, 2007:4-10). This framework focuses on reporting. This framework is illustrated in Figure 2.5.

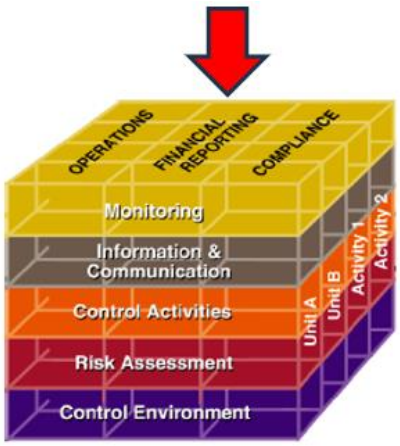


Figure 2.5: 1992 COSO Internal Control-Integrated Framework

(Source: COSO, 2013)

The philosophy underlying the 1992 COSO Internal Control-Integrated Framework suggests that organisations can ensure a robust internal control system by implementing a system that includes five interconnected components that work together seamlessly. These five interconnected components are as follows: 1. the control environment, 2. risk assessment, 3. control activities, 4. information and communication, and 5. monitoring (Martin, Sanders & Scalan, 2014:110; Rezaee, 1995:6-7; Smit, 2012:39). This framework provides a

comprehensive and systematic approach to the internal control system, which is considered effective when six key aspects are evident:

1. management demonstrates a positive perspective regarding the internal control system,
2. risks are accurately identified and recognised,
3. identified risks are assessed comprehensively,
4. effective controls are implemented to control the assessed risks,
5. adequate processes for information and communication, and
6. continuous monitoring of the implemented internal control system.

Prior studies indicate that the 1992 COSO framework thoroughly addresses how an internal control system can be enhanced within an organisation (Cho, Lee & Park, 2015:456; Khalil, Nawawi & Mahzan, 2014:612). However, a significant limitation of this framework is that it largely overlooks the management of human behaviours, especially among organisational non-managerial stakeholders (Zhang, Zhou & Zhou, 2007:301-302).

After the 1992 COSO framework was established, the Canadian Institute of Chartered Accountants (CICA) established the criteria of control (CoCo) framework. Building upon the 1992 COSO framework, the CoCo framework was introduced in 1995 to further develop internal control concepts (Champlain, 2003:407-408; Pfister, 2009:51). The CoCo framework is illustrated in Figure 2.6.

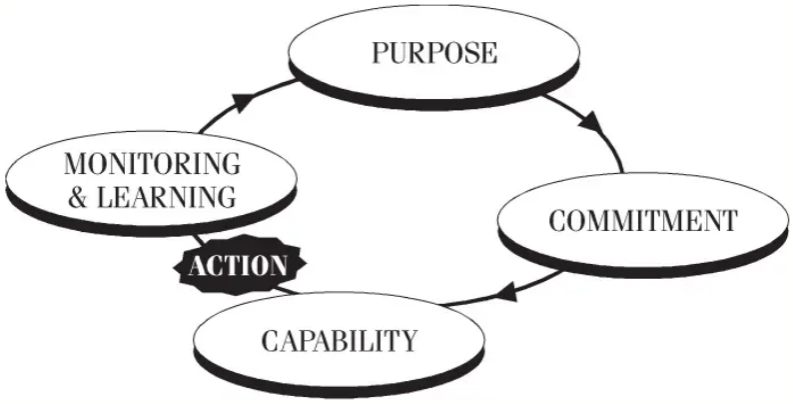


Figure 2.6: The 1995 COCO Framework

(Source: Beldiman, 2016:36)

In contrast to COSO's systematic approach, the CoCo framework proposes a more tailored internal control system that serves the needs of all organisational stakeholders to facilitate

the attainment of pertinent organisational objectives in the long term (Bruwer, 2016:68). According to the CoCo framework (1995), a robust internal control system is achieved by focusing on purpose, commitment, capability and monitoring and learning aspects. The CoCo framework indicates that organisations can improve their internal control systems through the implementation of a robust internal control system that considers aspects of corporate governance (Beldiman, 2016:36).

After two decades, the 1992 COSO Framework underwent a revision and was updated in 2013. This revision aimed to address management in setting objectives and the growing significance of technology concerning internal control systems (Bruwer, 2016:67; COSO 2013:i). The revised 2013 COSO framework is illustrated in Figure 2.7.

Figure 2.7: The 2013 COSO Internal Control-Integrated Framework

(Source: COSO, 2020)

The evolution and complexity of information technology, coupled with an increase in fraudulent behaviours, have led to significant shifts in governance oversight expectations (Adebayo, Obisesan & Akinola, 2024:105-106). Additionally, the global market and operational expansion, along with the heightened intricacies of the business environment, have resulted in more demanding legal frameworks, norms, and standards. These developments have also influenced expectations regarding accountability and competency since the establishment of the 2013 COSO framework (Albasteki, 2021:18). Thus, further extending the COSO framework may be necessary to determine the factors that practically influence the effectiveness of the internal control system and its impact on organisational

performance and audit outcomes (Mohammed, Al-Abedi, Flayyih & Mohaisen, 2021:6). Previous research has indicated that the practicality and effective functioning of the COSO internal control-integrated framework can be achieved when it is implemented alongside the BSC, rather than being utilised as an independent internal control framework (Iwata, 2018:21; Suttipun, Siripong, Sattayarak, Wichianrak & Limroscharoen, 2018:47; Wisutteewong & Rompho, 2015:134). The inclusion of human resource competency, corporate governance, BDA, and operational, customer, and financial performance within the extended model may better explain the factors that practically influence the effectiveness of the internal control system and its impact on organisational performance and audit outcomes. The influence of the internal control system on organisational performance is markedly substantial. Consequently, it is essential to manage the internal control system strategically, considering both internal organisational influences and external environmental dynamics, to improve organisational performance and competitiveness.

Furthermore, although the COSO framework is widely adopted, scholars (Braim & Mohammed, 2023; Helmy & Silviana, 2024; Holloway, 2023; Thabit, Solaimanzadah & Al-abood, 2017) argue that it has limitations that affect its ability to fully address contemporary organisational risk. First, COSO places insufficient emphasis on human resource competency, although skills, training, and staff capability are critical determinants of effective control environments and risk response. The framework mentions personnel competency only briefly, without providing clear metrics or guidance for assessing how human capital strengths or gaps influence internal control effectiveness (El-khateeb, Almohtaseb & ALfarajat, 2022:464-465). Second, Rae, Sands and Subramaniam (2017:42) criticised COSO for underrepresenting corporate governance dynamics, particularly the practical roles of boards, audit committees, and executive leadership in driving ethical culture, oversight, and accountability. While governance is embedded in the control environment component, it is not explored as a standalone variable, making it difficult for scholars to measure governance quality or examine its direct relationship with internal control performance (Al-Karawi, Alsfan & Mousa, 2021:395-396).

Third, the rapid digital transformation of organisations exposes another limitation of the COSO: the framework does not adequately integrate BDA into its internal control processes. Modern organisations rely heavily on data-driven insights for monitoring, predictive risk assessment, and automated controls; however, COSO provides minimal guidance on how analytics, machine learning, or digital audit technologies can be embedded into control

activities and continuous monitoring practices. As a result, COSO is sometimes viewed as outdated in addressing technology-enabled risks and opportunities (Braim & Mohammed, 2023:1208).

2.14.2. Development of the Conceptual Framework and Hypotheses

On the basis of the review of pertinent literature, as well as the provided theoretical underpinnings and the actual research at South African municipalities, the author proposed a conceptual framework identifying the factors influencing the effectiveness of the internal control system within South African municipalities (Anh, Thi, Quang & Thi, 2020:134). This conceptual framework is grounded in the combination of COSO's internal control-integrated framework and a balanced scorecard (BSC). This integration improves an organisation's ability to manage risks and performance, ultimately resulting in enhanced strategy alignments and operational efficiency (Wisutteewong & Rompho, 2015:134). The conceptual framework developed by the researcher outlines the expected relationships between various concepts. It addresses the necessary research areas identified in literature reviews (Luft, Jeong, Idsardi & Gardner, 2022:3). The COSO framework presents a systematic method for the internal control system, whereas the BSC provides a balanced framework for performance measurement (Ratri & Pangeran, 2020:567). Figure 2.8 below shows the conceptual framework for the study.

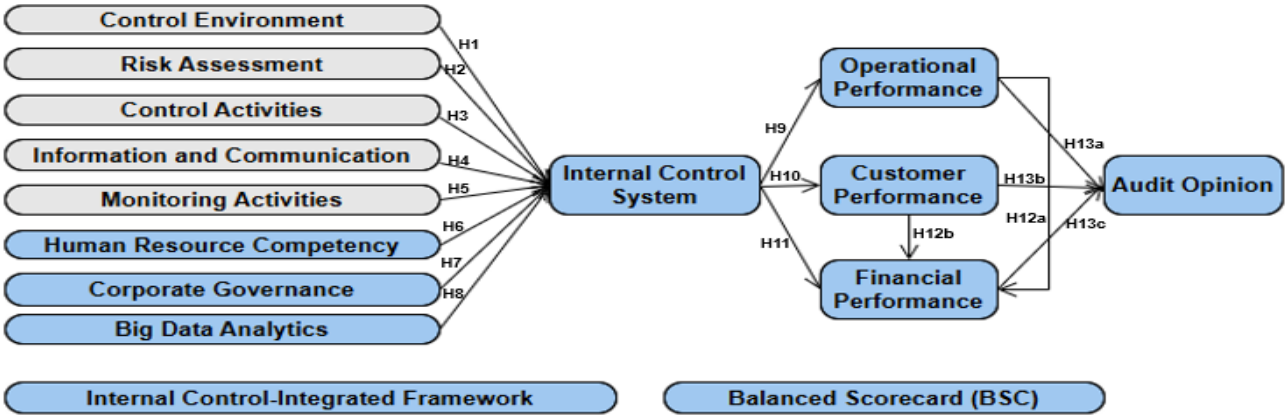


Figure 2.8: Conceptual Framework

Source: Author, 2025

The framework clearly illustrates the combination of the COSO framework with additional factors of human resource competency, corporate governance, BDA, and the BSC to obtain the desired audit outcomes. The framework illustrated in Figure 1 contains several

interconnected factors that illustrate cause–and–effect relationships to some degree. The following sections address each variable individually.

2.14.2.1. Control environment

It is a fundamental factor of an organisation's internal control system. It sets the tone for the organisation, influencing the control consciousness of its people. The control environment provides the foundation for the design, implementation, and monitoring of other internal control factors (Monday et al., 2014:246; Otoo et al., 2023:138). The control environment significantly impacts the effectiveness of the internal control system (Hung & Tuan, 2019:1802). A robust control environment promotes a culture of control consciousness, which is essential for the success of the internal control system (Ilyas, Sutisna, Saudi & Sinaga, 2021:6047). By fostering a commitment to internal control, assigning clear roles and responsibilities, promoting effective communication and coordination, implementing fair and consistent human resources policies, carrying out control activities diligently, and monitoring internal control continuously, organisations can ensure that their internal control systems are effective and efficient (Trang, 2022:3107). Therefore, the study hypothesises that:

Hypothesis 1 (H1): *The control environment will have a significant positive influence on the effectiveness of the internal control system.*

2.14.2.2. Risk assessment

Risk assessment and internal control systems have an intertwined relationship based on mutual dependability (Trang, 2022:3099). A robust risk assessment practice significantly influences the design and functioning of internal control systems (Aytaç & Çabuk, 2020:369). Organisations can determine the controls needed to offset identified risks through risk assessment and evaluation (COSO, 2013:4; Otoo et al., 2023:139). In contrast, well-designed and robust internal control systems improve the management of risks by providing reasonable assurance that actions taken to manage risk are executed and function as planned (Vulley, 2022:66). Risk assessment allows organisations to identify and prioritise risks based on their likelihood and potential impact (Uwingabiye, 2019:16). Such prioritisation helps organisations focus their resources on addressing the most significant risks, improving the effectiveness of internal control systems (Monday et al., 2014:246; Aliyu, Tijjani & Yusuf, 2024:2). Therefore, the study hypothesises that:

Hypothesis 2 (H2): *Risk assessment will have a significant positive influence on the effectiveness of the internal control system.*

2.14.2.3. Control activities

They are a vital factor of the internal control system, significantly impacting its effectiveness and implementation (Trang, 2022:3099). These activities consist of a set of policies and procedures designed to ensure that the management directives are executed and that the risk mitigation measures required are taken (; Aliyu et al., 2024:2; Frazer, 2012:363). Gyebi and Quain (2013:222) argued that robust control activities are critical for the overall effectiveness of the internal control system. Oseifuah and Gyekye (2013:244) and Otoo et al. (2023:138) also argued that control activities are an important factor that directly translates policies and procedures into actions. They are the specific activities intended to alleviate risks and ensure that management directives and guidelines are carried out (COSO, 2013:4; Otoo et al., 2023:138). Therefore, the study hypothesises that:

Hypothesis 3 (H3): *Control activities will have a significant positive influence on the effectiveness of the internal control system.*

2.14.2.4. Information and communication

This refers to information gathered by management throughout the organisation and from external sources to inform and sustain the effectiveness of the internal control system (COSO, 2013:5; Anh et al., 2020:135). Internal and external communication facilitates the sharing of essential information within and outside the organisation, allowing effective response and meeting expectations of the overall internal control system (Hung & Tuan, 2019:1802). The internal information sharing within the organisation enables senior management to convey the significance of control activities to the staff (Umar & Dikko, 2018:20). Uwingabiye (2019:17) argued that information is essential for an effective internal control system, enabling the accomplishment of organisational objectives. While all the components are essential, information and communication serve as the nervous system connecting all the other elements. Without reliable and timely information flowing throughout the organisation, the control environment becomes weak, risk assessments are inaccurate, control activities are ineffective, and monitoring efforts are futile. Therefore, the study hypothesises that:

Hypothesis 4 (H4): *Information and communication will have a significant positive influence on the effectiveness of the internal control system.*

2.14.2.5. Monitoring activities

They represent the ongoing evaluations used to determine whether each of the other internal control factors is present and functioning effectively (COSO, 2013:5; Hung & Tuan, 2019:1802). Monitoring activities are an essential factor of an effective internal control system (Trang, 2022:3100). Umar and Dikko (2018:22) argued that internal control systems require continuous monitoring and improvements, as changing circumstances can render them ineffective or obsolete over time. Monitoring activities evaluate the internal control system's performance, uncover improvements, and ensure effectiveness amid evolving risks and a changing operational environment (Uwingabiye, 2019:18-19). Monitoring activities enable the prompt identification and remediation of control weaknesses and offer continuous assurance that controls function as intended (Makgatho, 2013:12; Anh et al., 2020:135). Organisations can increase the effectiveness of their internal control systems, reduce risks, and accomplish their goals by implementing best practices for monitoring (Nguyen, Pham, Tran, Pham & Nguyen, 2023:186). Investing in effective monitoring activities is not merely a compliance obligation but also a strategic imperative for organisations seeking to improve their performance, protect their assets, and build a strong reputation (Mahadeen, Al-Dmour, Obeidat & Tarhini, 2016:28). Ultimately, effective monitoring translates to a more resilient and reliable control environment, enabling organisations to navigate the complexities of the modern business landscape with greater confidence (Akinleye & Kolawole, 2020:407; Umar & Dikko, 2018:22). Therefore, the study hypothesises that:

Hypothesis 5 (H5): *Monitoring activities will have a significant positive influence on the effectiveness of the internal control system.*

2.14.2.6. Human Resource Competency

While technology and procedures are the foundation of internal control systems, their effectiveness depends significantly on the knowledge, practical abilities and behaviour of the people entrusted with the tasks to design, implement, and monitor them (Dewi & Wirasedana, 2021:32). Saputra (2022:199) argued that while advanced technology and solid procedures are crucial determinants of the internal control system, the effectiveness of the internal control system ultimately rests with the competency of those in charge of carrying them out. A

competent personnel member can uncover and mitigate risks, effectively execute control activities, monitor internal control system performance, and adapt to evolving threats and challenges (El-Khateeb et al., 2022:464). In contrast, incompetence can result in breakdowns in control, financial misrepresentations, operational inefficiencies, and reputational harm (Daryanto et al., 2020:2).

In the context of internal control, human resource competency is a multifaceted concept consisting of the following:

***Knowledge*:** This comprises a comprehensive awareness of COSO internal control frameworks, pertinent laws and regulations, norms and standards, pertinent concepts, and specific industry practices (Sedyastuti, Rahadi, Suwarni & Handayani, 2020:250). Staff members should have the technical expertise required to comprehend the risks inherent in their employment and to design and implement effective control activities (Saputra, 2021:199).

***Skills*:** This refers to the practical abilities necessary to execute and sustain effective internal control systems (El-Khateeb et al., 2022:464). These consist of analytical skills that facilitate the identification and assessment of risks, communication skills that facilitate effective information sharing, problem-solving skills for dealing with internal control deficiencies, and proficiency in technology for addressing control-related technologies (Sedyastuti et al., 2020:250). Additionally, critical thinking is essential for assessing and enhancing the effectiveness of internal control systems (El-Khateeb et al., 2022:463).

***Professional Ethics*:** Upholding the integrity of the internal control system requires ethical behaviour (Dewi, Azam & Yusoff, 2019:1376). Personnel should have a strong moral and ethical foundation, comprising objectivity, honesty, integrity, and a commitment to maintaining organisational values (Sedyastuti et al., 2020:251). They should be able to identify and report potential ethics breaches and resist pressures to undermine internal control systems (Otoo, Kaur & Rather, 2023:138).

Human Resource Competency is theoretically grounded in both Agency Theory and Stakeholder Theory, which collectively explain its influence on the effectiveness of internal control systems (Jensen & Meckling, 1976:308; Freeman, 1984:25). An Agency Theory perspective posits that the principal–agent relationship assumes that agents (municipal managers) may not always act in the best interests of principals (citizens and council), particularly where information asymmetry and opportunistic behaviour exist (Jensen &

Meckling, 1976:308-309). Competent personnel, equipped with the requisite skills, knowledge, and ethical orientation, reduce agency costs by ensuring that internal controls are properly designed, implemented, and adhered to, thereby limiting errors, fraud, and non-compliance (Fama & Jensen, 1983:302-303). In this regard, HRC strengthens monitoring mechanisms and enhances the reliability of financial and non-financial reporting (Jensen & Meckling, 1976:309).

A Stakeholder Theory perspective posits that municipalities are accountable to a broad set of stakeholders, including communities, regulators, and oversight institutions, all of whom expect transparency, accountability, and effective service delivery (Freeman, 1984:46). Competent human resources better position the municipality to meet these expectations by ensuring that internal control systems function optimally to safeguard resources and support service delivery objectives (Donaldson & Preston, 1995:67; Sedyastuti et al., 2020:250). Therefore, HRC directly contributes to the effectiveness of internal control by enhancing both compliance and operational efficiency within a multi-stakeholder governance environment (Freeman, 1984:52). Human resource competency is a critical determinant of the effectiveness of internal control systems (Dewi & Wirasedana, 2021:32). Investment in competent personnel enables organisations to develop a robust internal control system that promotes accountability, transparency, and sustainable success (Hendri & Amelia, 2019:763). Therefore, the study hypothesises that:

Hypothesis 6 (H6). *Human resource competency will have a significant positive influence on the effectiveness of an internal control system.*

2.14.2.7. Corporate governance

Refers to the structure within which organisations are led and managed. It includes the rules, policies, and procedures that promote responsibility, transparency and ethics (Sahusilawane, 2020:198; Richardson, Larcker & Tuna, 2007:247-272). The effectiveness of the internal control system is intrinsically connected to the quality of corporate governance (Makhele, 2021:13). Tjivau (2020:16) argued that a strong governance framework, which includes board oversight, setting the ethical tone, defining lines of authority, and managing risk, improves the dependability and performance of internal control systems. In contrast, weak corporate governance, which may include poor board practices, a weak ethical climate, unclear authority, and poor risk management, weakens even the best-designed control systems, thus increasing the organisation’s exposure to fraud, errors, and operational issues (Masegare,

2016:15). Effective corporate governance significantly enhances the effectiveness of internal control systems (Kgwete, 2023:4). Good corporate governance, which highlights the principles of transparency and accountability, does indeed create a better environment for the implementation and success of internal control systems. This, in turn, protects assets, improves the accuracy of reports, and maintains the confidence of stakeholders (Mary & Kehinde, 2021:38; Petersen, 2019:20).

Corporate governance is firmly rooted in Agency Theory and Stakeholder Theory, both of which provide a strong theoretical justification for its influence on internal control system effectiveness (Jensen & Meckling, 1976:308; Donaldson & Preston, 1995:66). Agency Theory posits that governance structures, such as audit committees, internal audit functions, and oversight by councils are essential mechanisms for mitigating agency problems arising from the separation between principals and agents (Silpachai, Siengthai & Levermore, 2024:2-3; Fama & Jensen, 1983:302-303). Effective corporate governance enhances oversight, enforces accountability, and ensures that management actions align with the interests of principals (Shleifer & Vishny, 1997:738). Within this context, governance structures play a critical role in establishing, monitoring, and continuously improving internal control systems, thereby reducing the risk of mismanagement, fraud, and inefficiencies (AGSA, 2023:45; COSO, 2013:3).

Stakeholder Theory extends this perspective by emphasising that municipalities must balance the interests of multiple stakeholders, including the public, regulators, and funding bodies (Freeman, 1984:46). Strong governance frameworks ensure that internal controls are aligned not only with compliance requirements but also with broader stakeholder expectations of ethical conduct, transparency, and service delivery performance (Donaldson & Preston, 1995:67; Hill & Jones, 1992:140). Consequently, corporate governance strengthens internal control effectiveness by embedding accountability, ethical leadership, and strategic oversight within municipal operations (Daily, Dalton & Cannella, 2003:372). Therefore, the study hypothesises that:

Hypothesis 7 (H7). *Corporate governance will have a significant positive influence on the effectiveness of the internal control system.*

2.14.2.8. Big Data Analytics

BDA refers to the application of advanced analytical techniques to high-volume, high-velocity, and high-variety data in order to generate actionable insights that support decision-making and enhance organisational performance (Kwon, Lee, Shin, 2014:387). It is revolutionising internal control systems by offering a more adequate, effective, and holistic strategy for oversight and risk management, particularly through the analysis of large and diverse datasets that support enhanced control design and monitoring (Appelbaum, Kogan & Vasarhelyi, 2017:2-3; Elmashtawy & Salaheldeen, 2023:15). It has developed into a significant instrument for internal control systems, facilitating the analysis of vast datasets and the identification of patterns, trends, and anomalies that may signify potential risks and fraud activities (Ilori, Nwosu, & Naiho, 2024:932). BDA enables organisations to process vast volumes of structured and unstructured data in real time, thereby enhancing the scope, accuracy, and timeliness of control activities (Rosnidah, Johari, Hairudin, Hussin & Musyaffi, 2022:9). Predictive analytics can be employed to forecast possible risks and develop proactive strategies for mitigation. This may include identifying supply chain vulnerabilities, forecasting customer turnover, or assessing credit risk (Kleuskens & Larcher, 2020:31). Leveraging big data analytics is a front-burner priority for enhancing internal control systems (Zhou, 2020:10). By utilising data effectively, organisations can improve their control environment and risk assessment, automate control processes, and monitor performance in real time (Zhou, 2024:27). Organisations that adopt BDA and invest in the right infrastructure can be better equipped to uphold robust internal control systems, protect their assets, and accomplish their strategic goals in a complex and data-centric world environment (Elmashtawy & Salaheldeen, 2023:15). Adopting this paradigm shift is now a strategic imperative for organisations aiming to thrive in the modern business environment (Ilori et al., 2024:934).

Big Data Analytics can be theoretically explained through both Agency Theory and Stakeholder Theory, particularly in the context of information asymmetry and decision-making transparency (Appelbaum, Kogan & Vasarhelyi, 2017:2; Donaldson & Preston, 1995:66). Under Agency Theory, BDA reduces information asymmetry between principals and agents by enabling real-time monitoring, enhanced data accuracy, and predictive risk assessment (Alshehadeh, Alia, Jaradat, Injadat & Al-khawaja, 2023:1261). This technological capability strengthens internal control systems by improving the detection of anomalies, fraud, and

inefficiencies, thereby constraining opportunistic behaviour (Vasarhelyi, Kogan & Tuttle, 2015:384-385). In this regard, BDA contributes specifically to COSO dimensions such as risk assessment, monitoring activities, and information and communication by enabling continuous analysis of large volumes of financial and operational data, facilitating early identification of control weaknesses and emerging risks. A Stakeholder Theory perspective posits that the use of BDA enhances organisational transparency and responsiveness by providing timely, data-driven insights that support informed decision-making and accountability to stakeholders (Alshehadeh et al., 2023:1261). In municipal environments, where service delivery and public accountability are paramount, BDA contributes to more effective internal control systems by supporting more evidence-based decision-making processes and aligning with stakeholder expectations (Moffitt & Vasarhelyi, 2013:5-6). Furthermore, BDA strengthens control activities and monitoring functions by improving the accuracy, timeliness, and accessibility of information required for oversight and performance evaluation within municipalities. Thus, BDA is theoretically justified as a factor influencing internal control effectiveness through its role in enhancing monitoring efficiency (Agency Theory) and stakeholder-oriented transparency (Stakeholder Theory) (Jensen & Meckling, 1976;337-339; Freeman, 1984;233-240).

Hypothesis 8 (H8). *BDA will have a significant positive influence on the effectiveness of the internal control system.*

The reviewed literature demonstrates strong consensus that the factors of the COSO framework, namely the control environment, risk assessment, control activities, information and communication, and monitoring, are fundamental factors of internal control system effectiveness (COSO, 2013:3; Nguyen & Duong, 2024:4-5). Furthermore, scholars concur that the effectiveness of these components is reinforced by critical enabling factors such as human resource competency, sound corporate governance practices, and the adoption of big data analytics (Zahari, Said, Muhamad & Ramly, 2024:341). Collectively, these factors are widely recognised as essential for ensuring accountability, mitigating risk, and supporting reliable financial and performance reporting (Elmashtawy & Salaheldeen, 2023:21; Oppong, Atchulo, Fofack & Afonope, 2023:1; Makhele, 2021:10-13). However, disagreement and limitations persist regarding the contextual effectiveness of these factors, particularly within public-sector and municipal environments where governance capacity, staff competency, and technological maturity vary significantly. While some studies emphasise structural components such as governance and formal controls (Boudjelka, 2025:528-529), others

highlight behavioural and technological dimensions, suggesting that effectiveness may depend on contextual and institutional conditions (Cloete, 2023:6-9; Sofyani, Amalia, Hasan & Saleh, 2026:44-46). Despite these insights, there remains limited empirical clarity regarding which specific factors most strongly influence internal control system effectiveness within South African municipalities, and how these factors interact within an integrated system. Addressing this gap, the present study formulates Hypotheses H1 to H8 to empirically test the combined impact of these factors, directly responding to the study's problem statement regarding the strengthening of internal control systems to improve municipal performance and audit outcomes.

2.14.2.9. Internal control and customer performance

Refers to the utilisation of internal control systems to enhance customers' experience and satisfaction (Mudau, 2021:83). Customer performance encompasses the organisation's ability to satisfy and retain customers, provide excellent customer service, and cultivate enduring relationships with customers (Naidoo, 2024:38; Sulhan & Wasistiono, 2017:229). Robust internal control systems streamline service delivery business processes, ensuring efficiency, transparency, and accountability. This results in enhanced service quality, reduced complaints, and shorter wait times (Monnatlale, 2023:17). For example, in the context of municipalities, streamlined processes for services such as building permit processing, supported by effective monitoring mechanisms, can drastically reduce delays and enhance customer satisfaction (Farook & Irumba, 2024:287). Robust internal control systems that prioritise transparent communication channels and effective complaint resolution mechanisms ensure that concerns of the public are promptly and effectively addressed (Otoo et al., 2023:139). This aligns with the customer viewpoint of the BSC, which ensures that significantly important information is effectively communicated to pertinent stakeholders, ensuring that they have the information necessary to make informed decisions (Nunticha, Kajornatthapol & Siyaphat, 2024:888). As a result, this promotes responsiveness and trust between the public and municipalities (Akinleye & Kolawole, 2020:407). Therefore, the study hypothesises that:

Hypothesis 9 (H9): *An effective internal control system will have a significant positive influence on customer performance.*

2.14.2.10. Internal control and operational performance

Pertains to how organisations leverage internal control systems to increase their operational efficiency and effectiveness to achieve their goals and objectives (Naidoo, 2024:39). Operational performance assesses how efficiently and effectively an organisation runs its operations, focusing on processes, productivity, and service quality (Joshua & Umoh, 2022:301). An effective internal control system can substantially improve operational performance while ensuring adherence to regulatory requirements (Adegboyegun et al, 2020:469). Robust internal control mechanisms support operational efficiency, effectiveness, sustainability, and competitiveness (Otoo et al., 2023:146). Effective internal control systems enable dynamic capabilities that allow organisations to improve operational performance by providing good-quality services (Boufounou, Eriotis, Kounadeas, Argyropoulos & Poulopoulos, 2024:4). Internal control systems are essential for operational performance, as they encompass management's efforts to ensure effective, efficient, compliant, and reliable organisation operations, which result in efficient service delivery (Adegboyegun et al, 2020:469). Therefore, the study hypothesises that:

Hypothesis 10 (H10): *An effective internal control system will have a significant positive influence on operational performance.*

2.14.2.11. Internal control and financial performance

This refers to how organisations can effectively employ an internal control system to enhance their financial health. Financial performance encompasses key metrics such as revenue growth, cost savings, profitability, cash flow, and return on assets (Mudau, 2021:67). internal control systems assist organisations in accomplishing their goals by reducing the likelihood of human error, inadequate decision-making, fraud and losses and reducing operational inefficiencies (Muchoki, 2020:6). These controls help to avert waste, transgressions and financial losses and substantially enhance financial management and reporting (AGSA, 2023:20). AGSA (2024:102) argued that internal control systems can significantly enhance financial performance by reducing financial misrepresentation and protecting assets, ultimately improving the quality, accuracy, timeliness, and effectiveness of financial reports. Therefore, the study hypothesises that:

Hypothesis 11 (H11): *An effective internal control system will have a significant positive influence on financial performance.*

2.14.2.12. Operational and customer performance on financial performance

This refers to how leveraging internal control systems can improve operational efficiencies, resulting in improved financial stability and efficient service delivery, ultimately improving customer satisfaction (Enad & Gerinda, 2022:12). Despite their apparent differences, customer, operational, and financial performance are closely related and together form a dynamic trio that propels the overall health of the organisation and its thriving (Mudau, 2021:68). Financial performance, a standard criterion for determining organisational success, encompasses variables such as revenue, profit margins, return on assets, and cash flow (Refmasari & Supriyono, 2019:250). Although the organisation's financial health is depicted by figures in financial reports, they reflect operational efficiency and customer satisfaction rather than being standalone measures (Mukui, 2022:4). For example, a better financial position could be a direct result of streamlined processes, lower overhead expenses, and enhanced service delivery efficiency, all of which are indicators of robust operational performance (Suseno, Sugianto, Purnamasari & Supriadi, 2023:340).

Similarly, increased revenue may reflect positive customer performance, with happy customers returning for more services (Eklof, Podkorytova & Malova, 2020:1684). In contrast, operational inefficiencies negatively impact financial performance and drive away customers, resulting in deteriorating organisational performance (Enad & Gerinda, 2022:12). This study suggests that the effective implementation and execution of robust internal control systems will improve operational and customer performance, leading to improved financial and non-financial opinions, resulting in a more balanced perspective of an organisational performance (Naidoo, 2024:41). Robust internal control systems can improve operational efficiency by streamlining processes and procedures, reducing operational expenditures, and enhancing service delivery efficiency (Ajala et al., 2023:66). Therefore, the study hypothesises that:

Hypothesis 12 (H12): *Operational and customer performance will have a significant positive influence on financial performance.*

The literature reflects a broad consensus that effective internal control systems play a pivotal role in enhancing organisational performance across multiple dimensions, including customer satisfaction, operational efficiency, and financial sustainability (Anh et al., 2020:133; Boufounou et al., 2024:6-8; Otoo et al., 2023:135-137). Studies consistently highlight that robust internal control systems improve service delivery processes, reduce inefficiencies, and strengthen financial management practices, thereby contributing to both financial and non-

financial performance outcomes (Dauda & Baba, 2024:88-91; Nurisyal & Ramly, 2024:348-350). Nonetheless, some disagreement persists regarding the direct versus indirect effects of effective internal control systems on organisational performance (Virani & van der Wal, 2023:58-60). Additionally, while the interrelationships among customer, operational, and financial performance are widely acknowledged, empirical studies often examine these dimensions in isolation rather than as an integrated performance system (Barros, 2025:428-430; Mudau, 2021:34; Naidoo, 2024:21-22). Theoretically, these organisational performance dimensions are inherently interdependent rather than mutually exclusive. Improvements in operational efficiency may enhance the quality and timeliness of municipal service delivery, which in turn can strengthen customer satisfaction and public trust, ultimately contributing to improved financial sustainability and organisational legitimacy (Kaplan & Norton, 1996:31-33; Naidoo, 2024:22-23). Similarly, stronger financial performance may enable municipalities to allocate adequate resources toward infrastructure, human capital, and service delivery initiatives, thereby reinforcing operational and customer-related performance outcomes (Iselin, Mia & Sands, 2008:72-75; Meyer & Neethling, 2024:15-32). This interconnectedness suggests that organisational performance should be conceptualised as a multidimensional and integrated system in which improvements in one dimension can produce reinforcing effects across other performance dimensions (Kaplan & Norton, 1996:75-79). This fragmentation limits a comprehensive understanding of how internal control systems influence organisational performance holistically. As a result, analysing performance dimensions separately may obscure the complex pathways through which internal control effectiveness contributes to broader organisational outcomes. Therefore, a significant gap exists in empirically validating the interconnected pathways through which internal control effectiveness drives multidimensional performance outcomes. This study addresses this gap by testing Hypotheses H9–H12, which collectively analyse the direct and interrelated effects of internal control systems on organisational performance, thereby aligning with the study's objective of analysing the impact of internal controls on both financial and non-financial performance.

2.14.2.13. Organisational performance and audit outcome

This refers to how leveraging internal control systems can improve operational efficiencies, resulting in improved financial performance and customer satisfaction, ultimately leading to favourable audit outcomes (Kesuma & Ritonga, 2020:469). Internal control systems have an

impact on audit results that go beyond simple direct correlation (Khasodi, 2023:4; Khumalo & Edoun, 2021:144). Internal control systems influence audit outcomes through complex interactions with key performance indicators, comprising operational and financial performance and customer satisfaction (Zakiy, Agriyanto, Farida, Rahmiyanti, Fauziah & Fuadi, 2024:213). An effective internal control system improves financial performance, customer satisfaction, and operational efficiency by cultivating a culture of integrity and cautiousness (Nevhutanda, 2019:46). With strong performance, auditors see less risk, making the audit process smoother and more likely to result in a favourable audit outcome (Khasodi, Mahlala & Hofisi, 2023:339). Therefore, the study hypothesises that:

Hypothesis 13 (H13): *Organisational performance will have a significant positive influence on audit outcome.*

The literature reflects a strong consensus that effective internal control systems and improved organisational performance are associated with favourable audit outcomes (Ncgobo & Malefane, 2017:76; Utomo, 2026:52-54). Prior studies consistently indicate that organisations with reliable controls, credible financial reporting, and efficient operations are perceived as lower-risk entities by auditors, increasing the likelihood of unqualified audit opinions (Ncgobo & Malefane, 2017:82; Sawalqa & Qtish, 2012:128-129). However, disagreement remains regarding the nature of the relationship between internal controls, organisational performance, and audit outcomes, with some scholars suggesting a direct impact of internal control systems on audit outcomes (Dauda & Baba, 2024:88-92; Khumalo & Edoun, 2021:144-145), while others argue that this relationship is indirect and mediated through organisational performance indicators (Ngcobo & Malefane, 2017:78). Additionally, existing research (Khumalo & Edoun, 2021; Kesuma & Ritonga, 2020; Nevhutanda & Mamaile, 2020; Pamungkas, Ibtida & Avrian, 2018) tends to focus on direct relationships, offering limited insight into the complex pathways through which internal control system effectiveness translates into audit outcomes.

Although the literature acknowledges interactions among internal control systems, organisational performance, and audit outcomes, there is limited empirical evidence that explicitly tests organisational performance as a mediating variable within this relationship (Shatila, Nigam, & Benetti, 2025:95). Most existing studies adopt linear and fragmented approaches, examining either internal controls and performance or performance and audit outcomes in isolation. This has resulted in an incomplete understanding of the mechanisms through which internal control effectiveness ultimately affects audit opinions (Cantù, Langella,

& Vannini, 2024:264; Wehrhahn & Velte, 2024:4). The absence of mediation-based empirical models constitutes a significant research gap, particularly in South African municipalities that continue to experience adverse audit outcomes despite regulatory oversight. To address this gap, the present study formulates Hypothesis H13 to examine the influence of effective internal control systems on municipal audit outcomes through organisational performance as a mediating variable. This approach extends prior research beyond simplistic direct-effect models by empirically testing the indirect pathways linking internal control system effectiveness to audit outcomes.

2.15. CHAPTER SUMMARY

This chapter presented the two theories (agency theory and stakeholder theory) that anchor the study and describe the relationship between internal control systems, organisational performance, and audit outcomes. A comprehensive literature review was conducted to explore the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes within the context of the COSO framework and BSC model. This highlighted the critical determinants of the internal control system's effectiveness and the interconnectedness between the factors. The review highlighted the growing importance of internal control system capabilities in municipalities, driven by effective implementation and the obligation to provide high-quality services. The potential benefits, various impediments, and shortcomings of an effective internal control system were explored. There is a narrow understanding of how to establish and implement robust internal control systems among municipal senior management. Municipalities face challenges in effectively leveraging effective internal control systems, making it unclear how to drive organisational performance, ultimately obtaining and sustaining favourable audit outcomes.

The review presented the benefits of effectively establishing and implementing internal control systems in municipalities, such as enhanced accuracy, timeliness, and reliability of financial reports; improved operational efficiency; better service delivery; enhanced customer satisfaction; and ultimately improved overall organisational performance. Furthermore, the BSC was presented as a holistic approach to performance measurement, integrating financial and non-financial aspects. Internal control systems can impact both financial and non-financial information; however, prior research on internal control systems focused exclusively on financial performance, such as profitability (asset turnover, net profit, return on assets, and sales turnover), and disregarded non-financial performance indicators, such as

operational and customer performance. The review presented an overview of South African municipalities and the statutory framework that shapes internal control practices in the public sector. The literature review has consequently underscored and emphasised the significance of this study in assisting municipalities in justifying their investment in internal control systems. Additionally, the study establishes factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in the context of South African municipalities. The next chapter discusses the research design and methodology employed to conduct the research study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

Chapter 2 comprehensively reviewed the existing scholarly literature and theoretical frameworks pertinent to the research topic. It explored essential concepts, models, and empirical findings from prior studies to build a foundational understanding of the research problem. The literature review highlighted gaps in current knowledge, underscored areas of consensus and disagreements among scholars, and justified the necessity of this study. Through a critical analysis of prior literature, Chapter 2 situated this study within the broader academic discourse and elucidated its contribution to the existing body of knowledge. Building upon these insights, Chapter 3 presents the methodology utilised for data gathering and analysis to examine the research models and thus address the objectives of the study. The chapter discusses the research methodology, including the research approach, research design, data collection methods, research instruments, data analysis, reliability and validity, limitations and challenges, and ethical considerations. This chapter aims to present a detailed and transparent explanation of the research methodology employed, thereby enabling understanding, critical assessment, and replication of the study by other researchers.

3.2. RESEARCH APPROACH

A research paradigm is viewed as a shared perspective or a worldview that structures a research topic, influencing the researcher's thoughts about the subject (Hughes, 2010:35). Fraser and Robinson (2004:59) and Kamal (2019:1388) argue that a research paradigm is a collection of perceptions and beliefs about how research problems exist and a collection of concords on how such research problems can be examined. The paradigm undergirds the research, or a particular manner of perceiving and making sense of the world (Mukherji & Albon, 2015:24). According to the traditional view, the positivist paradigm underpins quantitative research. In contrast, the interpretivism paradigm frequently underpins qualitative research (Gichuru, 2017:1). This study aims to analyse the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. As such, it strives to assume the epistemological perspective of a positivist philosophy (Tekin & Kotaman, 2013:82).

Overall, this study is underpinned by a positivist philosophy approach, which is supported by the credence that objective reality can be conveyed through cause–and–effect correlations

and that data can be reliably quantified with a certain degree of precision (Park, Konge & Artino, 2020:691). This study's positivist notion places special importance on formulating a theory that can be empirically tested to establish ‘law-like’ generalisations (Huizing, 2007:25). Additionally, positivist philosophy aims to find objective realities, both social and physical, by developing clearly defined measures that uncover dimensions of reality that intrigue the researcher (Cohen, Manion, & Morrison, 2007:9-10). Positivist studies assume that the social world can be examined in the same manner as the natural world can be (Nickerson, 2023:1). The positivist researcher believes that only one reality exists and that establishing and understanding reality is the researcher’s responsibility. Generalisation of the population was accomplished through the utilisation of statistical techniques on collected data through surveys (Saunders, Lewis & Thornhill, 2019:147).

Compatible with positivism, this research study adopted a deductive method, employed theory to formulate hypotheses, and excluded alternative explanations for observations aimed at strengthening causal inferences. Deductive research enables conceptual and theoretical frameworks that can be empirically tested via observation (Saunders, Lewis & Thornhill, 2009:145). A deductive approach is beneficial when a rich body of literature exists, furnishing a theoretical framework that can be used to derive hypotheses. In this approach, the researcher validated the framework by progressing from theory to data. The data gathering was guided by particular variables identified by the theoretical framework (Grant & Osanloo, 2014:16).

To meet the information needs of the study, an appropriate research methodology for data gathering and analysis in this study was carefully selected (Babbie & Mouton, 2007:72-80). This study adopted a quantitative method, which is linked to the positivist research perspective and addresses the statistical, mathematical, or numerical analysis of collected data. Its distinct features include objective measurement, hypothesis testing, causality, and reproducibility. The adoption of the quantitative method facilitated the data that were collected for this study to be subjected to multifarious statistical analyses. By employing a quantitative research method, numeric data are collected, analysed, and utilised to generalise the views of particular groups of individuals or to furnish an overarching understanding of a specific phenomenon (Mohajan, 2020:3-13).

The primary aim of this study was to analyse the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. Specifically, the study aimed to understand the factors influencing

internal control system effectiveness and the impact of internal control effectiveness on both the financial and non-financial aspects of organisational performance within municipalities, as well as the impact of effective internal control on the audit outcomes of municipalities, with organisational performance serving as a mediating factor. By addressing these objectives, this study aimed to identify and analyse the factors influencing internal control system effectiveness for various key processes and how they impact organisational performance and audit outcomes in South African municipalities. The study aimed to obtain significant insights into the processes by which South African municipalities could see improvements in organisational performance and audit outcomes as a result of implementing an effectual internal control system.

This study, therefore, sought to establish relationship between variables. It can consequently be termed an “explanatory study” (Bakri & Nee, 2020:88). An explanatory study is carried out to recognise the nature and extent of cause–and–effect connections between independent and dependent variables. It tests whether an event generates another and attempts to find clarifications of the nature of particular correlations. The researcher adopted hypothesis testing in this study to provide an understanding of the correlations between variables (Welch, Piekkari, Plakoyiannaki & Paavilainen-Mantymaki, 2011:746).

3.3. RESEARCH DESIGN

The study design is a plan for executing the project and responding to the project research questions (Babbie & Mouton, 2002:234; Creswell, 2014:43). A design concentrates on the final product of the intended study and the type of outcomes the researcher hopes to accomplish (Chakabva, 2015:4-5). Designing a study assisted the researcher in planning and implementing the study in a way that assisted the researcher in acquiring intended results, thereby increasing the probability of acquiring information that could be related to the actual situation (Burns & Grove, 2001:223). The objective of generalising the findings to the whole population necessitated the utilisation of a survey-based quantitative research design. A survey was adopted as the research strategy for this study, which is often utilised in deductive studies in commercial and management disciplines to respond to questions concerning "what", "how much", and "how many" (Petty, Thomson, & Tew, 2012:6). The utilisation of a survey research strategy for explanatory research enhanced the generalisation of findings by enabling the gathering of data from a sizeable representative sample (Anderson & Lightfoot, 2022:182-183; Gable, 1994:113).

3.4. DATA COLLECTION METHODS

This study collected data through cross-sectional surveys. The survey method provided the researcher with a cost-effective and efficient way to gather data (Bihu, 2021:42). Larger sample sizes could be utilised to collect data more easily by using survey methods, improving the capacity to generate statistically significant results (Bihu, 2021:54). Surveys should follow clear protocols to ensure the cogency and dependability of the acquired data (Roopa & Rani, 2012:274-275). An in-depth survey-based approach was utilised to gather the data required to address the research objectives. This method was conducted by distributing online questionnaires to acquire insights from employees who work in the municipalities of South Africa (metropolitans, districts, and local levels).

To ensure confirmation of the hypotheses, data were collected via an online questionnaire distributed through LinkedIn invitations. The targeted respondents were from various South African municipalities, particularly those working in these municipalities as decision-makers. The study focused on municipal managers, executive managers, middle managers, lower-level managers, audit committee members, chief audit executives, other assurance providers (risk and compliance managers, internal and external auditors), and staff members directly involved in designing, implementing, and executing internal controls in all South African municipalities. The online survey link was included in the LinkedIn message invitations, which were sent to the recipients and LinkedIn contacts as an invitation to participate in the study. To improve the rate of responses, at least three (3) reminders were sent through LinkedIn inboxes after the original invitation to increase the possibility of acquiring adequate and representative data. The survey questionnaire was cautiously crafted to gather data on the pertinent variables, concentrating on factors influencing the systems of internal control effectiveness, organisational impact outcomes, organisational performance, and audit outcomes. A vast array of data could be acquired from numerous participants by employing a survey-based data-gathering method, providing an in-depth understanding of the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities.

Several benefits were provided by the selected method. First, it enables efficient and scalable data gathering, which makes it possible to include a sizeable number of municipalities in the sample. Second, the utilisation of an online questionnaire made participation more convenient and accessible, increasing the probability of participants' engagement.

Furthermore, a survey-based method systematically streamlined the measurement of essential constructs and variables, ensuring that the responses were consistent and comparable (Nayak & Narayan, 2019:33). Nonetheless, it was vital to recognise some constraints of the selected method. The dependence on self-reported data increased the probability of response bias and subjectivity (Rosenman, Tennekoon & Hill, 2011:321). Additionally, the survey's cross-sectional design further hindered efforts to establish cause–and–effect relationships or capture temporal variations (Bowen & Wiersema, 1999:628; Cronjé, 2024:111).

Overall, the survey-based data-gathering method was justified because of its ability to gather a sizeable amount of pertinent data from employees in South African municipalities. It provided a practical and efficient method of addressing the research objectives, offering useful insights into the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities and the mechanisms by which these factors were realised.

3.5. POPULATION AND SAMPLE

Understanding the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities requires rigorous scrutiny of the mechanisms at work within the South African context. There are 257 municipalities across all nine provinces of South Africa, comprising 8 metropolitans, 44 districts, and 205 local municipalities (Department of Cooperative Governance: South Africa, 2021:7). The population, sample, and sampling method utilised in this study are unpacked to provide a deeper understanding of the unique focus and adopted methodology. By focusing on South African municipalities, this study aims to offer insights into the nuanced dynamics surrounding factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes within this specific context. The study employed a meticulously developed sampling strategy to ensure an in-depth representation of municipalities of varying sizes, establishing a framework for a robust examination of the impact of internal control effectiveness on organisational dynamics, performance indicators, and audit outcomes.

3.5.1. Population

To accomplish research objectives RO1, RO2, and RO3 on the factors influencing the effectiveness of the internal control system and its impact on organisational performance and audit outcome, data on organisational-level internal control implementation and a balanced view of organisational performance and audit outcome factors are needed. The population relevant to the study includes 12,000 employees working as managers/decision makers in all 257 South African municipalities (local, district and metropolitan) (Stats SA, 2023:9). The list of potential respondents was accessed through LinkedIn from the Department of Cooperative Governance and Traditional Affairs (COGTA) and the Auditor-General of South Africa groups. LinkedIn was used as a professional networking platform that allows for the identification of municipal employees who meet the inclusion criteria of holding managerial or decision-making responsibilities. Profiles indicating roles such as managers, senior managers, directors, chief officers, and related positions formed the sampling frame. This population allowed for a more focused examination of the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. By focusing on these employees, the study can acknowledge the constraints that exist in the South African context while providing relevant insights and best practices.

3.5.2. Sample

The sample represents the population segment chosen for the study (Bell & Bryman, 2007:17). Several principles were employed to justify a sample size of 1200 individuals from South African municipalities. The following justifications support this strategy:

Representative and diversity: Prior studies have suggested a sample size of 10–20% of the population targeted for surveys (Krejcie & Morgan, 1970; MacCallum & Widaman, 1999; Roscoe, 1975). In this instance, 10% of the population was the size of the sample, allowing 1200 individuals to be sampled. The size of the sample was 1200 individuals employed in municipalities who responded in terms of their capacity.

Resource allocation: Municipalities with greater financial and administrative capacity, such as metros and other district municipalities, are better positioned to invest in advanced technologies and innovative systems. This enhanced capacity increases the likelihood of

adopting structured internal control frameworks such as COSO, thereby making such municipalities particularly relevant for this study (Lebese & Motubatse, 2025:8-9).

Technologically Capable: South African municipalities generally manage substantial asset bases and budget allocations, which enable investment in information systems and governance infrastructure. This resource capacity enhances their ability to implement and sustain formal internal control frameworks, including technology-enabled controls, thereby necessitating adequately designed and monitored internal control systems (Lebese & Motubatse, 2025:9).

Manageable scope: Although obtaining the experiences of a wide range of individuals would presumably provide a more comprehensive outlook, constraints such as resource and time limits make a smaller sample size more practical (Ahmad & Halim, 2017:21).

The choice to target the individuals in the municipalities gives the study a varied but practicable sample size. First, these individuals most likely represented a significant proportion of the municipalities. Individuals employed in municipalities provided a substantive sample (n=1200) that enabled a full examination. Consequently, their experiences with the internal control system may have offered significant insights into how it was adopted across the municipalities. The individuals selected from the municipalities also offered diverse but controllable sample sizes for the research. This particular sample presumably comprises various municipalities of varying sizes and operational settings. This diversity facilitated more comprehensive insight into the factors influencing internal control system effectiveness in municipalities. Moreover, restricting the sample to 1200 individuals significantly increased the study's viability from a logistical perspective.

The sample comprised municipal managers, executive managers, middle managers, lower-level managers, audit committee members, chief audit executives, other assurance providers (risk and compliance managers, internal and external auditors), and staff members directly involved in designing, implementing, and executing internal controls in all South African municipalities. Anseel et al. (2010) and Holtom et al. (2022) reported that while some surveys achieved higher rates, response rates in many studies fell within the 20–30% range, especially for internet-based surveys and non-incentivised samples. Therefore, the invitations were sent to approximately 2000–2500 individuals to ensure a sufficient response rate for achieving the target sample of 1200 participants. The study made an effort to invite

as many AGSA managers, chief audit executives, executive managers, and municipal managers as possible.

Examining these individuals in municipalities probably produced useful data on the adequate implementation and optimisation of internal control systems and provided an understanding of their impact on municipalities' efficiency and productivity. This enabled the researcher to make insightful conclusions that could be used in academic discourse and practical implementations.

3.5.3. Sampling Method

Sampling is the technique employed to identify and select the population members to be studied (Hunniger, 2012:5; Mertens, 1998). Non-probability sampling was utilised in this research study, which offered faster data gathering, reduced survey costs, and easier accessibility for potential respondents. Non-probability sampling facilitated the gathering of data by selecting participants non-randomly using purposive or snowball criteria. In this study, the researcher used two non-probability sampling techniques, namely: purposive sampling and snowball sampling, to target knowledgeable informants directly engaged in internal control processes within South African municipalities. Kerlinger (1973:129) observed that non-probability samples are often necessary and unavoidable. Their weaknesses can to some extent be mitigated by using knowledge expertise, and care in selecting samples, and by replicating studies with different samples. The current research integrated purposive and snowball sampling, which led to a complementary/symbiotic relationship. Purposive sampling was employed to ensure the selection of a specific group of employees within South African municipalities possessing pertinent roles, experience, and responsibilities related to the design, implementation and monitoring of internal control systems.

Concurrently, snowball sampling conducted via LinkedIn facilitated practical access to a specialised municipal population that is not easily identifiable through conventional sampling frames. While this methodology constrains the ability to statistically generalize findings to the broader municipal population, it is appropriately suited for a cross-sectional quantitative survey designed to analyse patterns and relationships among informed respondents. Consequently, the results are interpreted through the lens of analytical generalization and contextual applicability rather than population-wide inference. Given the cross-sectional survey and quantitative approach adopted, the objective was to collect standardised and quantifiable data suitable for statistical analysis, rather than in-depth qualitative insights

(Welman, Kruger & Mitchell, 2007:70). The researcher utilized contacts from LinkedIn and Facebook to initiate initial connections and generate sampling momentum, thereby facilitating the development of an expanding participant network. The employment of the snowball sampling method proved to be time-efficient and enhanced communication with participants, as they were acquaintances of the initial respondents, who themselves maintained a direct connection with the researcher.

3.6. RESEARCH INSTRUMENTS

The researcher developed a questionnaire for a survey (refer to Appendix C), which was utilised to gather data on different dimensions linked to internal control effectiveness, organisational performance, and audit outcome. The questionnaire employed a 7-point Likert scale (1 denoting “strongly disagree” and 7 denoting “strongly agree”) to ascertain the insights and attitudes of the respondents regarding these constructs to obtain meaningful responses (Moodley, 2019:21). By employing a survey questionnaire, the research study intended to gather quantitative data that can offer comprehensive insights into the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. The questionnaire facilitated the systematic measurement of crucial variables, allowing the examination of connections and hypothesis testing (Ropes & de Boer, 2021:730).

There are several advantages to utilising a survey questionnaire. Survey questionnaires allow the researcher to contact a large volume of individuals at a comparatively low cost, notably through email and social media channels. The questionnaire is useful for reaching individuals who live in remote areas or are spread out across large geographic areas (Lefever, Dal, & Matthíasdóttir, 2007:576). According to Cronjé (2024:54-55), the benefits of utilising a survey questionnaire include efficiency in data gathering from a large volume of respondents, a standardised format that ensures response consistency, and the capacity to systematically capture a variety of constructs. The instrument's validity and reliability were improved by using or modifying scales and items from earlier studies, which were built upon validated measures with proven psychometric qualities (Ajala, Ololade, Olaleye & Abass, 2023:67-68).

However, the utilisation of a survey questionnaire has some potential constraints. First, response biases such as recall biases or social desirability may be introduced because they rely exclusively on self-reported data. Furthermore, in contrast to qualitative approaches, the

questionnaire format may restrict the depth of comprehension and nuanced insights that can be acquired (Cronjé, 2024:55).

The instrument has been employed in key studies. Julius and Alex (2024) explored the correlation between the internal control system and financial performance in the Kisoro local government. Odumusor (2024) ascertained the internal control system as a key mechanism to effectively control spending in public institutions. Ismail, Kathim, and Al-Kanani (2023) explored the effect of corporate governance on the internal control effectiveness of non-profit government organisations. Kabweine (2022) evaluated the connection between Kabale Municipal Council's financial performance and its internal control system. Uwingabiye (2019) studied internal control factors and financial performance in Rwandan public institutions through a case study. Kinyua (2016) examined how internal control systems impact the financial performance of commercial businesses that are listed on the Nairobi Stock Exchange. Sihlali (2015) investigated the risk management effectiveness of local governments concerning the Nelson Mandela Bay municipality. Wibowo (2008) explored how internal corporate governance and organisational culture impact organisational performance in Indonesian commercial businesses.

3.7. PILOT STUDY

A pilot study is a brief research merit and viability determination intended to assess different facets of the approaches planned for more comprehensive, in depth, or confirmatory studies (Maxwell, 2013:66). To identify and develop the measures, previous research was utilised to ensure content validity. Pilot testing was carried out to determine whether the survey was comprehensible for participants and if there were any ambiguous or bewildering measurements in the survey questionnaire items. The survey items were also designed to ensure that they were appropriate for individual users of internal control systems. This ensured the instruments' face validity. The pilot test was conducted utilising a sample of a minimum of five senior managers who employ internal control systems and were sourced from the same demographic as the primary research study. The individuals selected to participate in the pilot study were not the same individuals who evaluated the instruments. Their responses assisted in determining the measures' face validity and enabled initial screening of each scale's descriptive statistics, comprising variation in responses, one-dimensionality, and overall measures of scale reliability.

3.8. DATA ANALYSIS STRATEGIES AND INTERPRETATION

The researcher analysed the data acquired statistically, utilising the statistical software version 29 of the Statistical Package for Social Sciences (SPSS) Analysis of Moment Structures (AMOS).

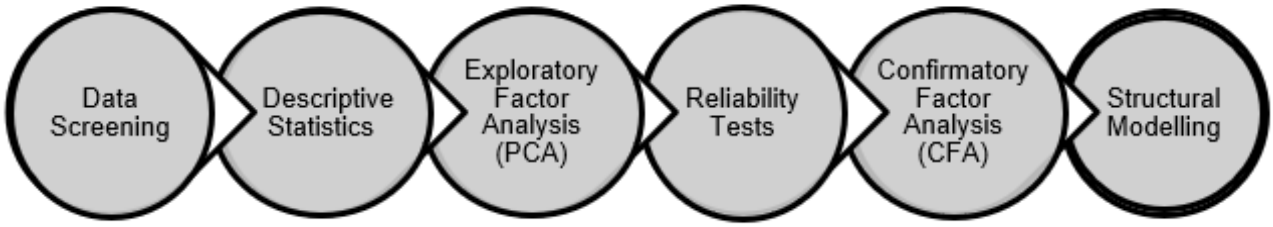


Figure 3.1: Steps to Analyse Data

3.8.1. Data Screening

The data screening procedure is a vital step when performing multivariate data analysis (Tabachnick & Fidell, 2013:79). Even though the questionnaires were pre-coded to reduce coding errors, the data acquired from the respondents underwent rigorous screening to detect and eliminate discrepancies before further analysis and processing (Mudau, 2021:111). The inferential statistic integrity was safeguarded by an honest data analysis, which required cautious consideration and the necessary resolution of any concerns before the primary analyses (Tabachnick & Fidell, 2013:61). Numerous studies have emphasised the analytical value of data screening exercises and preliminary analysis (Abubakar, Saidin & Ahmi, 2017; Badara & Saidin, 2014; Gorondutse & Hilman, 2014; Maiyaki & Mouktar, 2011; Mudau, 2021). Therefore, it is essential to check for potential data entry errors and other possible mistakes to correct the errors identified (Abubakar, Saidin & Ahmi, 2017:19). The data acquired were analysed via SPSS AMOS version 29, screening for outliers, normality, missing data, and outlying data (Cronjé, 2024:68).

3.8.2. Descriptive Statistics

Quantitative data can be meaningfully arranged, summarised, described, and compared via descriptive statistics (Salkind, 2008:8; Saunders, Lewis & Thornhill, 2007:433). This study employed descriptive statistics (including the mean, skewness, kurtosis, minimum,

maximum, and standard deviation) to describe the sample profile and determine the shape or distribution of the collected quantitative data.

Given that the data for this study were obtained through Likert scales, a pertinent issue arose regarding the appropriateness of employing parametric versus non-parametric statistical tests for data analysis. Gardner and Martin (2007:440) emphasised that the choice of analytical method significantly influences the interpretations derived from the results. Jamieson (2004:1217-1218) asserted that Likert data possess an ordinal or ranked structure, thereby suggesting the application of a non-parametric method to ensure the validity of findings. Conversely, Mudau (2021:111) demonstrated through empirical investigation that parametric methods, including covariance-based structural equation modelling (CB-SEM) and regression analysis, can be validly applied to data gathered via Likert scales without introducing bias in the conclusions. These results align with those reported by Murray (2013:262), who also confirmed the reliability of conducting parametric tests on Likert scale data.

Exploratory Factor Analysis was employed to identify the fundamental basis of a wide range of variables (Yong & Pearce, 2013:92). EFA was performed utilising the “Principal Component Analysis”. Prior to testing validity and reliability, a unidimensionality assessment needed to be completed. Nonetheless, during the “unidimensionality stage, the items with low factor loading (less than 0.6) were removed, while superfluous items could be removed or restricted” (Mudau, 2021:112). PCA enabled the initial examination of discriminant and convergent validity (Gruijters, 2019:547). Discriminant and convergent validity were confirmed by removing items with lower loadings. Validity pertains to whether the results derived from data gathering accurately depict the subject under examination (Cooper & Schindler, 2003:231-232). The validity of the instrument verified whether the instrument being employed was measuring the researcher’s intended outcome and the measured concept accurately (Cooper & Schindler, 2003:231).

Collis and Hussey (2009) outlined the three main categories of validity that are eminent:

- **Content validity** - primarily pertains to methods and tools and focuses on how well a measurement encompasses the variety of meanings inherent in the intended object or concept of study (Babbie & Mouton, 2001:122-123; Mudau, 2021:112). The most commonly asked question: ‘Does this tool or procedure adequately measure the intended outcome?’ (Delport, 2002:167). In this study, an in-depth literature review

focused on the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities, which provides background information for the overall design of the study. The conceptual definitions employed in this research study are connected with the research problem and inform the development of measuring instruments. Additionally, content validity is a judgemental process that the researcher employed in this study (Mudau, 2021:112).

- **Face validity -** this relates to the degree to which the scale is perceived as subjectively covering the concept it is intended to measure. The pilot study was used to identify items that were confusing and had low response variation (Lim, 2024:159; Mudau, 2021:112).
- **Construct validity -** this includes both convergent and discriminant validity, which refers to the extent to which the examination claims to measure and was initially established utilising EFA, as previously discussed. EFA was conducted to identify the underlying structure of the vast collection of variables. The primary aim of this initial EFA was to determine if the variables measured a single concept and to reveal the underlying factor structure (Lim, 2024:159).

Reliability tests were carried out to ensure that the measurement was error-free and that the results were reliable. The research study employed internal consistency as a reliability measure, which was validated with Cronbach's alpha, with at least a 0.70 threshold indicating reliability (Lai, 2018:8). The values below that gave rise to concern that there was too much measurement error. The internal consistency assessments were also employed to check item-to-total mutual connections, and items with low 0.30 item-to-total "mutual connections" were eliminated. The items that had fewer mutual connections were also eliminated (Mudau, 2021:113).

Confirmatory Factor Analysis was employed to evaluate whether the chosen measures corresponded with the suggested theories or models as a result of measuring the hypothesised model. The models were evaluated utilising the CFA procedures, which evaluated the unidimensionality, validity and reliability of the construct measurement items. After unidimensionality was assessed, reliability and validity tests were conducted. Items with factor loadings lower than 0.6 were eliminated when needed, and superfluous items were constrained or deleted (Cronjé, 2024:58).

Structural Equation Modelling is a complex statistical method that enables the examination of sophisticated connections between observed and latent variables within a specified theoretical framework. The technique combines aspects of multiple regression, factor analysis, and path analysis to estimate measurement models, which show the connection between observed indicators and latent constructs, and structural models, which illustrate the interrelations among latent constructs (Hair et al., 2019:6). SEM enables researchers to test theoretical claims involving large numbers of dependent and independent variables while controlling for measurement error, thereby distinguishing it from traditional statistical techniques such as regression analysis (Kline, 2016:10). The technique is especially useful in disciplines such as social sciences, behavioural studies, and business research, where abstract constructs such as satisfaction, trust, or organisational culture are measured using multiple indicators. Examining model fit was critical in SEM to assess how accurately the data were modelled. Various fit statistics were analysed, including the Goodness of Fit Index, Chi-square (X2), Normed Fit Index, Root Mean Square Error of Approximation, Comparative Fit Index, Tucker-Lewis Index, Chi-square degrees of freedom, and Adjusted Goodness of Fit Index. The acceptability of the study's proposed models and theories is indicated by these fit indices (Mudau, 2021:115-116).

Table 3.1: *Model fit indices criteria and acceptable levels*

Model fit criteria	Description	Acceptable level	Source
Goodness-of-Fit Index (GFI)	The GFI is the degree of fit between the hypothesised model and the observed covariance matrix	Less than 0.8 (no fit) Between 0.8 - 0.9 (acceptable) Above 0.9 (perfect fit)	Barret, 2007
Normed Fit Index (NFI)	The NFI evaluates the discrepancy between the chi-squared value of the hypothesised model and the chi-squared value of the null model.	Less than 0.8 (poor) Between 0.8 - 0.9 (acceptable) Above 0.9 (good)	Fan and Sivo, 2005; Byrne, 2013
Comparative Fit Index (CFI)	The CFI assumes that all latent variables are uncorrelated and compares the sample covariance matrix with the null model.	Less than 0.9 (poor) Above 0.9 (good)	Fan and Sivo, 2005
Incremental Fit Indices (IFI)	The IFI's purpose is to correct the issue of parsimony and sample size related to NFI.	Less than 0.9 (poor) Above 0.9 (good)	Byrne, 2013; Hoe, 2008
Root Mean Square Error of Approximation (RMSEA)	RMSEA informs how well the model, with indefinite but optimally selected parameter estimates, would fit the population's covariance matrix.	Less than 0.05 (good) Between 0.06 -1 (acceptable) Above 1 (poor)	Cheung and Rensvold, 2002
Ratio of Chi-square to Degrees of Freedom (χ^2/df)	To assess the magnitude of the discrepancy between the sample and fitted covariance matrices. The estimation process is dependent on the sample data.	Less than 3 (good) Between 3-5 (acceptable) Above 5 (poor)	Cheung and Rensvold, 2002
Tucker-Lewis Index (TLI)	The TLC utilises simpler models and is known to address the issue of sample size associated with NFI.	Less than 0.8 (poor) Between 0.8 - 0.9 (acceptable) Above 0.9 (good)	Hoe, 2008
Relative Fit Index (RFI)	The RFI compares the chi-square of the hypothesised model with that of a null or baseline model.	Less than 0.8 (poor) Between 0.8 - 0.9 (acceptable) Above 0.9 (good)	Byrne, 2013

3.9. POSSIBLE LIMITATIONS AND CHALLENGES OF THE STUDY

This research has several limitations that must be acknowledged. First, collecting organisational-level data via cross-sectional surveys creates noteworthy limitations in setting temporal priorities and drawing causal inferences (Rindfleisch, Malter, Ganesan & Moorman, 2008:261). Second, common method bias may occur when data on each variable are gathered from a single respondent (Cronjé, 2024:59). Multiple key informants were used for data gathering at the organisational level to mitigate this. Third, the adopted sampling design could introduce sampling bias due to a lack of responsiveness and self-selection bias and potentially affect the quantitative data analysis (Mudau, 2021:112). Consequently, the results may not represent all three spheres of South African municipalities (local, district, and metropolitan).

3.10. QUALITY ASSURANCE

Quality assurance is essential in this research study to ensure the validity, reliability, and overall robustness of the findings. Given the use of non-probability sampling, this study does not claim statistical representativeness; rather, it emphasises the steps taken to enhance the credibility of the findings and to reduce potential sources of bias. The following outlines these measures:

The study employed robust conceptual frameworks, namely COSO and the Balanced Scorecard (BSC), to guide the research design and ensure methodological rigour and theoretical validity. These frameworks provided a structured foundation for variable operationalisation, instrument development, and hypothesis formulation, thereby strengthening construct validity and internal coherence. Purposive and snowball sampling techniques were utilised to ensure the inclusion of knowledgeable and relevant respondents (e.g., municipal officials involved in internal control, risk management, and governance), thereby enhancing the credibility and contextual relevance of the data rather than its statistical generalisability. Purposive sampling supported internal validity (including content, face, and construct validity) by targeting respondents aligned with the study objectives (Tongco, 2007:154), while snowball sampling facilitated access to specialised networks that may otherwise be difficult to reach (Dusek, Yurova, & Ruppel, 2015:282-283). To mitigate nonresponse bias, a mixed-mode data collection strategy (e.g., electronic survey distribution and follow-ups) was employed, alongside reminder communications to improve participation

rates and response completeness. While nonresponse cannot be entirely eliminated, these steps contributed to improving response diversity and data quality. Maintaining respondents' confidentiality and anonymity was prioritised to encourage honest and unbiased responses, thereby enhancing data reliability and reducing social desirability bias (Roberts, 2007:21; Wilkinson & McTiernan, 2020:6). The survey questions were grounded in the COSO and BSC constructs, improving the construct validity, thereby strengthening construct validity through alignment with established theoretical frameworks. To uncover any ambiguity or misapprehension and enhance the instrument's clarity and face validity, the survey was pre-tested with a limited sample of respondents.

3.11. BOUNDARY STATEMENT (DELIMITATIONS AND LIMITATIONS)

This study is bounded within the context of South African municipalities, specifically focusing on metropolitan, district, and local municipalities as defined in the Municipal Finance Management Act (Act 56 of 2003). The unit of analysis is the municipality as an organisational entity, with data collected from key municipal decision-makers and assurance providers. These respondents include municipal managers, executive and middle management, audit committee members, chief audit executives, risk and compliance managers, internal and external auditors, and officials directly involved in the design, implementation, and monitoring of internal control systems. This respondent group was selected due to their direct involvement in governance, risk management, and internal control processes, thereby ensuring informed and contextually relevant responses.

The study is conceptually delimited to analysing internal control system effectiveness and its impact on organisational performance (incorporating both financial and non-financial dimensions) and audit outcomes in South African municipalities. While the study extends traditional internal control frameworks by incorporating human resource competency, corporate governance, and big data analytics, it does not explicitly analyse broader information technology systems beyond their relevance to big data analytics, nor does it extend to national or provincial government institutions.

Methodologically, the study is confined to a quantitative research approach employing a cross-sectional survey design. Data were collected at a single point in time, which limits the ability to establish temporal precedence and causal inference. The study further utilises Structural Equation Modelling (SEM) to test the hypothesised relationships and mediation effects, thereby focusing on statistically derived associations rather than longitudinal

dynamics. The reliance on perceptual data introduces the possibility of common method bias; however, this is mitigated through the use of multiple respondents per municipality and instrument design procedures. Sampling constraints, including purposive and snowball sampling, may introduce self-selection and non-response bias, potentially affecting the generalisability of findings across all municipalities (local, district, and metropolitan).

3.12. ETHICAL CONSIDERATIONS

Research ethics is perceived as a collection of permissible norms that prescribe and control what is permissible during the research process (David & Resnik, 2015:1). The study was conducted with ethical approval (reference number: 6405) obtained from the Ethics Research Committee at the University of South Africa's College of Accounting Sciences. The researcher adhered to the following general ethical principles:

3.12.1. Informed Consent

A fundamental standard of ethical research study is that potential participants can decide for themselves whether to accept participation. Informed consent forms the basis of ethical research (Monnatlale, 2023:10; Fleming & Zegwaard, 2018:210). In this context, the principles of informed consent were emphasised. The participants were prominently informed about the research study in a perspicuous, detailed, and factual manner using an informed consent form. Before participation, the researcher fully explained the study's overview and purpose to all participants and explained what was required of them, how the collected data would be utilised, and what, if any, consequences this might have.

3.12.2. Risk of Harm, Confidentiality, and Anonymity

Participants' identification must remain secret or anonymous (Hammer, 2017:158). The respondents were assured that participating in the research study would not have any negative consequences or cause any harm to them. The researcher complied with confidentiality and anonymity by allocating a pseudonym to each name mentioned in this study to protect the study participants. All invitations were sent as non-intrusive direct messages, and participation was entirely voluntary with no coercion, pressure, or repeated solicitation. As part of an academic programme, this study is designed not to cause harm to research participants. The participants were not coerced, intimidated, or manipulated to participate in this research study.

3.12.3. Plagiarism

As a researcher, it is of utmost importance to avoid plagiarism, as it compromises integrity. The ethical guidelines require that the author avoid using another person's work, data, images, ideas, or other original creations as his interpretation of the work, without consent or acknowledgement (Kintoki, 2017:58). However, researchers are permitted to cite or interpret other people's work and then acknowledge it by mentioning their publications/details in the reference list. All sources used by the researcher have been acknowledged as full references. The researcher also used Turnitin software to check, detect, and prevent plagiarism.

3.12.4. Participant Bias

While the adoption of a quantitative method within a positivist paradigm is appropriate for the survey design and statistical analysis employed in this study, the potential for participant-related biases is acknowledged as a limitation. To mitigate this risk, several measures were implemented. Firstly, anonymity and confidentiality were assured to respondents to reduce social desirability bias and encourage honest responses. Secondly, the questionnaire was carefully designed using clear, neutral, and unambiguous wording to minimise response bias and misinterpretation. Thirdly, where possible, items were adapted from previously validated instruments to enhance reliability and reduce measurement error. In addition, a pilot study was conducted to identify and correct potential sources of bias and ambiguity before full data collection. Finally, statistical techniques, such as reliability and validity testing (e.g., Cronbach's alpha and factor analysis), were employed to assess the consistency and robustness of the data. These measures collectively contributed to reducing the impact of participant bias and enhancing the credibility of the study findings.

3.12.5. Data privacy and protection

Data were collected through LinkedIn invitations in a manner that respected participants' privacy and complied with ethical research standards. Contact information was accessed solely through publicly available professional profiles and was used only for the purpose of distributing the survey invitation; no personal data were downloaded, stored, or shared outside the survey process. To ensure data protection, completed survey responses were anonymised and stored securely on a password-protected device accessible only to the

researcher and supervisor. In accordance with UNISA ethical guidelines, the data will be retained for the prescribed retention period and permanently deleted thereafter.

3.13. CHAPTER SUMMARY

In conclusion, this chapter outlines the research methodology necessary to analyse the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. Consistent with positivism, this research followed a deductive quantitative approach. A structured online survey questionnaire was disseminated to a sample of 1200 individuals through LinkedIn to gather and analyse data on the factors influencing the effectiveness of the internal control system and its impact on the organisational performance and audit outcomes of South African municipalities. The research design adopted snowball sampling and purposive sampling. The chapter outlined the data analysis strategies and interpretation employed in analysing and interpreting the data acquired. A systematic approach that encompassed descriptive statistics, exploratory and confirmatory factor analysis, assessments of reliability and validity, and structural equation modelling was followed. The chapter discussed ethical considerations that the researcher complied with. Ethical clearance was acquired, and the confidentiality of participants was upheld in adherence to research ethics protocols. The chapter also recognised the limitations of the research, including potential response bias and generalisability constraints, while maintaining meticulous data gathering and analysis. The following chapter presents and discusses the study's results derived from the analysed data to evaluate the research model.

CHAPTER 4: PRESENTATION OF RESULTS

4.1. INTRODUCTION

Chapter 3 presented a structured approach and procedures adopted to analyse the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. It provided an overview of the research approach and design, data collection methods, population and sampling methods, and techniques employed for data analysis. The research study is underpinned by a positivist paradigm and employs a quantitative deductive approach. Data collection was conducted through a cross-sectional survey employing a non-probability sampling technique, with a sample of 1200 participants. All the constructs were measured using a structured questionnaire utilising multi-item Likert scales. The data analysis procedure included descriptive statistics, reliability tests, factor analysis, and structural equation modelling.

Ethical clearance (reference number: 6405) of the instrument was acquired from the University of South Africa, College of Accounting Sciences, Research Ethics Review Committee, to ensure informed consent, participant confidentiality, and the protection of data. This methodological approach contributed to the reliability and validity of the data, thereby establishing a solid basis for the subsequent analysis of the research results.

This chapter presents the results of the data analysis, addressing the research objectives introduced in Chapter 1, Section 1.7. The research objective SRO1 "*To analyse the factors influencing internal control system effectiveness*" is analysed and empirically tested. In addition, SRO2 "*To analyse the impact of internal control effectiveness on both financial and non-financial aspects of organisational performance within municipalities*" is analysed and empirically tested. Finally, SRO3 "*To analyse the impact of effective internal control on audit outcomes of municipalities, with organisational performance serving as a mediating factor, and the indirect effect of internal control on audit outcomes via performance*" is analysed and empirically tested. The objective is to provide a comprehensive and methodological presentation of empirical findings collected by means of an online survey. The results are structured according to the main constructs of the study that informed the data collection process.

The subsequent sections begin with a discussion of the sample, including data preparation and the screening procedure, as well as the demographic profile of the respondents. This is

succeeded by the analysis of the sample, which yields descriptive statistics, an evaluation of normality, and confirmation of sample adequacy. Once confirmed, tasks such as principal component analysis (PCA), confirmatory factor analysis (CFA), testing for reliability and validity, and analysis of the structural model are performed. Lastly, the findings from the structural model are discussed, followed by a presentation of the conclusions.

4.2. SAMPLE SIZE

A questionnaire was disseminated to 1200 prospective participants via LinkedIn, following the sampling methodology outlined in Chapter 3, Section 3.5. A total of 338 individuals participated in the study, yielding a response rate of 28.2%. The 338 questionnaires received were subsequently screened for completeness, during which missing values were identified and eliminated. Eighteen responses were eliminated because of substantial missing data and incomplete responses, resulting in a total of 320 usable responses, corresponding to a 26.7% effective response rate. This ensured the integrity of the dataset utilised for subsequent descriptive analysis.

4.3. DATA PREPARATION

Data preparation refers to the process of converting and structuring raw data into a format that is appropriate for statistical analysis (Lutabingwa & Auriacombe, 2007:529). A primary benefit of data preparation is that it facilitates the readiness of both the dataset and the analyst. Properly prepared data enable the analyst to gain holistic insight and understanding regarding the data's content, scope of applicability, and limitations. When data are rigorously prepared and surveyed, the integrity and dependability of the produced models are predominantly contingent upon the quality and substance of the data rather than the analyst's technical prowess (Williamson & Johanson, 2018:432). In this study, data preparation was conducted through a tripartite process, which included data coding, data exporting, and data cleaning.

4.3.1. Data Coding

During the development of the questionnaire, the data coding process constituted a pivotal step to ensure that the responses obtained through Microsoft Forms could be systematically analysed using statistical software. Each questionnaire item was meticulously assigned a unique variable identifier and corresponding numerical code to facilitate interpretability and

maintain consistency across the dataset in line with the recommendation of Babbie and Mouton (2005:418). The study employed a 7-point Likert scale with responses pre-coded with ordinal values ranging from 1 (strongly disagree) to 7 (strongly agree), facilitating seamless integration into the Statistical Package for the Social Sciences (SPSS) software. The resulting codes for all the questions and responses are presented in the research instrument (refer to Appendix C). Categorical variables such as categories, size, total revenue of municipalities, job title, education level, professional registration, experience, and age group were assigned distinct numeric codes, with all response options designed to be mutually exclusive to preclude inconsistencies in the interpretation of empirical data in line with the recommendations of Lutabingwa & Auriacombe (2007:530). To minimise missing or invalid responses, the form's mandatory response settings and skip logic were carefully aligned with the study's coding scheme. Additionally, the coding scheme was constructed to support the research objectives and hypotheses, ensuring that each measured variable corresponded to a construct under examination in line with the recommendation of Babbie & Mouton (2005:412). This systematic coding of the data not only improved the structural quality of the dataset but also provided the basis upon which accurate statistical analysis, including factor analysis, reliability testing, and structural modelling, could be performed.

4.3.2. Data Exporting

After the conclusion of the data coding process, the raw dataset was migrated from Microsoft Forms to SPSS version 30 and AMOS version 30. Within these software environments, the variable properties, including names, measurement levels, and value labels, were meticulously defined to reflect the pre-established coding scheme, thus preparing the data for subsequent empirical analysis. Likert-scale variables were subjected to rigorous methodological attention, ensuring that their ordinal measurement levels were maintained, thus preserving the integrity of the statistical assumptions underlying subsequent tests. The exporting process also included cross-checking for format compatibility issues such as numeric fields inadvertently converted into text, thus ensuring that the dataset was fully optimised for statistical procedures, including reliability analysis, factor analysis, correlation, and regression.

4.3.3. Data Screening

Data screening is defined as the methodical examination of datasets to identify errors, recognise outliers, and evaluate assumptions before conducting statistical analyses (Abdulwahab, Zulkhairi & Galadima, 2011; Abubakar, Saidin & Ahmi, 2017:19). A rigorous data screening procedure was executed to ensure the integrity, precision, and appropriateness of the dataset for subsequent statistical analysis. This vital step was instrumental in detecting and addressing any inconsistencies, anomalies, or missing values that might have occurred during data collection or export.

During manual examination of the dataset, 15 responses (1.3% of the sample) were identified as incomplete. The respondents indicated that the internal control system is not within their knowledge, resulting in their provision of only demographic information. Consequently, these responses were subsequently excluded from further statistical analysis to ensure methodological rigour. This step ensured that only responses containing substantive data were retained for analysis.

Three responses contained minimal missing data, specifically for the item relating to the audit outcome. Given the importance of this variable to the structural model and the potential impact on analysis, these cases were also removed. Following case-wise deletion, the expectation-maximisation (EM) method was applied to address the small proportion of remaining missing values (Scheffer, 2002:154). The EM algorithm assumes that data are missing at random (MAR), whereby the probability of missingness is related to observed data but not to the missing values themselves (Seaman, Galati, Jackson & Carlin, 2013:257). . Table 4.1 displays the results from the analysis of the missing data.

Table 4.1: Summary of Missing Data and Removed Responses in the Dataset

Respondent	Count of Missing Values per Respondent	% of Responses Missing	Affected Theoretical Variables
14; 22; 113	3	9%	Audit outcome
1; 8; 24; 43; 89; 90; 105; 108; 121; 124;	15	86%	All

126; 149; 165; 196; 213
Total respondents removed (%missing > 5%) = 18

In accordance with established theoretical guidelines (Dong & Peng, 2013:2), survey responses with more than 5% missing data were excluded from the data analysis. Audit outcome was the most significantly impacted theoretical variable. Given that the survey questions related to this variable were located near the terminal section of the instrument, it is reasonable to infer that respondent fatigue may have contributed to the missing data (Van Mol, 2017:318). Consequently, a total of 320 responses were retained for subsequent analysis.

4.3.4. Sample Outliers

Outliers refer to data points that significantly differ from the overall trend of a dataset and can disproportionately affect statistical outcomes (Mudau, 2021:169). To detect possible outliers, z scores exceeding ±3 standard deviations from the mean of the sample were examined, adhering to conventional thresholds widely employed in multivariate statistical analyses and presupposing that the dataset conforms to a normal distribution (Kolbaşi & Ünsal, 2019:215-216; Seo, 2006:10). The analysis indicated no extreme values, as all z scores fell within the acceptable thresholds. This indicates a high degree of sample homogeneity, suggesting that all participants likely came from the same underlying population.

4.4. DEMOGRAPHIC STATISTICS

This section presents the demographic characteristics of the participants involved in the empirical study. The primary demographic characteristics examined included municipality category, municipality size, total revenue of the municipality, job title, level of education, professional registration, work experience, municipality experience, internal control experience, and age group. Table 4.2 presents the demographic characteristics of the data gathered from the 320 participants.

Table 4.2: Demographic Data of the Respondents.

Demographics	Category	Frequency	Percentage
	Metropolitan municipality	105	32.8

Municipality	District municipality	101	31.6
	Local municipality	114	35.6
Size	Less than 1000 employees	152	47.5
	1001 – 2000 employees	44	13.8
	2001 – 3000 employees	14	4.4
	3001 – 5000 employees	13	4.0
	5001 – 10000 employees	10	3.1
	10001 – 15000 employees	3	0.9
	15001 – 20000 employees	11	3.4
	Above 20000 employees	73	22.8
Total Revenue	Less than R500 million	94	29.4
	R501 – R1 billion	64	20.0
	R1 billion – R5 billion	46	14.4
	R5 – R10 billion	23	7.2
	R10 - R20 billion	8	2.5
	R20 – R50 billion	19	5.9
	Above R50 billion	66	20.6
Job Title	Municipal Manager	23	7.2
	Chief Financial Officer	25	7.8
	Chief Audit Executive	20	6.3
	Director	14	4.4
	Deputy Director	11	3.4
	SCM/Procurement/Contract Manager	11	3.4
	Risk Manager	12	3.8
	Compliance Manager	5	1.6
	Internal Audit Manager	20	6.3
	Internal Assistant Audit Manager	3	0.9
	External Audit Manager	52	16.3
	External Assistant Audit Manager	41	12.8
	Senior Auditor	21	6.6
	Operational Manager	11	3.4
	Budget/Finance Manager	15	4.7
	Internal Control Manager	5	1.6
	Other (please specify)	31	9.7
	Grade 12 or Matric	7	2.2

Highest Level of Education	National Diploma/Advanced Certificate	16	5.0
	Bachelor's Degree/Advanced Diploma	60	18.8
	Honours Degree/Postgraduate Diploma	168	52.5
	Master's degree	46	14.4
	PhD	23	7.2
Professional registration	No professional registration	139	43.4
	Chartered Accountant (CA)	102	31.9
	Certified Public Accountant (CPA)	3	0.9
	Registered Government Auditor (RGA)	16	5.0
	Certified Internal Auditor (CIA)	18	5.6
	Professional Internal Auditor (PIA)	4	1.3
	Registered Auditor (RA)	1	0.3
	Associated Chartered Certified Accountant (ACCA)	5	1.6
	Associate Chartered Management Accountant (ACMA)	5	1.6
	Certified Information Systems Auditor (CISA)	12	3.8
	Other (please specify)	15	4.7
Work Experience	Less than 5 years	15	4.7
	5 - 10 years	70	21.9
	10 - 15 years	48	15.0
	More than 15 years	187	58.4
Municipal Experience	Less than 5 years	33	10.3
	5 - 10 years	94	29.4
	10 - 15 years	53	16.6
	More than 15 years	140	43.8
Internal Control Experience	1-2 years	21	6.6
	3-4 years	21	6.6

	5-7 years	31	9.7
	8-10 years	50	15.6
	More than 10 years	197	61.6
Age Group	18 - 25 years	9	2.8
	26 - 35 years	79	24.7
	36 - 60 years	181	56.6
	Above 60 years	51	15.9

4.4.1. Municipality Category

The results presented in Table 4.2 and Figure 4.1 reflect a broad and diverse representation across South African municipalities. In terms of the municipal category, local municipalities accounted for the largest segment, at 35.6% (n=114), followed by metropolitan municipalities at 32.8% (n=105) and district municipalities at 31.6% (*n*=101). This distribution suggests that the results of the study are reflective of the full spectrum of municipal administration types in South Africa.

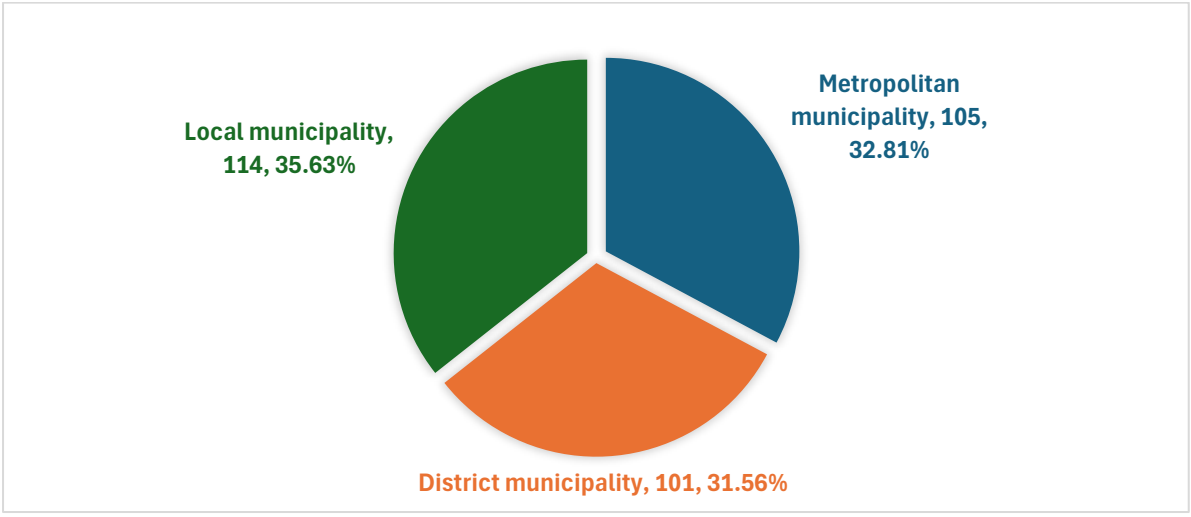


Figure 4.1: Municipality Category

4.4.2. Size of Municipalities

The size of municipalities is measured by the number of employees. The highest proportion of respondents, with a contribution of 47.5% (*n*=152), served municipalities with fewer than 1,000 employees. This indicates that a significant representation from local municipalities is characterised by streamlined staffing, likely located in rural or semi-urban regions. The results

are also representative of medium-sized municipalities, with 13.8% *(n*=44) of respondents from municipalities with 1,001–2,000 employees, followed by 4.4% (*n*=14) from those with 2,001–3,000 employees and 4.0% (*n*=13) from those with 3,001–5,000 employees. A smaller proportion, 3.1% (*n*=10) and 0.9% (*n*=3), served municipalities with between 5,001–10,000 and 10,001–15,000 employees, respectively. Notably, 3.4% (*n*=11) of the respondents were from municipalities with between 15,001 and 20,000 employees, which is indicative of larger urban areas or metropolitan regions characterised by intricate governance frameworks. A notable proportion of 22.8% (*n*=73) represented larger municipalities employing over 20,000 employees, whereas the remaining respondents were spread across medium-sized categories. These are probably metropolitan municipalities that have broad responsibilities for service delivery and significant administrative tasks. This allocation underscores a well-distributed representation of municipalities of different sizes, offering in-depth insight into internal control systems within various operational environments. The results are illustrated in Figure 4.2 below.

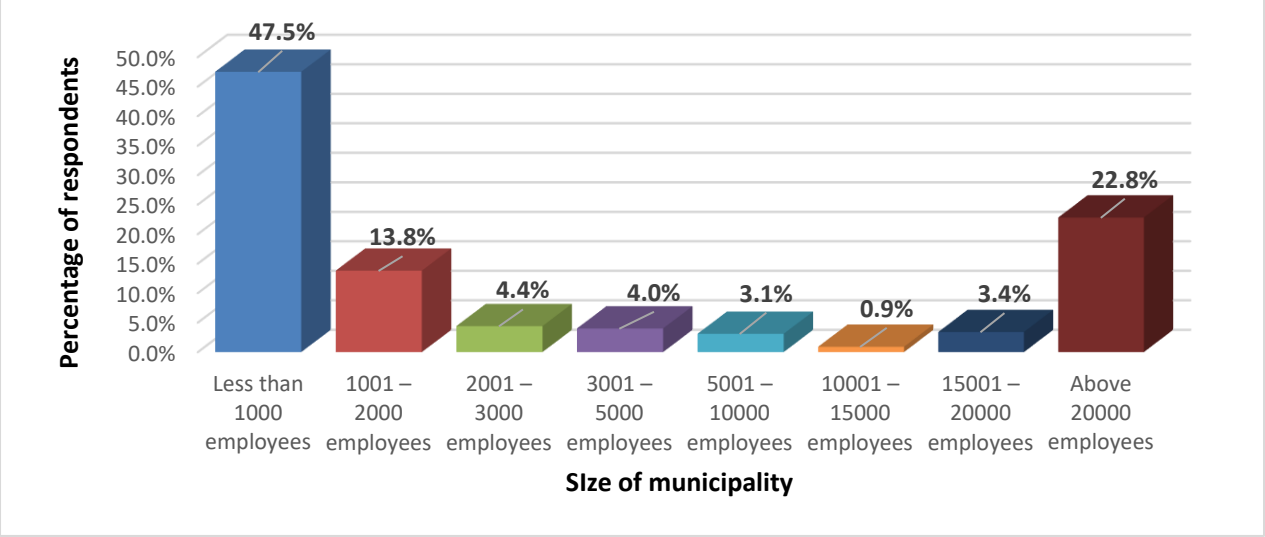


Figure 4.2: Size of Municipality

4.4.3. Total Revenue of the Municipalities

In terms of the total revenue of the municipalities, 29.4% (*n*=94) of the respondents came from municipalities with annual revenues below R500 million, reflecting a substantial representation from smaller municipalities that are potentially resource constrained. This was followed by 20.6% (*n*=66) of the respondents working in municipalities with over R50 billion in annual revenue, indicating that the sample also comprised well-resourced metropolitan

municipalities with large fiscal capacity. Revenues falling between R501 million and R1 billion represented 20.0% (*n*=64) of the sample, depicting medium-sized financial operations. Another 14.4% (*n*=46) of the respondents were from municipalities with annual revenues between R1 billion and R5 billion, whereas 7.2% (*n*=23) represented municipalities with revenues between R5 billion and R10 billion. In addition, 5.9% (*n*=19) represented municipalities with revenues between R20 billion and R50 billion, and 2.5% (n=8) represented municipalities with revenues between R10 billion and R20 billion per annum. This wide financial range among the sample illustrates that the research gathered insights from municipalities of different economic scales, from those with limited financial means to high-revenue metropolitan municipalities. This financial diversity broadens the applicability of the findings and ensures that the results mirror the characteristics of internal control systems across various fiscal contexts within the South African municipal sector. The results are illustrated in Figure 4.3 below.

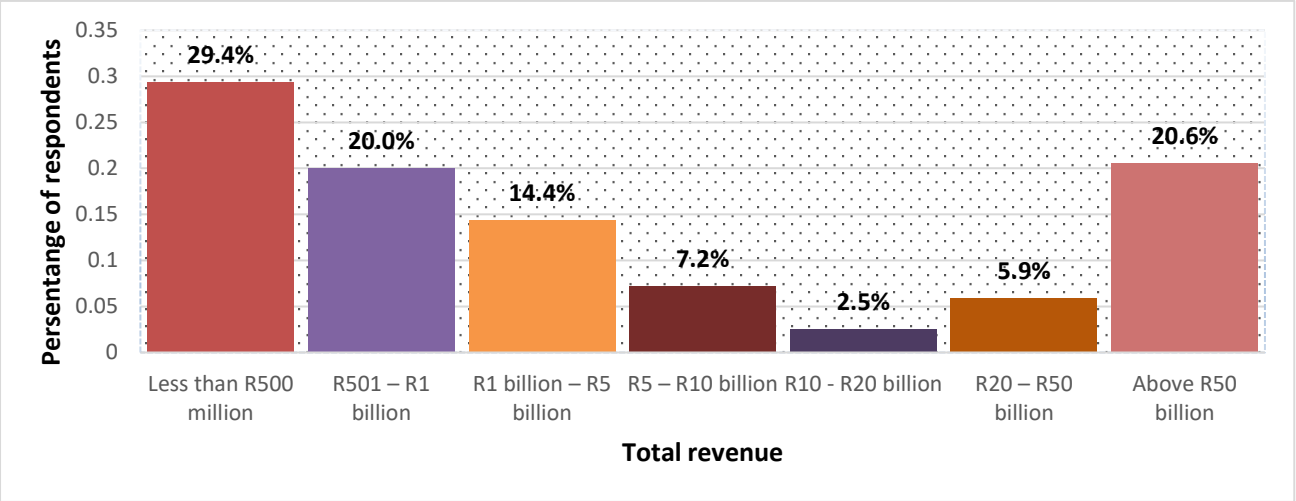


Figure 4.3: Total Revenue of Municipalities

4.4.4. Job Title

The examination of the job titles of the respondents revealed a diverse and multidisciplinary array of professional roles within the municipal landscape of South Africa. Among the 320 respondents, the position that was reported most frequently was the External Audit Manager, representing 16.3% (*n*=52) of the sample, with External Assistant Audit Managers closely following at 12.8% (*n*=41). These statistics highlight the notable presence of external overseeing professionals in the study. Chief Financial Officers made up 7.8% (*n*=25), whereas municipal managers accounted for 7.2% (*n*=23), reflecting significant participation

from senior executive leadership. Both Chief Audit Executives and Internal Audit Managers represented 6.3% (*n*=20) of the sample, indicating the robust inclusion of internal assurance professionals. Senior Auditors contributed at a rate of 6.6% (*n*=21), along with Budget/Finance Managers at 4.7% (*n*=15), indicating their meaningful contributions to the dataset. The dataset also included a variety of mid-level and specialised roles, such as Directors (4.4%, *n*=14), Deputy Directors, and SCM/Procurement/Contract Managers (each at 3.4%, *n*=11), Risk Managers (3.8%, *n*=12), Operational Managers (3.4%, *n*=11), and Compliance Managers (1.6%, *n*=5). A smaller segment consisted of Internal Assistant Audit Managers (0.9%, *n*=3), Internal Control Managers (1.6%, *n*=5), and a category referred to as Other (9.7%, *n*=31), likely capturing a variety of support and advisory roles not explicitly mentioned. This diversity in professional backgrounds indicates that the findings of the study are shaped by a wide range of perspectives across different managerial and technical fields, thus enhancing the empirical understanding of internal control systems and audit-related dynamics in the municipal sector. The results are illustrated in Figure 4.4 below.

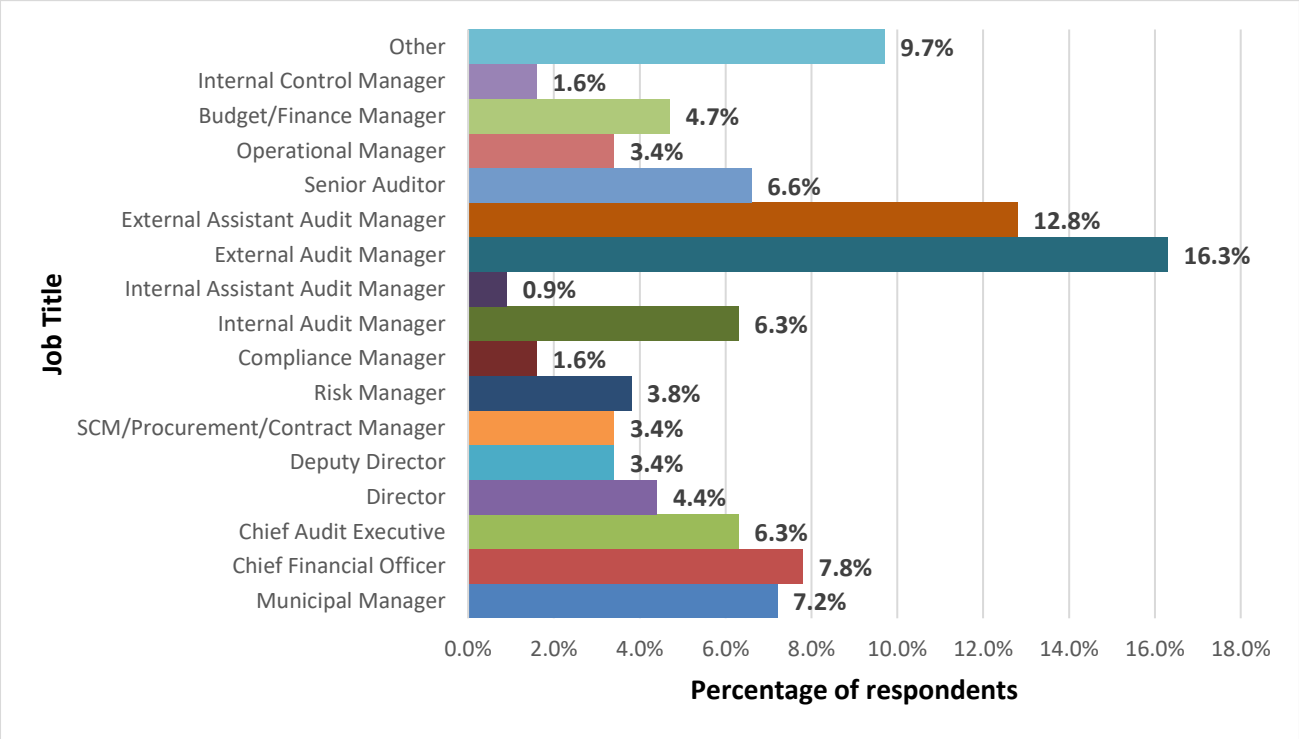


Figure 4.4: Job Title

4.4.5. Highest Level of Qualification

The participants' educational level indicates a group of professionals in the South African municipal sector who are well qualified and possess significant academic achievement. A

significant portion of the participants, 52.5% (*n*=168), possessed either a Honours degree or a postgraduate diploma, highlighting the notable presence of individuals with postgraduate qualifications. The next group consisted of 18.8% (*n*=60) who held either a bachelor's degree or an advanced diploma, while 14.4% (*n*=46) had completed a master's degree, indicating that a considerable number of respondents had higher education credentials. Importantly, 7.2% (*n*=23) had earned a Doctor of Philosophy (PhD), highlighting the presence of highly educated professionals within the sample. A smaller group of respondents held either a national diploma or advanced certificate, making up 5.0% (*n*=16), whereas only 2.2% (*n*=7) possessed a Grade 12 or Matric. The significant presence of postgraduate degrees within the sample indicates a workforce that is both intellectually competent and professionally ready to tackle intricate matters concerning internal control systems, organisational performance, and auditing practices in the municipal setting. This academic strength increases the dependability of the insights obtained from the research and enhances the credibility of the respondents' viewpoints. The results are illustrated in Figure 4.5 below.

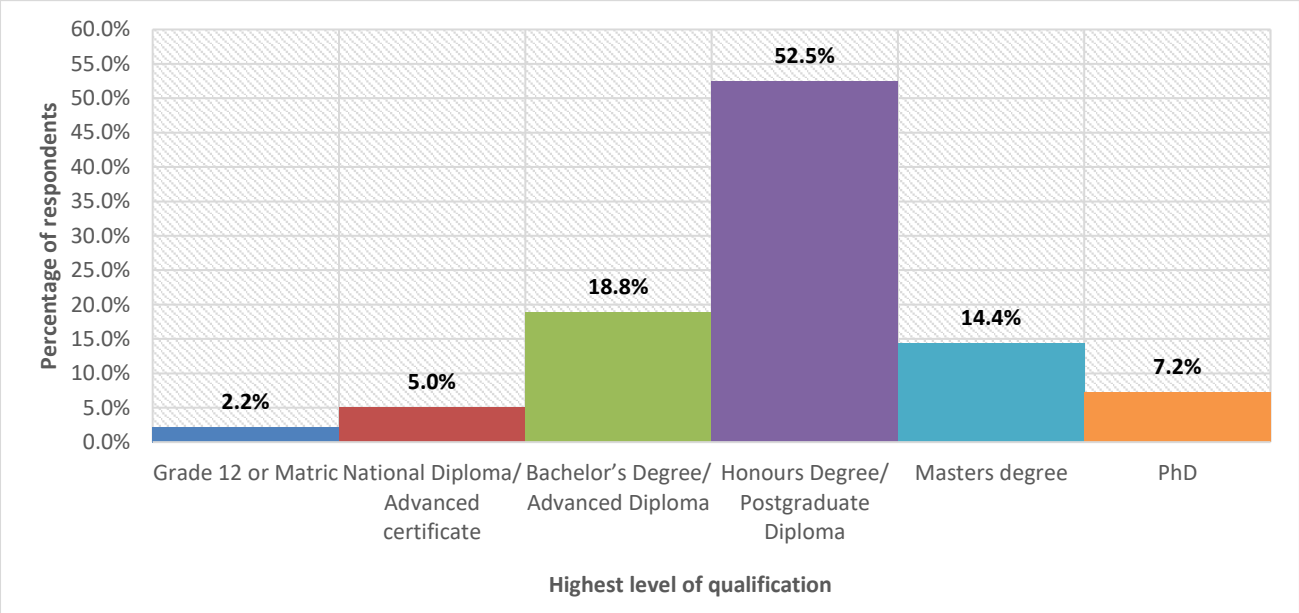


Figure 4.5: Highest Level of Qualification

4.4.6. Professional Registration

The respondents' professional registration profile presents a heterogeneous combination of formally certified professionals and those holding no official designations, echoing a wide range of expertise within the South African municipal sphere. Notably, a considerable proportion (43.4%, *n*=139) indicated no professional registration, which means that a large

majority of the participants operated on the strength of experience or academic training alone. The dataset, however, also reflects a strong presence of formally certified professionals. The most dominant professional affiliation was Chartered Accountant (CA), which constituted 31.9% (*n*=102) of the sample, highlighting the significant presence of financial expertise. Other prominent professional affiliations were Certified Internal Auditors (CIA) at 5.6% (*n*=18), Registered Government Auditors (RGA) at 5.0% (*n*=16), and Certified Information Systems Auditors (CISA) at 3.8% (*n*=12), collectively highlighting an appreciable presence of auditing and IT governance experts. Small yet imperative groups belonged to the Professional Internal Auditor (PIA), constituting 1.3% (*n*=4); Associated Chartered Certified Accountant (ACCA), constituting 1.6% (*n*=5); Associate Chartered Management Accountant (ACMA), constituting 1.6% (*n*=5); and Registered Auditors (RA), constituting 0.3% (*n*=1). Certified Public Accountants (CPA) made up 0.9% (*n*=3), while other professional registrations, including unspecified designations, were 4.7% (*n*=15). This comprehensive professional accreditation profile reflects a robust combination of formal qualifications and certifications, particularly within the auditing, accounting, and internal control disciplines. This approach substantially improves the empirical rigour of the study by capturing the perspectives of both professionally certified experts and holders of experiential knowledge. The results are illustrated in Figure 4.6 below.

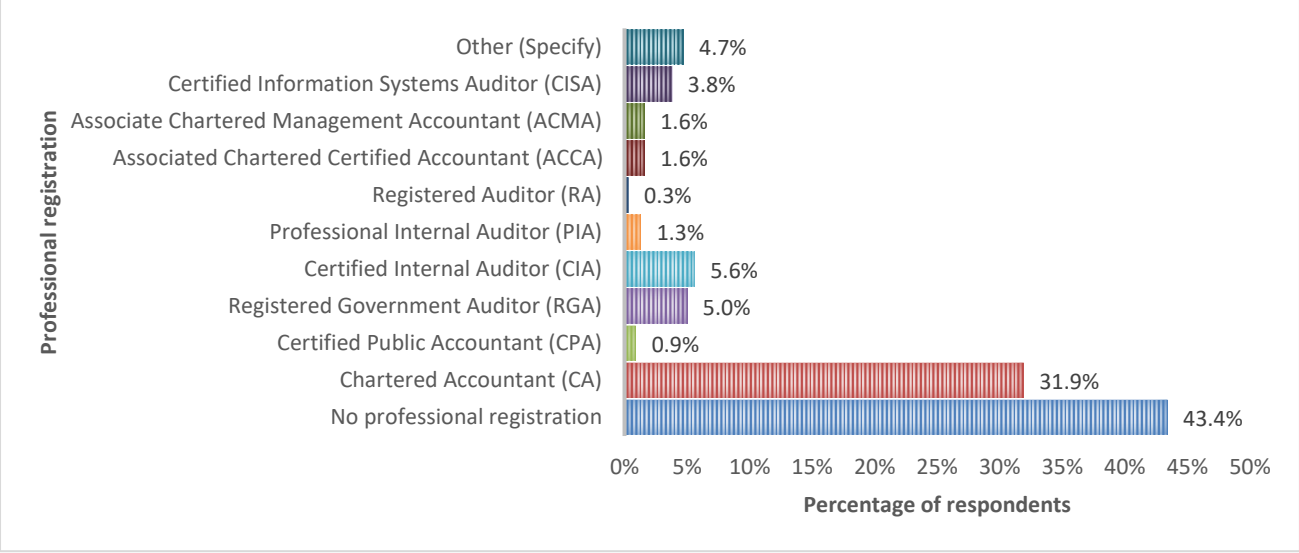


Figure 4.6: Professional Registration

4.4.7. Work Experience

The breakdown of respondents by total work experience indicates a prevalence of veteran professionals in the municipal sector. Most participants, 58.4% (*n*=187), indicated more than 15 years of work experience, highlighting the depth of institutional knowledge and practical insight inherent in the sample. This category includes senior executives, long-serving auditors, and finance specialists with an encyclopaedic knowledge of municipal operations and internal control systems. Those with 5 to 10 years of experience constituted 21.9% (*n*=70), reflecting mid-career professionals who have gained substantial practical experience and are often in middle to senior management positions. Furthermore, 15.0% (*n*=48) of the respondents reported between 10 and 15 years of experience, suggesting that a seasoned group moved toward strategic leadership roles. Conversely, only 4.7% (n=15) of the respondents indicated having less than 5 years of professional experience, indicating limited representation from early-career individuals. This array of professional experience highlights the study's empirical foundation, which is predominantly derived from data collected from individuals possessing extensive and long-term involvement in municipal governance. This focus on sector-specific knowledge significantly enhances the analytical credibility, methodological strength, and epistemological depth of the results, thereby bolstering the validity and interpretative richness of insights related to internal control systems, performance, and audit dynamics within the South African municipal framework. The results are illustrated in Figure 4.7 below.

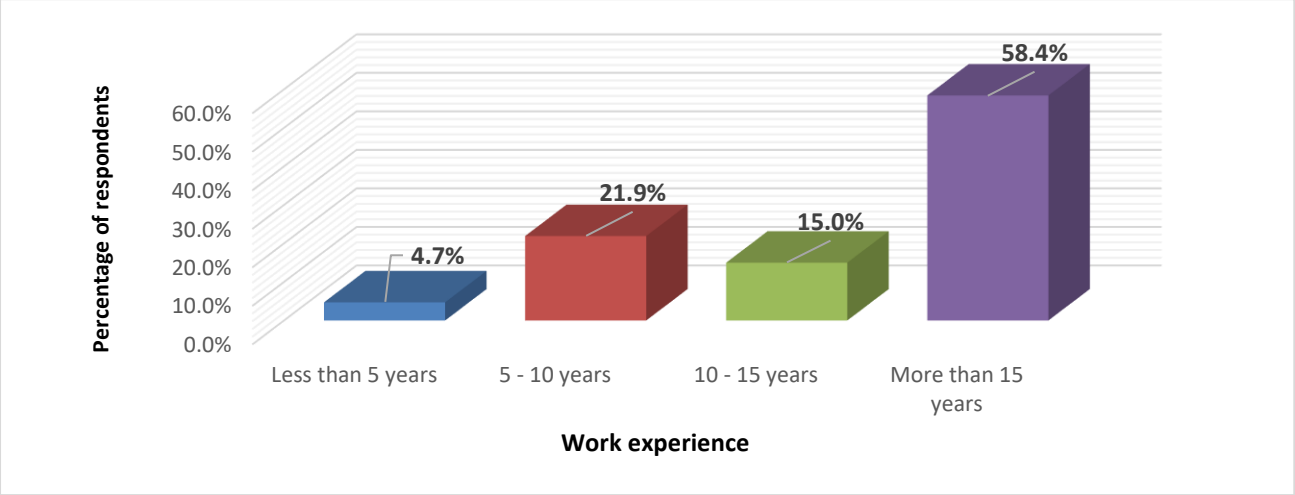


Figure 4.7: Work Experience

4.4.8. Municipal Experience

The distribution of participants according to their length of service in the municipal sector indicates diverse representations of various experience levels. The largest group of 43.8% (*n*=140) indicated that they have over 15 years of experience, specifically in municipalities, which points to a strong cohort of deeply integrated professionals with a significant understanding of public sector operations, governance structures, and compliance with regulations. This cohort likely includes senior officials who have a long-term understanding of the development and implementation of internal control and audit frameworks in the municipal environment. A noticeable portion of the respondents (29.4%, *n*=94), with experience ranging from 5 to 10 years of municipal work, signified a strong mid-career archetype with some operational and policy-level insight. Additionally, 16.6% (n=53) of the respondents had 10–15 years of experience, giving further credence to the study's reliance on respondents possessing mature sector-specific expertise. In contrast, 10.3% (*n*=33) of the participants had less than 5 years of experience in municipal contexts, indicating a smaller yet significant group of relatively new professionals in the municipal sector. These results indicate that many respondents had extensive institutional knowledge and contextual understanding. This strengthens the empirical rigour and practical relevance of the study's findings on the internal control systems and audit practices of municipalities. The results are illustrated in Figure 4.8 below.

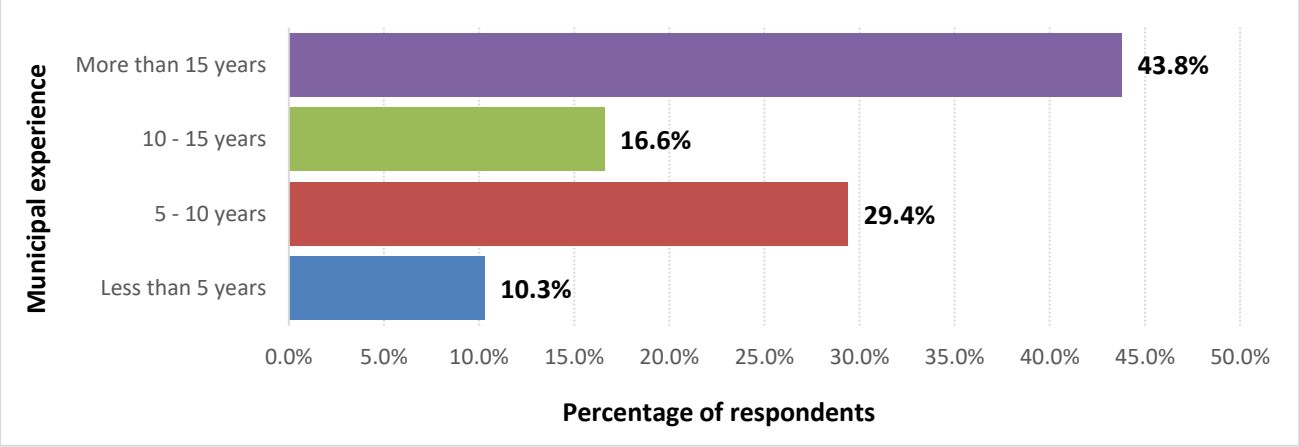


Figure 4.8: Municipal Experience

4.4.9. Internal Control Experience

The distribution of respondents' experience with internal control systems indicates that they are technically proficient and highly knowledgeable. A significant proportion of respondents constituted 61.6% (*n*=197), indicating that they had over 10 years of experience in the internal control environment, reflecting a notable contribution of advanced knowledge in areas such as internal audits, risk management, compliance, and governance practices in the municipal sector. Based on this extensive background, it appears that most respondents have significant institutional experience and are likely to be actively involved in the design, evaluation, execution and implementation of internal control mechanisms within their respective municipalities. Furthermore, 15.6% (*n*=50) indicated having between 8 and 10 years of experience, which underscores the presence of experienced professionals with nearly a decade of involvement in internal control systems. Additionally, 9.7% (*n*=31) of the participants reported having 5 to 7 years of experience, whereas 6.6% (*n*=21) indicated experience levels of 1 to 2 years and 3 to 4 years, respectively. These cohorts reflect early-to-mid-career professionals who are progressively acquiring subject-matter expertise. Collectively, the distribution reflects a workforce that is predominantly characterised by long-term practical engagement in internal control activities, thus bolstering the credibility, technical precision, and empirical richness of the study's conclusions within the framework of municipal governance in South Africa. The results are illustrated in Figure 4.9 below.

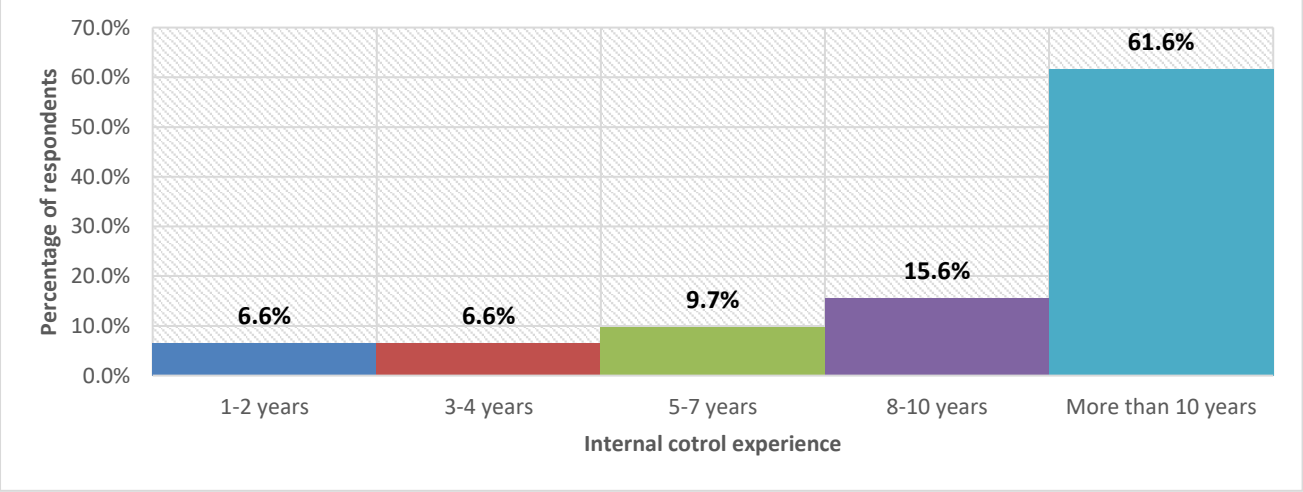


Figure 4.9: Internal control experience

4.4.10. Age Group

The age profile of the respondents reflects a mature and professionally experienced cohort well placed to offer informed viewpoints on internal control systems in municipalities. The highest age bracket was the 36–60 years category, which accounted for 56.6% (*n*=181) of the sample. This age group is commonly linked with middle- to senior-management-level positions and implies a rich source of professional experience and institutional knowledge. The age bracket of 26–35 years constituted 24.7% (*n*=79) of the sample, indicating a significant presence of early-to-mid-career professionals who are likely progressing to leadership or specialist positions. The percentage of respondents above 60 years of age was 15.9% (*n*=51), indicating the involvement of veteran professionals with long years of experience in public administration and governance. Conversely, only 2.8% (*n*=9) of the participants were in the 18–25 years age range, implying minimal involvement from the entry level to recent graduates. The age profile illustrates a respondent pool with high levels of professional maturity and strategic understanding, thus bolstering the credibility, depth, and practical application of the study's findings in the fields of municipal internal control systems, organisational performance, and audit systems. The results are illustrated in Figure 4.10 below.

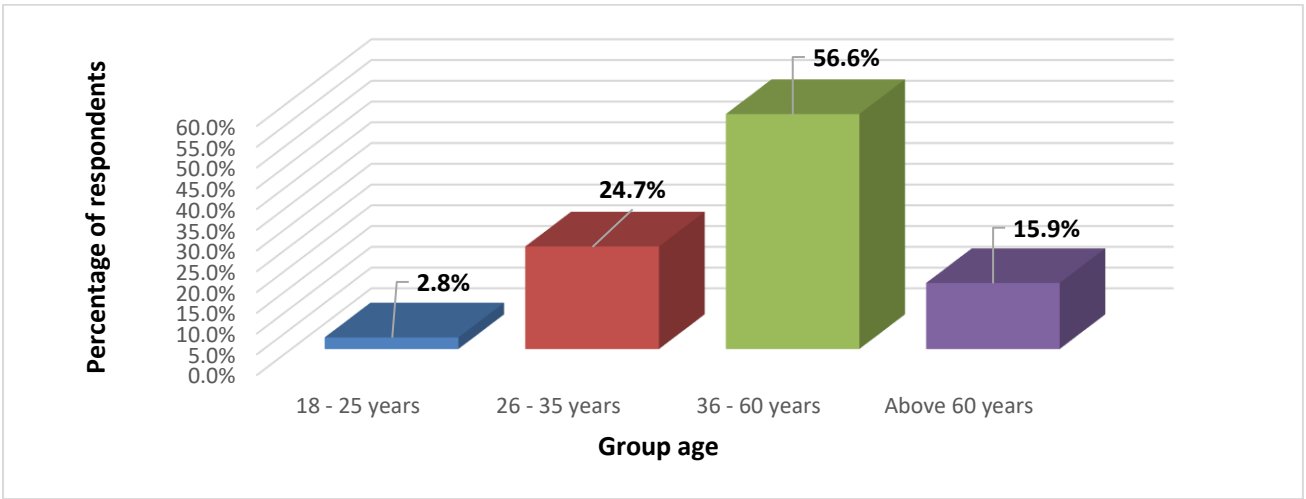


Figure 4.10: Age Group

4.5. DESCRIPTIVE STATISTICS

This section provides a descriptive statistical analysis of the constructs analysed in this study. The constructs under empirical scrutiny include the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource

competency, corporate governance, big data analysis, internal control systems, operational performance, customer performance, financial performance, and audit outcome. First, constructs such as the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, big data analysis, internal control system, and audit outcome were measured utilising a seven-point Likert scale where a value of 1 represents *"strongly disagree*" and a value of 7 represents *"strongly agree*". Second, the operational performance, customer performance, and financial performance constructs were measured via a seven-point Likert scale where a value of 1 represents *"much worse than expected"* and 7 represents *"much better than expected".* The mid-point of the seven-point Likert scale is 4. Mean values below this threshold indicate a general tendency toward disagreement with the presented statements, whereas values within the intervals of 4 and 4.5 are indicative of attitudinal neutrality. In contrast, values above 4.5 indicate a predominant inclination among respondents to agree or strongly agree with the presented statements. The composite scores for each construct were derived as the arithmetic mean of their corresponding items, treated with equal weight. Table 4.3 presents a comprehensive statistical synopsis for each variable, consisting of the minimum, maximum, mean, standard deviation, skewness, and kurtosis.

Table 4.3: Descriptive Statistics for the Research Variables

Variables	N	Min.	Max.	Mean	Std. Deviation	Skewness	Kurtosis
Control Environment	320	1	7	6.409	0.966	-2.811	10.736
Risk Assessment	320	1	7	5.716	1.370	-1.719	2.467
Control Activities	320	1	7	5.434	1.596	-1.190	0.500
Information and Communication	320	1	7	4.144	2.038	-0.071	-1.402
Monitoring Activities	320	1	7	4.909	1.684	-0.650	-0.719
Human Resource Competency	320	1	7	6.122	1.180	-1.977	4.738
Corporate Governance	320	1	7	4.697	1.725	-0.552	-0.944
Big Data Analytics	320	1	7	3.784	1.792	0.087	-1.611
Internal Control Systems	320	1	7	5.634	1.103	-1.634	3.150
Operational Performance	320	1	7	4.381	1.427	-0.459	-0.865
Customer Performance	320	1	7	4.122	1.488	-0.021	-1.137
Financial Performance	320	1	7	3.450	1.685	0.465	-1.008
Audit outcome	320	1	7	5.031	1.630	-0.973	0.267

*Composite values for each construct were calculated as the arithmetic mean of its respective items.

4.5.1. Control Environment

The control environment (CE) is constructed to extract information on management's beliefs that the internal control system is ethical, credible, and committed to competence. Table 4.3 shows that the CE construct recorded a mean of 6.409 and a standard deviation of 0.966. These results indicate a strong consensus, with most respondents agreeing that the CE is defined by integrity, ethical values, and competence. Six items related to attributes of internal control systems were adopted from prior studies (Agbigbi, 2016; Kabweine, 2022) and were measured via a seven-point Likert scale. As illustrated in Table 4.4, the average mean number of items ranges between 6.572 (SD = 0.900) and 5.697 (SD = 1.128). This suggests that respondents mostly agree with statements reflecting the strength and effectiveness of their organisation's CE.

Table 4.4: Descriptive Results for the CE items

Item	Mean	Std. Deviation	Skewness	Kurtosis
CE1	6.572	0.900	-3.229	13.124
CE2	5.697	1.128	-1.059	2.230
CE3	6.453	0.994	-3.202	13.016
CE4	6.356	1.047	-2.355	6.831
CE5	6.288	1.032	-2.581	9.063
CE6	6.466	0.985	-2.962	11.177

4.5.2. Risk Assessment

The risk assessment (RA) is constructed to extract information on management's beliefs that the internal control system is effectively identifying, assessing, and responding to emerging risks, aligning municipal operations with strategic operations, ensuring efficient resource allocation and supporting compliance with regulatory requirements. Table 4.3 shows that the RA construct recorded a mean score of 5.716 and a standard deviation of 1.370. These results show that most respondents agree that risk assessment is characterised by the effective identification, evaluation, and implementation of appropriate mitigating controls. Five

items related to attributes of internal control systems were derived from previous studies (Agbigbi, 2016; Sihlali, 2015) and were measured via a seven-point Likert scale. As illustrated in Table 4.5, the average mean number of items ranges between 6.184 (SD = 1.484) and 5.453 (SD = 1.524). This suggests that respondents mostly agree with statements reflecting the strength and effectiveness of their organisation's risk assessment.

Table 4.5: Descriptive Results for Risk Assessment Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
RA1	5.453	1.524	-1.340	1.523
RA2	5.503	1.469	-1.410	1.469
RA3	6.184	1.484	-2.007	3.081
RA4	6.075	1.351	-1.841	3.128
RA5	5.944	1.482	-1.878	3.124

4.5.3. Control Activities

Control activities (CAs) are constructed to extract information on management's beliefs that the internal control system translates policies into action. Table 4.3 shows that the CAs construct recorded a mean of 5.434 and a standard deviation of 1.596. These results show that most respondents agree that control activities are characterised by effective policies and procedures, reconciliations, and proper approvals and authorisations. Four items related to attributes of internal control systems were adopted from previous studies (Owusu, 2023; Kinyua, 2016) and were measured via a seven-point Likert scale. As illustrated in Table 4.6, the average mean number of items ranges between 5.309 (SD = 1.746) and 5.456 (SD = 1.759). This suggests that respondents agree with statements reflecting the strength and effectiveness of their organisation's control activities.

Table 4.6: Descriptive Results for Control Activities Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
CA1	5.394	1.673	-1.124	0.369
CA2	5.309	1.746	-1.030	0.090
CA3	5.322	1.720	-1.036	0.105
CA4	5.456	1.759	-1.223	0.505

4.5.4. Information and Communication

Information and communication (IC) is constructed to extract information on management's beliefs that the internal control system accurately communicates information in a timely manner and promotes open and transparent communication of information that supports the functioning of internal control components. Table 4.3 shows that the IC construct recorded a mean of 4.144 and a standard deviation of 2.038. These results show that most respondents hold a neutral view that information and communication are characterised by the quality and timeliness of information and the continual interactive process of obtaining and sharing necessary information. Five items related to attributes of internal control systems (Uwingabiye, 2019), measured via a seven-point Likert scale, were adopted from a prior study. As illustrated in Table 4.7, the average mean number of items ranges between 4.019 (SD = 2.022) and 4.272 (SD = 2.165). This indicates a neutral stance by participants in terms of the strength and effectiveness of their organisation's information and communication.

Table 4.7: Descriptive Results for IC Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
IC1	4.019	2.022	-0.042	-1.248
IC2	4.141	2.025	-0.027	-1.309
IC3	4.172	2.049	-0.058	-1.351
IC4	4.044	2.041	-0.002	-1.308
IC5	4.272	2.165	-0.147	-1.429

4.5.5. Monitoring Activities

Monitoring activities (MAs) are constructed to extract information on management's beliefs that the internal control system is continuously evaluating and improving internal control components and is committed to better implementation of policies. Table 4.3 shows that the MA construct recorded a mean of 4.909 and a standard deviation of 1.684. These results show that most respondents agree that monitoring activities are characterised by effective, continuous, and separate evaluations. Five items related to attributes of internal control systems were adopted from a previous study (Kabweine, 2022) and were measured via a seven-point Likert scale. As illustrated in Table 4.8, the average mean number of items ranges between 4.781 (SD = 1.832) and 5.100 (SD = 1.884). This suggests that respondents

agree with statements reflecting the strength and effectiveness of their organisation's control activities.

Table 4.8: Descriptive Results for MA Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
MA1	4.934	1.863	-0.512	-0.965
MA2	4.781	1.832	-0.508	-0.900
MA3	4.925	1.852	-0.584	-0.859
MA4	5.100	1.884	-0.691	-0.728
MA5	5.056	1.708	-0.680	-0.471

4.5.6. Human Resource Competency

Human resource competency (HRC) is constructed to extract information on management's belief that the internal control system is staffed with ethical personnel who possess the necessary technical knowledge and skills. Table 4.3 shows that the HRC construct recorded a mean of 6.122 and a standard deviation of 1.180. These results indicate a strong consensus, with most respondents agreeing that human resource competency is characterised by pertinent technical knowledge, professional qualifications and experience. Six items related to human resource competency were adopted from a prior study (Kinyua, 2016) and were measured via a seven-point Likert scale. As illustrated in Table 4.9, the average mean number of items ranges between 5.894 (SD = 1.252) and 6.203 (SD = 1.161). This suggests that respondents mostly agree with statements reflecting the strength and effectiveness of their organisation's human resource competency.

Table 4.9: Descriptive Results for HRC Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
HRC1	6.075	1.204	-1.773	3.616
HRC2	5.894	1.252	-1.763	3.924
HRC3	6.097	1.232	-1.907	4.112
HRC4	5.978	1.165	-1.682	3.630
HRC5	6.078	1.205	-1.872	4.091
HRC6	6.203	1.161	-2.182	5.803

4.5.7. Corporate Governance

Corporate governance (CG) is constructed to extract information on management's beliefs that the internal control system ensures clearly defined roles and responsibilities, promotes ethical conduct, aligns with strategic objectives, and provides effective oversight through governance mechanisms. Table 4.3 shows that the CG construct had a mean score of 4.697 and a standard deviation of 1.725. These results show that most respondents agree that corporate governance is characterised by clearly defined roles and responsibilities, promotes ethical conduct, strategic objective alignment, and effective oversight. Five items related to attributes of corporate governance were adopted from prior studies (Wibowo, 2008; Ismail, Kathim & Al-Kanani, 2023) and were measured via a seven-point Likert scale. As illustrated in Table 4.10, the average mean number of items ranges between 4.397 (SD = 1.925) and 5.234 (SD = 1.729). This suggests that respondents agree with statements reflecting the strength and effectiveness of their organisation's corporate governance.

Table 4.10: Descriptive Results for CG Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
CG1	4.484	2.019	-0.419	-1.085
CG2	4.397	1.925	-0.466	-0.955
CG3	4.925	1.801	-0.552	-0.764
CG4	5.234	1.729	-0.622	-0.822
CG5	4.416	1.804	-0.362	-0.764

4.5.8. Big Data Analytics

Big data analytics (BDA) is constructed to extract information on management's beliefs that the internal control system, through advanced data mining, predictive modelling and real-time analytics, can uncover and assess fraud risk. Table 4.3 shows that the BDA construct recorded a mean of 3.784 and a standard deviation of 1.792. These results show that most respondents hold a neutral view that BDA is characterised by its ability to integrate vast and diverse data sources that enable risk predictions, fraud detection, compliance automation and strategic decisions. Five items were adopted from a prior study related to BDA (Shalhoob, Halawani, Alharbi, & Babiker, 2024) and were measured via a seven-point Likert scale. As illustrated in Table 4.11, the average mean number of items ranges between 3.316 (SD =

1.901) and 4.316 (SD = 1.991). This indicates a neutral stance by participants in terms of the strength and effectiveness of BDA in their organisations.

Table 4.11: Descriptive Results for BDA Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
BDA1	3.316	1.901	0.281	-1.170
BDA2	4.281	1.997	-0.046	-1.332
BDA3	3.516	2.000	0.133	-1.416
BDA4	4.316	1.991	0.056	-1.449
BDA5	3.822	2.127	0.101	-1.427

4.5.9. Internal Control System

The internal control system (ICS) is constructed to extract information on management's beliefs that improvements in the internal control system enhance the functioning of governance structures; reduce irregular, fruitless and wasteful spending; streamline compliance; reduce errors; and enhance risk management capabilities. Table 4.3 shows that the mean and standard deviation of the ICS construct were 5.634 and 1.103, respectively. These results strongly agree, with most respondents agreeing that improvement in the internal control system is characterised by an effective CE, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance and BDA. Five items related to the effectiveness of the internal control system were adopted from prior studies (Muchoki, 2020; Uwingabiye, 2019) and were measured via a seven-point Likert scale. As illustrated in Table 4.12, the average mean of the items ranges between 4.900 (SD = 1.273) and 6.103 (SD = 1.211). This suggests that respondents mostly agree with statements reflecting the strength and effectiveness of their organisation's internal control system.

Table 4.12: Descriptive Results for ICS Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
ICS1	6.103	1.211	-1.842	3.972
ICS2	6.031	1.239	-1.612	2.644
ICS3	5.775	1.303	-1.466	2.241
ICS4	4.900	1.273	-0.665	1.255

ICS5	5.469	1.276	-1.049	1.245

4.5.10. Operational Performance

The operational performance (OP) is constructed to extract information on management's beliefs that an effective internal control system enhances the effective and efficient utilisation of resources and delivery of quality service. Table 4.3 shows that the OP construct recorded a mean of 4.381 and a standard deviation of 1.427. These results suggest that most respondents hold a neutral view of business process improvements, staff productivity, and the efficient use of resources in delivering quality service. Seven items related to attributes of operational performance were adopted from prior studies (Kaplan and Norton, 1992, 2001;2006; Mudau, 2021) and were measured via a seven-point Likert scale. As illustrated in Table 4.13, the average mean number of items ranges between 3.922 (SD = 1.553) and 4.909 (SD = 1.554). This suggests that participants perceive the organisation as functioning at a moderate to satisfactory level in various areas evaluated.

Table 4.13: Descriptive Results for OP Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
OP1	4.909	1.554	-0.625	-0.447
OP2	3.978	1.662	-0.159	-0.834
OP3	4.853	1.586	-0.701	-0.383
OP4	4.784	1.580	-0.716	-0.415
OP5	4.406	1.561	-0.342	-0.786
OP6	4.109	1.569	-0.368	-0.653
OP7	3.922	1.553	-0.167	-0.959

4.5.11. Customer Performance

Customer performance (CP) is constructed to extract information on management's beliefs that an effective internal control system enhances the organisation's ability to meet citizens' needs and deliver quality services. Table 4.3 shows that the CP construct recorded a mean of 4.122 and a standard deviation of 1.488. These results suggest that most respondents hold a neutral view of quality service, responsiveness and fostering of public satisfaction.

Four items related to attributes of customer performance were adopted from prior studies (Kaplan and Norton, 1992, 2001;2006; Mudau, 2021). As illustrated in Table 4.14, the average mean number of items ranges between 3.469 (SD = 1.555) and 4.309 (SD = 1.590). This suggests that participants perceive the organisation as functioning at a moderate level in various areas evaluated.

Table 4.14: Descriptive Results for CP Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
CP1	4.084	1.627	0.091	-1.027
CP2	4.309	1.590	-0.235	-1.122
CP3	3.469	1.555	0.079	-0.903
CP4	4.141	1.704	0.192	-1.064

4.5.12. Financial Performance

Financial performance (FP) is constructed to extract information on management's beliefs that an effective internal control system enhances financial accountability and achieves fiscal sustainability. Table 4.3 shows that the FP construct recorded a mean of 3.450 and a standard deviation of 1.685. These results suggest that most respondents disagree that financial performance is characterised by improvements in revenue collection, operating surplus, and gross operating spending, preventing fruitless, wasteful and irregular spending, and improvements in return on assets. Six items related to attributes of financial performance were adopted from prior studies (Kaplan and Norton, 1992, 2001;2006; Mudau, 2021). As illustrated in Table 4.15, the average mean number of items ranges between 2.456 (SD = 1.453) and 3.669 (SD = 1.762). This suggests that respondents' views on the outcome of financial performance have moderate negative divergence and have been somewhat worse than expected.

Table 4.15: Descriptive Results for FP Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
FP1	3.450	1.827	0.278	-0.936
FP2	3.525	1.691	0.321	-1.036
FP3	3.669	1.762	0.357	-1.001
FP4	2.456	1.453	0.627	-0.795

FP5	3.222	1.908	0.519	-1.053
FP6	3.500	1.758	0.420	-1.093

4.5.13. Audit outcome

The audit outcome (AO) is constructed to extract information on management's beliefs that improved organisational performance enhances the audit outcome. with organisational performance serving as a mediating factor. Table 4.3 shows that the AO construct recorded a mean of 5.031 and a standard deviation of 1.630. These results indicate a strong consensus, with most respondents agreeing that improvement in the AO is characterised by improved organisational performance. Seven items related to attributes of audit outcomes were adopted from prior studies (Mnguni & Subban, 2022; Aadnesgaard & Willows, 2016). As illustrated in Table 4.16, the average mean number of items ranges between 4.344 (SD = 1.760) and 5.513 (SD = 1.651). This suggests that respondents agree with statements reflecting the improvement of their organisation's audit outcomes.

Table 4.16: Descriptive Results for AO Items

Item	Mean	Std. Deviation	Skewness	Kurtosis
AO1	5.513	1.651	-1.214	0.844
AO2	4.344	1.760	-0.284	-0.692
AO3	5.172	1.702	-1.101	0.569
AO4	4.709	1.704	-0.592	-0.320
AO5	5.097	1.737	-0.920	0.066
AO6	5.144	1.672	-1.023	0.409

4.6. ASSESSMENT OF NORMALITY

The assessment of normality was conducted to evaluate whether the distributional properties of the data support the use of parametric techniques, particularly covariance-based structural equation modelling (CB-SEM). Given that this study utilised seven-point Likert-scale data, which are ordinal in nature, such data are widely treated as approximately continuous when aggregated into composite measures and analysed using multivariate techniques; it was necessary to assess whether the assumptions underpinning CB-SEM were reasonably

satisfied. Normality was examined using skewness and kurtosis statistics. Acceptable thresholds for normality are typically considered to fall within the range of −3 to +3 (Das & Imon, 2016:10). Table 4.3 shows that the criteria for assessing normality were mostly satisfied, except for the kurtosis values for the CE (10.7) and human resource competency (4.7), which exceeded the acceptable thresholds. To contextualise these deviations, consideration was given to sample size and the robustness of estimation methods. With a relatively large sample size (n = 320), the Central Limit Theorem suggests that the sampling distribution of the mean approximates normality, even when the underlying data exhibit some abnormal characteristics (Demir, 2022:400). reduces the sensitivity of parameter estimates, particularly under maximum likelihood estimation in CB-SEM, to moderate deviations from normality. Accordingly, the observed kurtosis values exceeding ±3 are not considered sufficiently severe to compromise the validity of the results. Overall, while minor deviations from normality were observed, these do not pose a serious threat to the assumptions of parametric analysis. Principal component analysis can therefore be conducted with confidence to assess whether the items load onto their intended latent constructs.

4.7. SAMPLE ADEQUACY

Before performing a PCA to validate the measurement scales of the constructs, it is essential to determine the adequacy of the sample first. The adequacy of the sample is assessed via the Kaiser–Meyer–Olkin (KMO) test, which was introduced by Kaiser and Rice (1974). Mudau (2021:135) posits that the KMO statistic assesses the sampling attribute, which is defined as the ratio of the squared correlations between variables to the squared partial correlations between them. The correlation patterns range from 0 to 1; a value nearer to 1 indicates that the correlations are likely to yield dependable factors (Naidoo, 2024:83). A guide for interpreting KMO measures is as follows: values exceeding 0.90 indicate excellent sampling adequacy, while those ranging from 0.80 to 0.89 are deemed “great,” 0.70 to 0.79 are considered “good,” 0.60 to 0.69 are labelled “mediocre,” 0.50 to 0.59 are regarded as “miserable,” and values below 0.50 are classified as unacceptable (Nkansah, 2018:53). The KMO statistic evaluates the extent of variance among variables that may represent common variance, demonstrating the appropriateness of the data for factor analysis (Mudau, 2021:135).

As indicated in Table 4.17, the KMO measure of sampling adequacy for the dataset was calculated to be 0.948, which is categorised as “excellent” based on the widely recognised

thresholds. A value of 0.948 suggests that partial correlations among variables are minimal and that the correlation patterns are tightly grouped, which is beneficial for effective factor extraction. The elevated KMO score indicates that the dataset possesses strong underlying correlations that are suitable for techniques aimed at dimension reduction. Additionally, Bartlett's test of sphericity yielded a highly significant result ($\chi^2 = 32957.928$, $df = 2415$, $p < 0.001$), which led to the rejection of the null hypothesis claiming that the correlation matrix was an identity matrix. This significance further reinforces that the correlation patterns observed are not random, confirming that the dataset is amenable to factor analysis and satisfies both the statistical and practical conditions necessary for undertaking exploratory factor analysis.

Table 4.17: KMO and Bartlett's Test Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.948
Bartlett's Test of Sphericity	Approx. Chi-Square	32957.928
	df	2415
	Sig.	0.000

4.8. EXPLORATORY FACTOR ANALYSIS

Explanatory factor analysis (EFA) is a multivariate statistical technique commonly utilised in quantitative research. It has started to be applied across various fields, including economics, health sciences, and social sciences (Watkins, 2018:219–220). Researchers employing EFA concentrate on a smaller number of items that elucidate the underlying structure rather than analysing an excessive number of potentially irrelevant items, allowing them to conduct their studies by organising these items into significant categories (factors) (Sürücü, Maslakçi & Yikilmaz, 2024: 947). In this study, PCA was employed to perform EFA, a method aimed at uncovering patterns within a dataset by organising related variables into distinct components (Watkins, 2018:220). These components, which are mostly uncorrelated with one another, assist in comprehending the relationships among variables, where strong intercorrelations indicate that the variables reflect similar underlying constructs. To enhance the understanding of these components, factor rotation is applied, utilising two main types: orthogonal rotations (Equamax, Quartimax, and Varimax) and oblique rotations (direct oblimin and promax) (Field, 2005:619; Ho, 2006:203; Mudau, 2021:136).

A principal component factor analysis was performed utilising the Equamax orthogonal rotation method. Equamax rotation was considered suitable for this dataset, as it presents a balanced strategy for factor rotation by merging the goals of both Varimax and Quartimax methods (Kaiser, 1958:187). Given that a relatively high number of factors were extracted in this study, Equamax was beneficial for simultaneously clarifying both the variables (rows) and the factors (columns) in the loading matrix (Hair, Black, Babin & Anderson, 2019:351). This approach minimises the risk of a prominent general factor, which can occur with Quartimax, while also steering clear of the excessive focus on factor independence typical of Varimax (Tabachnick & Fidell, 2019:660). By spreading the variance more evenly among the factors, Equamax enables a clearer and more interpretable factor structure, particularly in scenarios where multiple constructs are being assessed, as seen in this analysis. This balanced simplification fosters both conceptual clarity and statistical strength, thus improving the interpretability of the resulting latent constructs for further validation and modelling activities (Field, 2018:1012).

The findings of the EFA conducted with PCA, utilising Equamax rotation and Kaiser normalisation, demonstrated a clear and defined factor structure, with loadings indicating strong correlations between the observed variables and their associated latent constructs. The rotation achieved convergence after 13 iterations, indicating the stability of the model. The factor loadings varied from 650 to 0.896, all surpassing the suggested threshold of 0.50 for practical relevance (Hair et al., 2019:351), indicating that each item contributed significantly to its related factor. For instance, items CE1–CE6 showed high loadings (0.650–0.783) on their respective factor, reflecting a coherent construct, whereas items RA1–RA5 showed strong loadings (0.788–0.870) on a different factor, thus adding to the validation of construct distinctiveness. Similarly, robust loadings were recorded for other constructs, including BDA1 to BDA5 (0.825–0.859), AO1 to AO7 (0.808–0.874), and FP1 to FP6 (0.863–0.896), indicating excellent convergent validity.

Furthermore, a factor score coefficient matrix was employed in the scores menu and opted for listwise exclusion, sorting by size and suppression of absolute values less than 0.40 in the options menu. These outcomes imply that the correlation patterns within the dataset are both conceptually meaningful and statistically solid, confirming the sufficiency of the measurement model for future analyses such as confirmatory factor analysis (CFA) or structural equation modelling (SEM) (Field, 2018:1012). Table 4.18 displays the factor loadings derived from the PCA using a thirteen-component solution.

Table 4.18: PCA Results of a Thirteen-Component Solution.

Rotated Component Matrix													
	Component												
Item	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
CE1										0.783			
CE2										0.650			
CE3										0.730			
CE4										0.724			
CE5										0.702			
CE6										0.677			
RA1							0.819						
RA2							0.804						
RA3							0.870						
RA4							0.833						
RA5							0.788						
CA1												0.786	
CA2												0.773	
CA3												0.788	
CA4												0.783	
IC1						0.737							
IC2						0.814							
IC3						0.824							
IC4						0.803							
IC5						0.800							
MA1								0.759					
MA2								0.820					
MA3								0.834					
MA4								0.835					
MA5								0.638					
HRC1				0.780									
HRC2				0.784									
HRC3				0.801									
HRC4				0.780									
HRC5				0.765									
HRC6				0.746									
CG1											0.776		
CG2											0.766		
CG3											0.782		
CG4											0.817		
CG5											0.766		
BDA1					0.837								
BDA2					0.850								
BDA3					0.832								
BDA4					0.859								
BDA5					0.825								
ICS1									0.799				

ICS2				0.799	
ICS3				0.837	
ICS4				0.798	
ICS5				0.814	
OP1	0.807				
OP2	0.819				
OP3	0.859				
OP4	0.839				
OP5	0.767				
OP6	0.754				
OP7	0.808				
CP1					0.845
CP2					0.751
CP3					0.785
CP4					0.787
FP1		0.876			
FP2		0.863			
FP3		0.896			
FP4		0.878			
FP5		0.875			
FP6		0.893			
AO1	0.813				
AO2	0.822				
AO3	0.852				
AO4	0.808				
AO5	0.849				
AO6	0.862				
AO7	0.874				

Extraction Method: Principal Component Analysis. Rotation Method: Equamax with Kaiser Normalization.

a. Rotation converged in 13 iterations.
b. Total variance explained 88%

Based on the PCA carried out on 70 items, thirteen components with eigenvalues greater than 1 were extracted, explaining 88% of the overall variance. Each of the thirteen components was characterised as follows: Component 1: Audit outcome (7 items), Component 2: Operational Performance (7 items), Component 3: Financial Performance (6 items), Component 4: Internal Control System (5 items), Component 5: Big Data Analytics (5 items), Component 6: Human Resource Competency (6 items), Component 7: Risk Assessment (5 items), Component 8: Control Environment (6 items), Component 9: Monitoring Activities (5 items), Component 10: Information and Communication (5 items), Component 11: Corporate Governance (5 items), Component 12: Customer Performance (4 items) and Component 13: Control Activities (4 items).

All thirteen components were kept for further analytical procedures, as their factor loadings surpassed the empirically established minimum threshold of 0.5, indicative of substantive loading (Tabachnick & Fidell, 2013:654). Each item demonstrated a high loading on a single component exclusively, with no evidence of cross-loadings. In summary, the confirmed factor structure supports a thirteen-variable model, enabling a strong confirmatory analysis.

4.9. RELIABILITY AND VALIDITY

Reliability refers to the consistency of measurement, specifically the degree to which results remain consistent across various forms of the same tool or during different data collection occasions (Creswell, 2009:149). A scale must demonstrate reliability to be valid and practically useful. In other words, an instrument is considered reliable if a different researcher, employing the same measurement procedures, obtains comparable results over a specific timeframe (Bell, 2010:119; McMillan & Schumacher, 2001:245). According to Hair et al. (2019:149), a Cronbach's alpha value exceeding 0.7 is indicative of satisfactory internal consistency. Field (2016:97) also suggested that Cronbach's alpha values exceeding 0.7 are considered acceptable, with values exceeding 0.8 considered ideal. Furthermore, Hair et al. (2019:149) underscore the importance of incorporating composite reliability (CR) to attain a more precise evaluation of internal consistency. As illustrated in Table 4.19, the Cronbach's alpha values are between 0.939 and 0.982, all surpassing the acceptable limit of 0.7. Similarly, the CR values, also presented in Table 4.19, range from 0.860 to 0.954, with all values meeting or exceeding the acceptable limit of 0.7. Consequently, the measurement model demonstrated satisfactory reliability.

4.10. CONVERGENT VALIDITY

Convergent validity indicates the degree to which different measures of the same construct are highly correlated, which shows that they capture the same fundamental concept. Convergent validity is confirmed when items intended to assess a specific construct share a significant amount of variance, with an acceptable AVE value of 0.50 or higher (Hair et al., 2019:140).

As presented in Table 4.19, the AVE values for every variable fall between 0.507 and 0.775, each surpassing the established threshold. These findings confirm that the measurement model exhibits adequate convergent validity.

Table 4.19: Results of Reliability and Validity

Variable	Original number of items	Final number of items	Cronbach's Alpha	"Average variance extracted (AVE)"	"Composite reliability (CR)"
Control Environment	6	6	0.952	0.507	0.860
Risk Assessment	5	5	0.961	0.678	0.913
Control Activities	4	4	0.967	0.612	0.863
Information and Communication	5	5	0.982	0.634	0.896
Monitoring Activities	5	5	0.966	0.601	0.886
Human Resource Competency	6	6	0.979	0.602	0.901
Corporate Governance	5	5	0.961	0.611	0.887
Big Data Analytics	5	5	0.973	0.706	0.923
Internal Control Systems	5	5	0.941	0.655	0.904
Operational Performance	7	7	0.966	0.653	0.929
Customer Performance	4	4	0.939	0.628	0.871
Financial Performance	6	6	0.975	0.775	0.954
Audit outcome	7	7	0.977	0.706	0.944

4.11. CORRELATION MATRIX OF COMPOSITE SCORES

The intercorrelations were calculated and are presented in Table 4.20. Discriminant validity is confirmed, as the square root of the AVE for each construct exceeds the correlations among the constructs. This indicates that each variable accounts for more variance with its own measurement items than with those of other variables (Fornell & Larcker, 1981:41). These findings illustrate that the constructs are empirically distinct and assess unique facets of the research model. For example, although some variables, such as Corporate Governance and BDA or CE and Human Resource Competency, exhibit moderately strong correlations between constructs, these values still fall below the square root of their respective AVEs, reinforcing the notion of discriminant validity (Hair et al., 2019:139). Additionally, the reliability of the constructs is confirmed by the significant correlations among theoretically related variables, implying stable relationships consistent with conceptual

expectations (Kline, 2016:72). Collectively, these findings confirm that the reliability and validity of the measurement model are adequate, providing a solid foundation for further analysis. With these psychometric attributes established, the study can confidently assess the structural model and explore the hypothesised relationships among the constructs (Hair et al., 2019:167).

Table 4.20: Results of Matrix of Composite Scores

Correlations													
Corre-lations	**CE**	**RA**	**CA**	**IC**	**MA**	**HRC**	**CG**	**BDA**	**ICS**	**OP**	**CP**	**FP**	**AO**
CE	**0.860**												
RA	.408**	**0.913**											
CA	.513**	.664**	**0.863**										
IC	.405**	.428**	.599**	**0.896**									
MA	.306**	.509**	.545**	.756**	**0.886**								
HRC	.707**	.475**	.521**	.418**	.416**	**0.901**							
CG	.395**	.327**	.376**	.469**	.424**	.492**	**0.887**						
BDA	.332**	.312**	.335**	.441**	.382**	.472**	.747**	**0.923**					
ICS	.641**	.279**	.397**	.259**	.174**	.523**	.315**	.276**	**0.904**				
OP	.303**	.117*	.136*	0.057	0.069	.151**	0.036	0.068	.214**	**0.929**			
CP	.238**	0.066	.116*	0.051	0.041	0.108	0.035	0.026	.188**	.699**	**0.871**		
FP	.189**	0.060	.117*	0.055	0.030	0.078	0.040	0.063	.146**	.496**	.623**	**0.954**	
AO	.581**	.299**	.386**	.324**	.241**	.505**	.368**	.328**	.475**	.235**	.135*	0.070	**0.944**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

CE=Control Environment; RA=Risk Assessment; CA=Control Activities; IC=Information and Communication; MA=Monitoring Activities; HRC=Human Resource Competency; CG=Corporate Governance; BDA=Big Data Analytics;
ICS=Internal Control System; OP=Operational Performance; CP=Customer Performance; FP=Financial Performance;
AO=Audit outcome

4.12. CONFIRMATORY FACTOR ANALYSIS

CFA was a critical technique utilised to evaluate the relationships between different constructs within the proposed theoretical model and their corresponding measurement items. When evaluating a model, it is imperative to rigorously examine the fit of the measurement model and systematically appraise the construct validity of the model under

examination. In the evaluation process of the measurement model in the CFA, it is necessary to distinguish between endogenous and exogenous constructs. Only during model testing is it necessary to distinguish between endogenous and exogenous constructs. Figure 4.11 shows the interconnections among all the variables, with the measured variables (construct items) presented in rectangular shapes. In Figure 4.11, covariances are denoted by double-headed arrows, whereas relationships are denoted by unidirectional arrows. Therefore, the model presented in Figure 4.11 focuses on the CE, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, BDA, operational performance, customer performance, financial performance, and AO.

The estimation of model parameters was performed using the maximum likelihood approach, with all analyses being based on covariance matrices. Following measurement model development, it is imperative to rigorously assess model fit utilising indices such as Tucker-Lewis Index (TLI), Goodness-of-fit (GFI), Comparative fit index (CFI), root mean square error of approximation (RMSEA), and Chi-Square to degrees of freedom ratio (χ^2/df) (Mudau, 2021:187-188). Table 4.24 displays the model fit indices for the initial CFA measurement model employed in this study. Although indices such as CFI = 0.942, IFI = 0.94, RMSEA = 0.052, χ^2/df = 1.853, and TLI = 0.938 indicate a reasonable fit, other indices such as GFI = 0.708, NFI = 0.883, and RFI = 0.875 are below the established thresholds, thereby indicating the need for further model recalibration and refinement.

However, the primary aim of the CFA model was to ascertain whether all scale items exhibited significant loading on the model. The CFA test was undertaken to substantiate construct validity and evaluate factor loadings (Mudau, 2021:188) rather than to empirically test inter-construct hypotheses. The findings demonstrate that all the items are appropriately loaded in accordance with the theory. Specifically, factor loadings range between 0.74 and 0.98 (Figure 4.11), thereby exceeding the recommended threshold of 0.60. The following section assesses the proposed model.

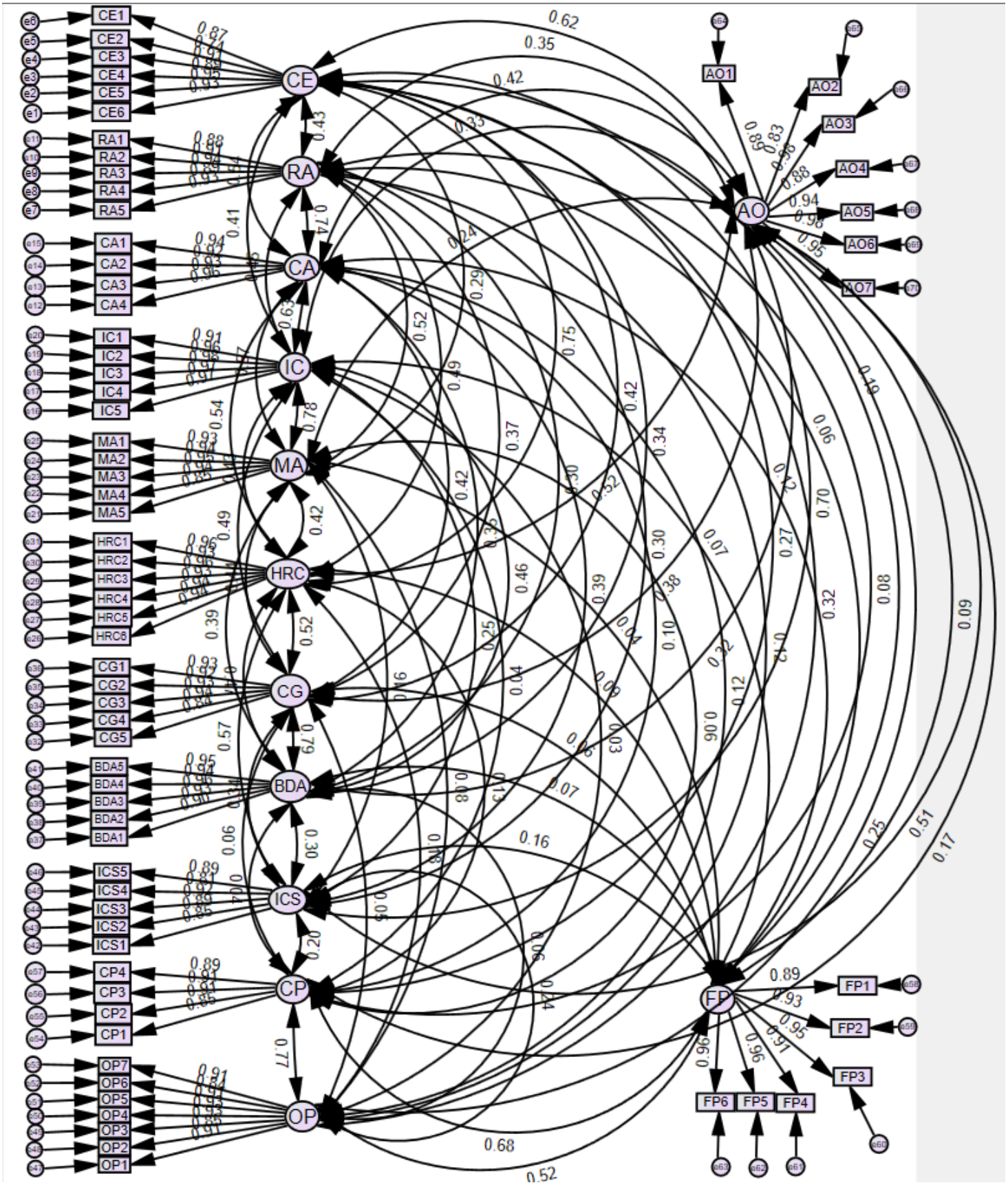


Figure 4.11: Final CFA Measurement Model

(Source: Author, 2025).

4.13. STRUCTURAL MODELLING

In this section, structural modelling is presented, which aims to empirically analyse the proposed relationships between latent constructs. Figure 4.12 depicts the relationships within the model analysed in this study. The analysis offers insight into the strength, direction, and significance of relationships between constructs.

4.13.1. Initial Model Testing

The results presented above confirm the reliability and convergent validity of the measurement model, as substantiated through both EFA and CFA methods. The subsequent analytical phase involves testing the proposed relationships between the endogenous and exogenous latent constructs, as illustrated in Figure 4.12, accomplished through the structural model test. At this juncture, the study specifies directional relationships between dependent and independent variables via unidirectional arrows. Within the context of this study, only unconstrained or “free” structural paths are modelled for theoretically hypothesised relationships between the variables under examination. These paths are permitted to vary freely; there are no fixed pathways, which is consistent with the approach outlined in prior studies (Hair et al., 2019:708-712; Kline, 2023:134-140).

The initial results of the structural model revealed that some indices had acceptable fit levels, but others revealed weaknesses that required refining the model. For example, the Goodness-of-Fit Index (GFI) was 0.615, which is below the acceptable level of 0.80, indicating a poor fit. In addition, the Normed Fit Index (NFI = 0.87), Comparative Fit Index (CFI = 0.914), Incremental Fit Index (IFI = 0.914), Tucker-Lewis Index (TLI = 0.911), and Relative Fit Index (RFI = 0.865) were in the borderline acceptable range but did not consistently hit the higher threshold of 0.95, which typically indicates strong model fit. The root mean square error of approximation (RMSEA) was reported to be 0.072, which exceeds the ideal value of 0.05 but remains within the acceptable range. Additionally, the Chi-Square/DF ratio was 2.674, remaining below the recommended limit of 3. Overall, the initial model provided a moderate but not optimal view of the data.

This finding indicates that the model does not fit the data adequately. Model improvement is needed so that a better model fit can be achieved. To improve the model, some of the constructs or hypotheses may have to be dropped, and some of the variables may also have to be removed. In addition, some of the constructs may be constrained to zero; this means

that they will not be part of the model that is being tested. The error estimate covariance may also be drawn to improve the model fit. These approaches are grounded in the foundational literature in the field, including (Hair, Black, & Babin, 2010) "Multivariate Data Analysis" for Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) techniques, as well as (Kline, 2011) "Principles and Practice of Structural Equation Modelling" for testing structural models, both of which offer thorough frameworks and best practices for conducting these types of analyses.

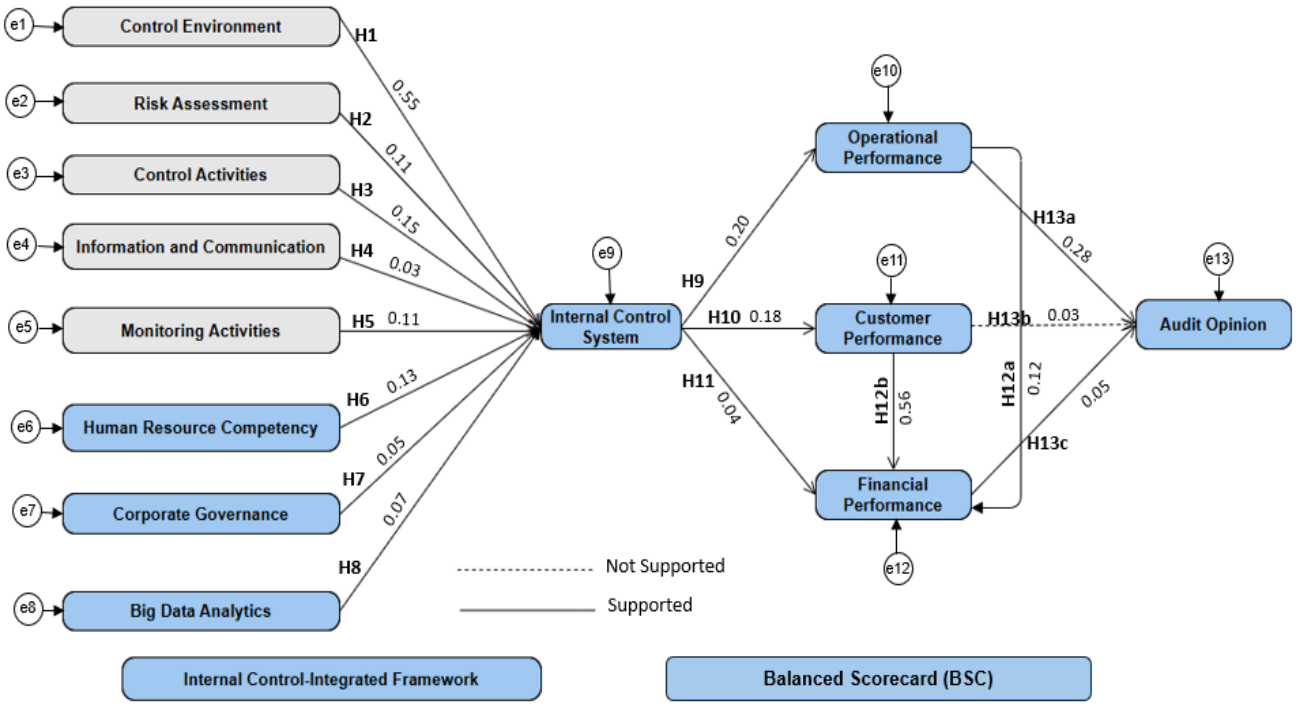


Figure 4.12: Initial Structural Model

4.13.2. Final Model Testing

The results of the final SEM AMOS model are illustrated in Figure 4.13. The ultimate model has a p-value greater than 0.050, indicating a lack of statistical significance compared with the default model; however, the Chi-Square to degrees of freedom ratio (χ^2/df) is 1.476, which is considered acceptable since it falls within the recommended threshold of less than 3. Following the second iteration of the model, improvements in model fit were observed, as detailed in Table 4.24 below. The fit indices were as follows: [GFI = 0.832; NFI = 0.916; TLI = 0.982; RFI = 0.961; CFI = 0.956; IFI = 0.954; RMSEA = 0.039], collectively indicating satisfactory model fit across most indices.

Model improvement steps

To attain the model fit described above, the modifications outlined in Table 4.21 were implemented based on a detailed analysis of the AMOS output. Initially, the modification indices were analysed to pinpoint relationships between constructs, where introducing covariances between error terms could significantly enhance the model's fit. In particular, high modification indices were noted for the paths connecting CG and BDA, HRC and BDA, HRC and CG, MA and BDA, MA and CG, and MA and HRC, suggesting that permitting these error terms to covary would likely lower the overall Chi-Square value and increase model adequacy. Therefore, these error terms exhibiting significant covariance were covaried, a practice deemed methodologically acceptable provided that it does not undermine the integrity of the theoretical model under examination (Fan & Sivo, 2005:91-93).

Table 4.21: Error Term Modification Indices

Paths	M.I.	Par Change
CG <--> BDA	203.305	3.158
HRC <--> BDA	61.008	1.039
HRC <--> CG	79.513	0.996
MA <--> BDA	52.425	1.413
MA <--> CG	68.418	1.355
MA <--> HRC	64.853	0.792

The outcomes following this final model improvement are presented in the subsequent section.

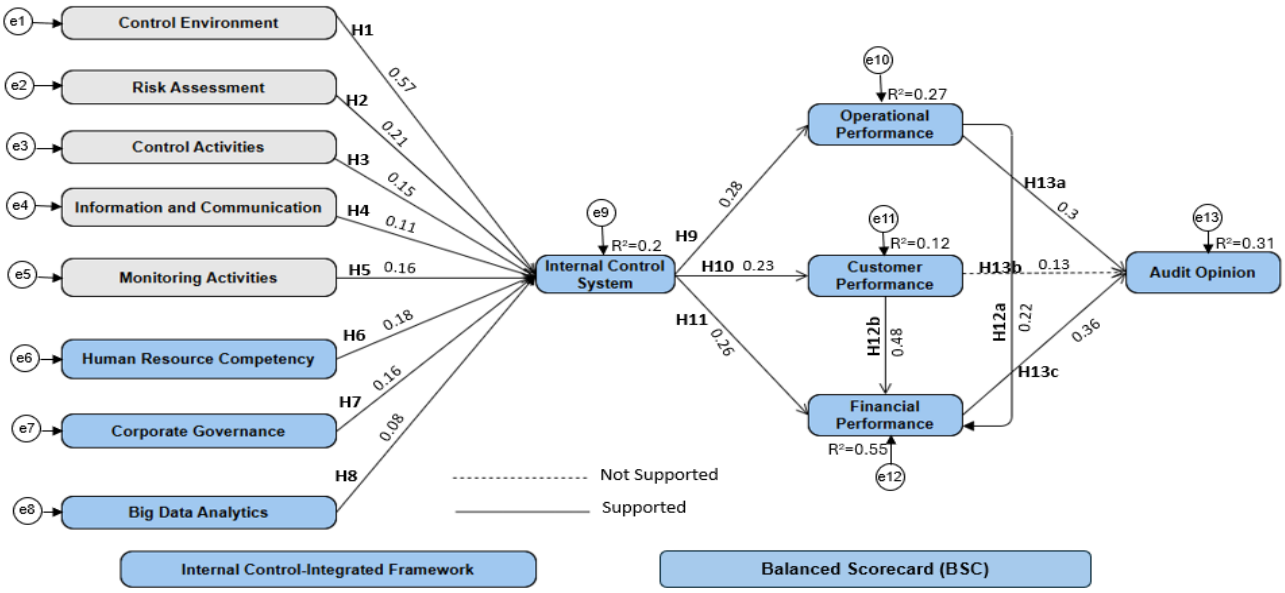


Figure 4.13: Final Structural Model

Statistically significant paths are presented by solid one-headed arrows, whereas pathways that lack significance are depicted using dotted one-headed arrows. The final model indices indicate that the model meets the acceptable thresholds, thereby justifying the examination of the hypothesised relationships within the model. Table 4.22 presents the path coefficients associated with the proposed research model's hypothesised relationships. H1–H8 address SRO1, H9–H12 address SRO2, and H13 together with the mediation analysis address SRO3.

Table 4.22: Hypothesised Model SEM Results

Hypothesis	Independent variable		Dependent variable	Path Estimate (β)	S.E.	C.R.	p-value	Supported
H1	CE	"--->	ICS	0.574	0.063	9.111	***	**Supported**
H2	RA	"--->	ICS	0.21	0.039	5.385	***	**Supported**
H3	CA	"--->	ICS	0.1503	0.033	4.555	***	**Supported**
H4	IC	"--->	ICS	0.107	0.026	4.115	***	**Supported**
H5	MA	"--->	ICS	0.158	0.034	4.647	***	**Supported**
H6	HRC	"--->	ICS	0.175	0.051	3.431	0.001	**Supported**
H7	CG	"--->	ICS	0.155	0.03	5.167	***	**Supported**
H8	BDA	"--->	ICS	0.081	0.025	3.205	0.001	**Supported**

H9	ICS	"--->	OP	0.279	0.069	4.063	***	**Supported**
H10	ICS	"--->	CP	0.227	0.071	3.210	0.001	**Supported**
H11	ICS	"--->	FP	0.26	0.063	4.127	***	**Supported**
H12a	OP	"--->	FP	0.217	0.05	4.340	***	**Supported**
H12b	CP	"--->	FP	0.479	0.052	9.212	***	**Supported**
H13a	OP	"--->	AO	0.3	0.06	4.998	***	**Supported**
H13b	CP	"--->	AO	0.125	0.082	1.524	0.251	Not Supported
H13c	FP	"--->	AO	0.355	0.071	5.000	***	**Supported**

If p = ***, it indicates the hypothesised relationships are strongly supported at the 0.1% level (2-tailed).

If p < 0.050, it indicates the hypothesised relationship is statistically significant at the 5% level (2-tailed).

CE=Control Environment; RA=Risk Assessment; CA=Control Activities; IC=Information and Communication; MA=Monitoring Activities; HRC=Human Resource Competency; CG=Corporate Governance; BDA=Big Data Analytics; ICS=Internal Control System; OP=Operational Performance; CP=Customer Performance; FP=Financial Performance; AO=Audit outcome

Table 4.23: R-squared Results

R Squared	Estimates
ICS	**0.196**
CP	0.124
OP	0.27
FP	0.55
AO	0.307

R-squared results are essential in hypothesis testing because they indicate the extent to which independent variables explain the variation in the dependent variables (Mudau, 2021:151). Table 4.23 illustrates the extent to which each construct accounts for variations in the dependent variables. FP exhibits robust explanatory strength, accounting for 55% of

the variance, whereas OP (27%) and AO (31%) exhibit moderate effects. In contrast, ICS (20%) and CP (12%) have comparatively low R-squared values, indicating that they account for a smaller portion of the variation.

As presented in Table 4.22, 12 of the hypotheses were directly supported by the research model tested. The study demonstrated that eight critical factors influence the effectiveness of the internal control system: Control Environment ($p<0.001$); Risk Assessment ($p<0.001$); Control Activities ($p<0.001$); Information and Communication ($p<0.001$); Monitoring Activities ($p<0.001$); Human Resource Competency ($p<0.001$); Corporate Governance ($p<0.001$); Big Data Analytics ($p<0.001$), all of which fall within the established threshold p-value of 0.001 or lower, highlighting strong statistical significance. Therefore, H1, H2, H3, H4, H5, H6, H7, and H8 are supported. These results indicate that a strong internal control system relies not only on traditional COSO components but also on organisational-specific aspects such as personnel competency, effective governance practices, and advanced data management capabilities. This demonstrates that organisations seeking to strengthen their internal control systems should adopt a holistic strategy that integrates both structural and operational elements to ensure accountability, efficiency, and reliability in the control processes.

In addition, the results support the hypothesis (H9) that the internal control system has a positive and statistically significant influence on operational performance ($P<0.001$). This suggests that municipalities with effective internal control systems can enhance service delivery, reduce financial mismanagement and fraud, and ensure the optimal use of public resources. Furthermore, reliable controls strengthen accountability and provide accurate information for decision-making, enabling municipal managers to plan and execute operations more effectively. The results support the hypothesis (H10) that the internal control system has a positive and statistically significant influence on customer performance ($P<0.001$). This suggests that municipalities with effective internal control systems can enhance service delivery outcomes and citizen satisfaction, thereby reducing the frequency of service delivery protests. The results indicate that enhanced planning, monitoring, and accountability in municipal internal control systems are crucial for aligning municipal operations with citizens' expectations and needs.

The results also support the hypothesis (H11) that the internal control system has a positive and statistically significant influence on financial performance ($P<0.001$). This suggests that municipalities with effective internal control systems are prone to an increase in essential

financial indicators, such as an increase in operating surplus and a more manageable increase in gross operating expenditures. Moreover, municipalities can effectively collect revenue, thereby increasing the revenue collection rate. The results further underscore that municipalities with effective internal control systems can also enhance the prevention of wasteful and irregular spending and reduce instances of overspending on budgets.

Furthermore, the results also support the hypothesis (H12a), indicating that operational performance has a positive and statistically significant influence on financial performance ($P<0.001$). This suggests that enhancing the efficiency of service delivery, optimising resource use, and improving administrative responsiveness directly led to better financial outcomes, such as increased surpluses, enhanced revenue collection, and reduced irregular and wasteful spending. Consequently, the reinforcement of operational processes is essential for attaining financial stability. The results further support the hypothesis (H12b), indicating that customer performance has a positive and statistically significant influence on financial performance ($P<0.001$). This implies that improvements in citizen satisfaction, service responsiveness, and delivery outcomes lead to robust financial outcomes, such as enhanced collection of revenue and decreased overspending of budgets, thereby increasing the operating surplus.

In addition, the results support the hypothesis (H13a) that operational performance has a positive and statistically significant influence on AO ($p<0.001$). This suggests that improvements in operational performance, such as enhanced service delivery, reduced financial mismanagement and fraud, and optimal use of public resources, are likely to lead to more favourable audit outcomes, including clean audit outcomes and reduced audit findings. Surprisingly, customer performance has no significant effect on AO, as its significance level ($p>0.05$) exceeds 0.05. This suggests that improvements in customer-related metrics, such as citizen satisfaction, service responsiveness, and delivery efficiency, do not directly translate into favourable audit outcomes. Therefore, H13b is not supported. Finally, the results support the hypothesis (H13c) that financial performance has a positive and statistically significant influence on AO ($P<0.001$). This implies that effective financial management, encompassing effective budgeting, collection of revenue, and expenditure control, leads to a favourable AO, reinforcing the importance of financial discipline in fostering good governance and accountability.

4.14. MODEL FIT INDICES

This section delineates the model fit indices assessed for all the models examined through CFA and SEM. Model parameters were derived via the maximum likelihood estimation technique. Table 4.24 presents a consolidated summary of the model fit indices for the evaluated models, accompanied by their respective recommended threshold values.

Table 4.24: Model Fit Indices

Fit Index	Recommended Value	CFA Results	Initial Structural Model	Final Structural Model
Goodness-of-fit (GFI)	Less than 0.80 (No fit) Between [0.80-0.90] (acceptable) Above 0.90 (Perfect fit)	0.708	0.615	0.832
Normed fit index (NFI)	Less than .80 (poor) Between [0.80-0.90] (acceptable) Above 0.90 (good)	0.883	0.87	0.916
Comparative fit index (CFI)	Less than 0.90 (poor) Above 0.90 (good)	0.942	0.914	0.956
Incremental fit index (IFI)	Less than 0.90 (poor) Above 0.90 (good)	0.942	0.914	0.954
Root mean square error of approximation (RMSEA)	Less than 0.05 (good) Between [0.06-1] (acceptable) Above 1 (poor)	0.052	0.072	0.039
Chi-square (χ2/DF)	Less than 3 (good) Between [3-5] (acceptable)	1.853	2.674	1.476

	Above 5 (poor)			
	Less than 0.80 (poor)			
Tucker–Lewis Index (TLI)	Between [0.80-0.90] (acceptable)	0.938	0.911	0.982
	Above 0.90 (good)			
	Less than 0.80 (poor)			
Relative Fit Index (RFI)	Between [.80-.90] (acceptable)	0.875	0.865	0.961
	Above .90 (good)			

4.15. CHAPTER SUMMARY

The aim of this chapter was to undertake a rigorous analytical examination of the data gathered during the research study, thereby elucidating the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes. The chapter commenced with a comprehensive delineation of the sample characteristics, encompassing the demographic profile of the respondents and descriptive statistics pertinent to the constructs under examination. The distributional properties of the dataset were subsequently scrutinised through assessments of skewness and kurtosis to ascertain normality, followed by an evaluation of sampling adequacy through the Kaiser–Meyer–Olkin test and Bartlett's test of sphericity. Upon establishing these prerequisites, principal component analysis was employed to identify the latent dimensionality inherent in the variables. This was succeeded by CFA to validate convergent validity. The reliability and validity of the results were evaluated through Cronbach’s alpha and composite reliability for assessing reliability, whereas construct validity was confirmed through the average variance extracted and examination of the correlation matrix. Ultimately, the hypothesised structural model was empirically tested through structural equation modelling, offering comprehensive insights into the proposed theoretical relationships.

The empirical results demonstrated statistically significant positive relationships between the CE, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, bid data analytics, and internal control system effectiveness. Additionally, statistically significant relationships exist between

effective internal control systems, operational performance, customer performance, and financial performance. Furthermore, when combined with operational performance and financial performance, these factors demonstrated statistically significant positive relationships with audit outcomes. However, the empirical results demonstrated that customer performance does not have a statistically significant influence on audit outcomes. These empirical results offer a novel interpretive lens through which to understand the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes, thereby yielding strategically pertinent insights for public sector organisations aiming to implement or improve the internal control system to improve their performance and audit outcomes. A comprehensive exposition of these empirical results is provided in the subsequent chapter.

CHAPTER 5: DISCUSSION OF THE RESULTS OR FINDINGS

5.1. INTRODUCTION

In Chapter 4, the internal control systems model was validated by identifying factors influencing internal control system effectiveness. The hypothesis testing results presented in Figure 4.13 and Table 4.22 indicate eight key factors – control environment, risk assessment, control activities, information and communication, human resource competency, corporate governance, and big data analytics (BDA) – that significantly impact the effectiveness of the internal control system. Additionally, the results indicate statistically significant relationships between effective internal control systems and operational performance, customer performance, and financial performance. Furthermore, when combined with operational performance and financial performance, these factors demonstrated statistically significant relationships with audit outcomes. However, the empirical results demonstrated that customer performance does not have a statistically significant influence on audit outcomes. These findings contribute to a deeper understanding of the factors influencing the internal control system, demonstrating how these factors impact organisational performance and audit outcome (AO).

The purpose of this chapter is to discuss the empirical results obtained through structural equation modelling in addressing research objectives SRO 1: *"To analyse the factors influencing internal control system effectiveness",* SRO 2: "To analyse *the impact of internal control effectiveness on both financial and non-financial aspects of organisational performance within municipalities"*, and SRO 3: "*To* analyse *the impact of effective internal control on the audit outcomes of municipalities, with organisational performance serving as a mediating factor, and test the indirect effect of internal control on audit outcomes via performance*. To address the research objectives, this study adopted the COSO framework as the theoretical foundation, integrating it with the balanced scorecard (BSC) model to provide a comprehensive lens for examining the relationships among internal control, organisational performance and audit outcomes. The integrated research model is presented in Figure 4.13. The COSO framework serves as a basis for assessing the key factors influencing internal control system effectiveness, considering factors such as the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and BDA. The BSC offers a multidimensional perspective on organisational performance by incorporating both financial

and non-financial performance to capture a balanced view of municipal performance. Collectively, these frameworks guided the creation of the research model presented in Figure 4.12, which informed the development of hypotheses and guided the subsequent analysis and interpretation of the findings.

Although the COSO framework has been established for several years, the effective implementation of internal control remains a challenge (Makgatho, 2013:61-72). This study identifies a research gap, revealing a limited understanding of the factors influencing the effectiveness of the internal control system. While previous studies (Hung & Tuan, 2019; Kazaara & Julius, 2024; Bridget & Catherine, 2024) have attempted to evaluate the factors influencing the effectiveness of internal control systems, their findings have been inconsistent, underscoring the necessity for further examination. Additionally, research on the impact of internal control systems on organisational performance is still emerging (Ajala, Ololade, Olaleye & Abass, 2023:66). Prior studies have examined internal control systems and organisational performance focused exclusively on financial performance (Ayamga & Bagina, 2019; Julius & Alex, 2024; Kalvel & Irumba, 2023), such as profitability (asset turnover, net profit, return on assets, and sales turnover) (Mudau, 2021:7), and ignored non-financial performance indicators, such as operational and customer performance (Wu, Pan, Zhou & Li, 2020:70-71). Focusing solely on financial performance provides a narrow and incomplete understanding of an organisation's performance. Financial performance is just one part of the organisational performance puzzle (Mudau, 2021:7).

Furthermore, prior studies that have examined the relationships among internal control, organisational performance and audit outcomes remain limited (Farook & Alex, 2024; Kalvel & Irumba, 2023; Makhele, 2021; Nqala, 2020). There is insufficient empirical evidence to substantiate the influence of internal control and organisational performance on audit outcomes (Chalmers et al., 2018:25). To address these gaps, this study extends two established models: the COSO framework and the BSC. Importantly, this study moves beyond the traditional COSO-only perspective, which predominantly focuses on the five internal control components, by empirically validating an extended COSO framework that incorporates human resource competency, corporate governance, and big data analytics (BDA) as critical determinants of internal control system efficacy. This extension represents a substantive theoretical and empirical advancement, particularly within the context of South African municipalities, where governance complexity, capacity constraints, and technological demands necessitate a broader conceptualisation of internal control systems. Furthermore,

the study integrates financial, operational, and customer performance dimensions to assess the impact of internal control systems on a balanced view of organisational performance and AO. The subsequent sections of this chapter elaborate on the empirical results, providing an in-depth interpretation of the findings and their broader implications.

5.2. FACTORS INFLUENCING THE EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEM

The findings presented in Chapter 4, Section 4.13.2, provide a detailed answer to the factors influencing internal control system effectiveness. This section presents the discussion of key findings on the factors influencing the effectiveness of the internal control system in South African municipalities. The results indicate that all eight hypothesised factors, control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and big data analytics (BDA), have a statistically significant and positive effect on internal control effectiveness. These findings confirm the robustness of the extended conceptual framework, which integrates the COSO framework with additional governance and technological variables. Notably, the inclusion of human resource competency, corporate governance, and BDA provides a broader and more contemporary understanding of internal control systems. Overall, the findings highlight that internal control effectiveness is shaped by a combination of structural, human, governance, and technological factors. The factors influencing internal control system effectiveness are summarised in Table 5.1.

Table 5.1: Factors Influencing the Effectiveness of the Internal Control System

Factors influencing the effectiveness of the internal control system	Effectiveness of the internal control system
Control Environment	Yes
Risk Assessment	Yes
Control Activities	Yes
Information and Communication	Yes
Monitoring Activities	Yes
Human Resource Competency	Yes
Corporate Governance	Yes

Big Data Analytics	Yes

The conceptual framework depicted in Figure 4.13 identifies eight key factors that affect the effectiveness of the internal control system. These factors are crucial in understanding how internal control can enhance municipalities' efficiency and effectiveness in delivering quality services. Previous investigations have employed the COSO framework to examine the effectiveness of the internal control system within both private and public sector organisations (Akinleye & Kolawole, 2020; Kabweine, 2022; Makgatho, 2013; Muchoki, 2020; Umar & Dikko, 2018; Trang, 2022; Uwingabiye, 2019). However, the application of this framework has focused predominantly on its five core components: the control environment, risk assessment, control activities, information and communication, and monitoring activities (Zahari, Muhamad & Ramly, 2023:354; Kharbach, Zaam & El Guir, 2022:87). This traditional approach often neglects broader factors influencing internal control system, particularly in dynamic and complex governance environments such as South African municipalities (Mnguni, 2022:110).

To address this gap, this research has extended and integrated the COSO framework with the BSC model, thereby establishing a more comprehensive and holistic conceptual framework. This enhanced framework incorporates additional variables such as human resource competency, corporate governance, and BDA, recognising that effective internal control systems evolve beyond traditional boundaries to encompass competencies, governance structures, and technological capabilities that reflect the complex realities of South African municipalities (Khateeb, Almohtaseb & Alfarajat, 2022:467; Ponick & Wieczorek, 2022:5). The inclusion of corporate governance reinforces the link between accountability structures and internal control, whereas BDA reflects the increasing need for municipalities to leverage technology in monitoring financial flows, forecasting risks and enhancing transparency. The results of this study underscore that multiple interconnected factors significantly influence the effectiveness of the internal control system in South African municipalities. As presented in Table 4.22, all eight tested variables, control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and BDA, were found to have a significant and positive impact on the internal control system.

The control environment was found to be one of the key factors influencing the effectiveness of the internal control system. In this study, the control environment measures the extent to which ethical values, governance structures, accountability mechanisms, and efficient resource allocation collectively enhance service delivery and strengthen the municipality's internal control system. Most respondents agreed that a strong control environment is characterised by ethical values, clear accountability, and effective governance structures. The findings suggest that a strong control environment built on ethical values, sound governance practices, clear accountability structures, and efficient resource allocation significantly improves the effectiveness of internal control systems and service delivery in municipalities. Additionally, when leadership models integrity, systems are well structured, resources are allocated efficiently, and compliance, risk or error identification, and responsible resource usage are improved. This finding is consistent with prior studies (Nzama, Moloi & Marx, 2023; Otoo et al., 2023; Trang, 2022; Vulley, 2022; Zitha, Munzhelele & Sirembe, 2024), which emphasise the importance of these factors in improving internal control. This study advances this understanding by contextualising the control environment within the specific challenges faced by South African municipalities, where governance is often strained due to an ineffective control environment. While this finding is consistent with the literature, emphasising ethical values, governance structures, accountability mechanisms, and efficient resource allocation as drivers of control environment effectiveness represents a meaningful contribution to the discourse. In contrast, poor control environments can weaken internal control systems, leading to unclear accountability, weak oversight, and a lack of ethical leadership, which often create opportunities for mismanagement, corruption or fraud (Lekubu, 2019:180; Matshiga, 2018:16). A weak control environment refers to a situation where the internal control systems, policies, and culture that are supposed to ensure proper oversight, accountability, good governance, and risk management with an organisation are not functioning effectively. When such situations arise in a municipality, public funds can be used inefficiently, essential services can be delayed or poorly delivered, and public trust can decline (Manganye, 2019:47). Therefore, enhancing the control environment is more than a compliance requirement; it is a strategic imperative for municipalities aiming to promote transparent, accountable decision-making processes and the effective delivery of developmental mandates. An Agency Theory perspective suggests that a strong control environment reduces information asymmetry and limits opportunistic behaviour by enforcing accountability and ethical conduct, thereby strengthening internal

control effectiveness. Similarly, Stakeholder Theory explains that transparent governance structures and ethical leadership enhance trust among stakeholders, which reinforces compliance and supports improved service delivery outcomes.

Risk assessment was identified as a key factor influencing the effectiveness of the internal control system. In this study, risk assessment refers to a municipality's ability to identify, evaluate, and respond effectively to emerging risks, thereby enhancing operational efficiency and service delivery and strengthening overall internal control performance. Most respondents agreed that risk assessment is characterised by timely identification, evaluation, and implementation of appropriate mitigating controls. The findings suggest that effective risk assessment enables municipalities to proactively identify and address potential threats and improve service delivery and operational efficiency. By detecting risks early and implementing appropriate mitigation strategies, municipalities can strengthen their internal control performance and reduce vulnerabilities. This finding is consistent with prior studies (Ntahondereye, Opuodho & Muigai, 2024; Trang, 2022; Umar, Karfe, Sule & Ahmed, 2019), which emphasise the importance of effective risk identification, assessment, and mitigation in strengthening internal control systems against internal and external uncertainties. Furthermore, the finding corresponds with key aspects of the control environment, especially the significance of management's commitment to integrity, ethical values and strong governance practices, which form the basis for effective risk assessment practices. A strong control environment promotes a comprehensive culture of integrity and risk awareness, which directly influences the identification, assessment, and mitigation of risks and reduces the likelihood of fraudulent or irregular activities (Bruwer, Coetzee & Meiring, 2019:3; Klein, Lubinga & Masiya, 2024:2). This study contributes further by situating these findings within the specific context of South African municipalities, where risks extend beyond financial concerns to include political, infrastructural, and social concerns. This finding was expected, given the growing emphasis on risk-based strategies within public sector governance; however, the clear relationship between risk assessment and improved internal control effectiveness in municipal contexts constitutes a significant contribution. In contrast, poor risk assessment can weaken internal control systems, which can lead to inefficient resource allocation and operations and compromised service delivery. In the context of municipalities, weakened risk assessment means that potential threats to service delivery, finances, and governance are not properly identified and analysed. This leads to unpreparedness for issues such as budget shortfalls, infrastructure failures, or fraud. As a result, municipalities often

react to crises instead of preventing them, causing delays, wasted resources, and poor public service outcomes. Therefore, embedding robust risk assessment mechanisms is essential for municipalities to increase their resilience, improve their internal control effectiveness and effectively deliver on their mandates (Otoo et al., 2023:147). Agency Theory further explains this finding, as effective risk assessment mechanisms enable principals to monitor agents more effectively and mitigate opportunistic behaviour through early identification of risks. A Stakeholder Theory perspective suggests that proactive risk management enhances organisational responsiveness to stakeholder needs, thereby improving service delivery reliability and institutional legitimacy.

Control activities were found to be among the key factors influencing the effectiveness of the internal control system. In this study, control activities measure the extent to which effective policies and procedures, reconciliations, and proper approvals and authorisations collectively enhance operational efficiency and effective service delivery and strengthen the overall internal control system within the municipality. Most respondents agreed that strong control activities are characterised by effective policies and procedures, regular reconciliations, and proper approvals and authorisation protocols. The finding suggested that when municipalities implement clear policies and guidelines, conduct regular reconciliations and enforce stringent approval processes, they are more capable of operating efficiently and delivering services effectively. Strong control activities contribute to the prevention of errors, early detection of irregularities, and the responsible and transparent utilisation of public resources. This finding is consistent with the literature (Anh et al., 2020; Hung & Tuan, 2019; Trang, 2022), which underscores that effective policies and procedures, reconciliations, and proper approvals and authorisations collectively serve not only as compliance measures but also as strategic instruments through which organisational actors integrate governance and proactively mitigate risks, thereby strengthening the overall internal control system. This finding was expected, given the growing emphasis on structured control activities in the public sector (AGSA, 2025:18; Mnguni, 2022:28). However, the clear relationship between control activities and improved internal control effectiveness in municipal contexts constitutes a significant contribution. While the finding emphasises the importance of control activities, it also reflects aspects of the control environment, including management's commitment to ethical values, accountability, good governance practices and a compliance-oriented culture, which constitute the fundamental foundation of effective policy adoption and implementation, consistent reconciliations, and stringent authorisation processes. Inadequate control

activities can result in a weak internal control system, which can lead to financial instability and compromised service delivery (Moloto & Lethoko, 2018:750). Inadequate control activities in South African municipalities have resulted in a significant increase in irregular, fruitless and wasteful spending, with certain municipalities incurring billions of losses due to poor financial management (Monnatlale, 2023:4). Consequently, this has caused delays in infrastructure projects and hindered service delivery, undermining public trust and financial sustainability (AGSA, 2025:9). Therefore, embedding robust control activities is crucial for municipalities to enhance the effectiveness of the internal control system, enabling municipalities to prevent or quickly identify and address errors or irregularities before they develop into larger systemic problems. This finding is also supported by Agency Theory, which posits that formal control mechanisms such as policies, procedures, and approvals reduce agency problems by constraining discretionary behaviour and ensuring compliance. In addition, Stakeholder Theory suggests that well-implemented control activities promote transparency and responsible resource utilisation, thereby enhancing stakeholder confidence in municipal operations.

Information and communication emerged as key factors influencing internal control system effectiveness. This study assesses how information and communication processes, including quality, timeliness, and sharing of information, enhance effective service delivery and strengthen the overall internal control system within the municipality. Most respondents agreed that information and communication, characterised by the quality and timeliness of information and the continual interactive process of obtaining and sharing necessary information. This finding is consistent with the literature (Anh et al., 2020; Boufounou et al., 2024; Hung & Tuan, 2019; Musheke & Phiri, 2021), emphasising the need for an effective and efficient flow of quality and timely information to improve the internal control system. The finding suggested that sharing accurate and timely information across departments, such as audit findings, financial reports, and service delivery updates, facilitates expeditious decision-making and enhanced coordination (Gaffoor & Cloete, 2010:4). For example, if the finance department quickly and consistently communicates budget variances to the relevant departments, necessary corrections can be made before any funds are misused. Strong communication also ensures that all municipal employees comprehensively understand internal control policies and procedures, which promotes compliance and enhances service delivery (Ngcobo, 2016:10). This study enhances the understanding by contextualising it within the specific difficulties faced by South African municipalities, where governance is

frequently strained due to fragmented communication channels. This finding was expected based on the prior literature (Hung & Tuan, 2019; Nguyen & Duong, 2024; Otoo et al., 2023); however, the clear relationship between information and communication and improved internal control effectiveness in municipal contexts constitutes a significant contribution.

Although this finding primarily addresses information and communication, it also highlights critical aspects of the control environment, especially the role of management in fostering transparency and accountability. The tone set by leadership significantly shapes the openness and effective flow of information within a municipality. In contrast, ineffective information and communication channels can hinder informed decision-making and weaken accountability. Inadequate communication can result in misunderstandings of policies and procedures, resulting in non-compliance with regulatory requirements and strategic misalignment across departments (Anh et al., 2020:135). In the context of a municipality, ineffective information and communication channels mean that financial and operational information is not accurately recorded, shared, or reported in a timely and consistent manner. This results in management and council decision-making on the basis of incomplete or outdated data, leading to inefficiency and non-compliance with regulations. Consequently, service delivery suffers, and accountability and transparency within the municipality are significantly weakened. Therefore, enhancing the information and communication channels transcends mere sharing of information; it is a strategic imperative for municipalities that aspire to promote transparent and accountable decision-making processes, foster trust, and deliver on their developmental mandates. An Agency Theory perspective suggests that effective information and communication systems reduce information asymmetry between principals and agents, enabling improved monitoring and decision-making. Stakeholder Theory further explains that timely and transparent information flows enhance accountability, responsiveness, and public trust by ensuring that stakeholders receive reliable information regarding organisational performance and governance practices. In public sector environments, effective information and communication systems contribute to internal control systems' effectiveness by improving reporting accuracy, coordination, and accountability in service delivery and financial management.

Monitoring activities were found to be among the key factors influencing the effectiveness of the internal control system. In this study, control activities measure the extent to which effective, continuous, and separate evaluations enhance effective service delivery and strengthen the overall internal control system within the municipality. Most respondents

agreed that strong monitoring activities, characterised by effective, continuous, and separate evaluations. This finding suggested that systematic internal reviews, performance evaluations, and audits assist in detecting operational anomalies or weaknesses. For example, ongoing monitoring can uncover issues such as delayed service delivery and budget overspending before they escalate. By implementing structured and independent assessments, municipalities can take timely corrective measures, thereby enhancing accountability and service delivery. This finding is consistent with the literature (Mkhize & Nandwa, 2020; Nguyen & Duong, 2024; Uwingabiye, 2019), emphasising the need for effective, continuous, and separate evaluations to improve the internal control system. However, this study enhances the understanding by contextualising it within the specific difficulties faced by South African municipalities, where non-compliance and irregular spending cases have been increasing due to outdated policies and procedures (AGSA, 2025:117). This finding was expected on the basis of the prior literature (Mkhize & Nandwa, 2020; Nguyen & Duong, 2024; Uwingabiye, 2019); however, the clear relationship between monitoring activities and improved internal control effectiveness in municipal contexts constitutes a significant contribution.

While this finding centres on monitoring activities, it also highlights aspects of the control environment, particularly leadership's commitment to accountability and oversight. A strong control environment enhances effective monitoring by fostering a culture in which performance assessments are conducted regularly and corrective measures are encouraged. This alignment ensures that monitoring is beyond a procedural activity but rather a proactive governance function integrated into the municipality's values and operations. In contrast, weakened monitoring activities can weaken internal control systems, which can lead to undetected errors, non-compliance, and misuse of resources (Ncgobo & Malefane, 2017:82). Weakened control activities mean that management fails to regularly review whether policies, procedures, and controls are working effectively. This allows errors, fraud, and non-compliance to go undetected, leading to the misuse of public funds and poor performance. Therefore, embedding robust monitoring activities within internal control systems is imperative for municipalities that aspire to promote compliance and accountable decision-making processes and deliver on their developmental mandates. Agency Theory provides further support for the positive relationship between monitoring activities and internal control system effectiveness, as continuous monitoring and oversight mechanisms enable principals to detect deviations, enforce accountability, and limit opportunistic behaviour by

agents. A Stakeholder Theory perspective suggests that regular evaluations and transparent reporting strengthen organisational credibility and reinforce stakeholder confidence in financial accountability, governance effectiveness, and public sector oversight processes.

Surprisingly, human resource competency has emerged as one of the key factors influencing the effectiveness of the internal control system, an aspect that has received limited attention in the literature. In this study, human resource competency measures the extent to which skilled, well-informed, and experienced personnel enhance effective service delivery and strengthen the overall internal control system within the municipality. Most respondents agreed that human resource competency is characterised by individuals' technical knowledge and skills, professional qualifications, and experience. This finding, therefore, presents a new contribution. This finding represents a significant extension to the traditional COSO framework, which does not explicitly recognise human resource competency as an independent determinant of internal control system effectiveness. By empirically validating the role of professional competencies and technical capabilities, this study demonstrates that internal control systems are not solely dependent on structural design and formal procedures. Their effectiveness is fundamentally influenced by the competence of individuals responsible for control implementation, monitoring, and oversight. This finding suggested that the effectiveness of internal control systems within South African municipalities is largely reliant on personnel competency. Employees who possess adequate skills, knowledge, and experience are more capable of effectively implementing and overseeing control mechanisms, preventing irregularities, and ensuring compliance with pertinent laws and regulations (El-Khateeb et al., 2022:464). Consequently, prioritising investments in staff training, professional development, and hiring based on merit can reinforce the control environment and improve overall service delivery (Saputra, 2021:199).

Furthermore, this finding corresponds with the control environment, as competent personnel are central to fostering ethical values and a culture of accountability. Their expertise directly influences the leadership's tone, facilitates sound decision-making and strengthens the municipality's commitment to good governance and effective internal control systems. The lack of skilled, well-informed, and experienced personnel can result in a weak design and implementation of the municipal internal control system, ultimately compromising service delivery (AGSA, 2024:80; Daryanto et al., 2020:2). Therefore, recruiting and retaining skilled, well-informed, and experienced personnel is crucial for municipalities to improve the effectiveness of the internal control system, enabling consistent compliance and service

delivery (Kifflee, Nawi, Jusoh, Mohaiyadin & Abdullah, 2023:663). This finding can be further explained through Agency Theory, which suggests that professionally competent personnel are better equipped to act in the best interests of principals, thereby reducing agency costs associated with inefficiency, weak oversight, and non-compliance. Competent employees also strengthen internal control system effectiveness through improved execution, monitoring, and accountability processes. A Stakeholder Theory perspective suggests that skilled employees enhance service delivery quality and organisational responsiveness, which directly influences stakeholder satisfaction, public trust, and organisational legitimacy within municipalities.

Notably, corporate governance has emerged as one of the key factors influencing the effectiveness of the internal control system. In this study, corporate governance is measured by the extent to which clearly defined roles and responsibilities, ethical conduct, strategic objective alignment, and effective oversight collectively enhance effective service delivery and strengthen the overall internal control system within the municipality. Most respondents agreed that strong corporate governance, characterised by clearly defined roles and responsibilities, promotes ethical conduct, strategic objective alignment, and effective oversight. This finding presents a new contribution. This finding extends the traditional COSO framework by explicitly conceptualising corporate governance as a central factor of internal control effectiveness, rather than treating it as an implicit element within the control environment. The results empirically confirm that governance structures, such as oversight, accountability mechanisms, and ethical leadership, operate as distinct and influential drivers of internal control system effectiveness. Corporate governance provides the ethical and strategic framework within which internal control systems operate, encompassing accountability, oversight, and risk management (Sahusilawane, 2020:198). This suggests that strong corporate governance, which includes board oversight, setting the ethical tone, defining lines of authority, and managing risk, improves the dependability and performance of internal control systems, thereby safeguarding assets, ensuring financial sustainability, and aligning operations with the organisational objectives of the municipality (Tjivau, 2020:16). Additionally, this contribution aligns with the aspects of the control environment, as governance practices directly influence the leadership's tone, organisational values, and commitment to integrity and responsible management. This suggests that improving internal control systems is not only a technical exercise but also a governance imperative. In contrast, weak corporate governance, which may include poor board practices, a weak ethical climate,

unclear authority, and poor risk management, weakens the internal control system, thus leading to increased vulnerability to fraud, mismanagement of public funds, inefficient resource allocation, and ultimately service delivery failure (Popa, Achim & Teusdea, 2024:503). Therefore, enhancing corporate governance by promoting effective oversight bodies and ethical conduct is imperative for municipalities to strengthen their internal control systems and ensure effective municipal performance. This finding is strongly aligned with Agency Theory, which emphasises governance structures as critical mechanisms for aligning the interests of agents with those of principals through oversight and accountability. Stakeholder Theory further reinforces this relationship by asserting that effective governance ensures that the interests of multiple stakeholders are considered, thereby improving transparency, trust, and overall organisational performance.

Surprisingly, BDA has emerged as one of the key factors influencing the effectiveness of internal control systems. In this study, BDA measures the extent to which integrating vast and diverse data sources that enable risk prediction, fraud detection, compliance automation, and strategic decisions collectively enhances effective service delivery and strengthens the overall internal control system within the municipality. Most respondents agreed that BDA is characterised by its ability to integrate vast and diverse data sources that enable risk predictions, fraud detection, compliance automation, and strategic decisions. BDA can play a transformative role in strengthening internal control systems for municipalities. For example, by integrating financial, operational, and service delivery data from various departments, municipalities can detect irregular spending patterns, predict potential risks, and automate compliance checks in real time. This facilitates quicker decision-making, enhances transparency, and improves accountability (Kleuskens & Larcher, 2020:31). This finding presents a new contribution. This finding extends the COSO framework into a digitally enabled control environment by incorporating big data analytics (BDA) as a critical technological enabler of internal control system effectiveness. In contrast to traditional COSO-based studies, which have largely treated technological capabilities as peripheral to internal control system effectiveness, the results provide empirical evidence that data-driven tools strengthen key COSO dimensions, particularly monitoring activities, risk assessment, and information and communication. Through real-time monitoring, predictive risk analysis, and enhanced fraud and anomaly detection, BDA reinforces the effectiveness of internal control systems within increasingly complex municipal governance environments. This highlights the growing importance of digital transformation in public sector governance and

underscores the need for municipalities to invest in data capabilities as part of their internal control frameworks. BDA can help municipalities integrate and analyse vast datasets to improve planning, monitor performance, detect fraud, and enhance service delivery. An Agency Theory perspective suggests BDA enhances monitoring capabilities by enabling real-time analysis and reducing information asymmetry, thereby limiting opportunities for opportunistic behaviour. In line with Stakeholder Theory, the use of advanced data analytics improves transparency, decision-making, and responsiveness, which strengthens stakeholder confidence in municipal governance.

In conclusion, this section demonstrates that a comprehensive set of interrelated factors influences the effectiveness of internal control systems in municipalities. While the traditional COSO components remain fundamental, the findings underscore the critical role of human resource competency, corporate governance, and technological capabilities such as BDA. Collectively, these factors provide a more holistic explanation of internal control effectiveness, reinforcing the need for municipalities to adopt an integrated and multidimensional approach to strengthening internal control systems.

5.3. IMPACT OF AN EFFECTIVE INTERNAL CONTROL SYSTEM ON ORGANISATIONAL PERFORMANCE

This section analyses the impact of internal control system effectiveness on organisational performance across financial and non-financial dimensions. The findings reveal that effective internal control systems have a significant and positive influence on operational, customer, and financial performance. Importantly, the study extends existing literature by incorporating non-financial performance measures, providing a more balanced and comprehensive assessment of organisational outcomes. The results further indicate that improvements in operational and customer performance contribute to enhanced financial performance. Overall, these findings confirm that internal control systems play a strategic role in driving multidimensional organisational performance within municipalities.

In addition to research on factors influencing the effectiveness of the internal control system, studies on the impact of internal control systems on organisational performance are still emerging (Ajala et al., 2023:66; Al-Hiyari, Al-Mashre & Al-Khattab, 2020:103; Mwangi & Wanjala, 2022:45; Ncube & Zondo, 2021:78). Prior studies have examined internal control systems and organisational performance (Ayamga & Bagina, 2019; Julius & Alex, 2024; Kalvel & Irumba, 2023), focusing exclusively on financial performance indicators, such as

profitability (asset turnover, net profit, return on assets, and sales turnover) (Mudau, 2021:7), while neglecting non-financial performance indicators, such as operational and customer performance (Wu et al., 2020:70-71). Examining the impact of internal control systems on a more balanced set of organisational performance measures could assist management in justifying their efforts to enhance organisational performance and aid organisations in adequately measuring their performance (Mudau, 2021:5). Focusing on both financial and non-financial performance measures could provide organisations with deeper insights into how effective internal control systems can impact performance. To address this gap, this research has expanded and integrated the COSO framework with the BSC model. This integration further differentiates the present study from traditional COSO-only approaches by linking internal control systems not only to financial outcomes but also to operational and customer performance. In doing so, the study advances a multidimensional understanding of performance, demonstrating that internal control effectiveness produces broader organisational value beyond financial metrics alone.

To a greater extent, organisations with improved internal control systems were found to have improved operational performance. Operational performance refers to how effectively and efficiently an organisation performs its core activities to achieve its objectives. It includes the ability to deliver services or products with optimal use of resources, minimal waste, and high quality (Joshua & Umoh, 2022:301). In this study, operational performance measures the extent to which the internal control system impacts business process improvements, staff productivity, and the efficient use of resources, thereby enhancing effective service delivery and organisational performance within the municipality. Most respondents agreed that operational performance is characterised by business process improvements, staff productivity, and the efficient use of resources in delivering quality service. This is a new contribution, as previous studies (Ayamga & Bagina, 2019; Julius & Alex, 2024; Kalvel & Irumba, 2023) have examined internal control systems and organisational performance focused exclusively on financial performance, such as profitability (asset turnover, net profit, return on assets, and sales turnover) (Mudau, 2021:7), and ignored non-financial performance indicators, such as operational and customer performance. An internal control system helps streamline workflows by enforcing standard operating procedures, reducing duplication of efforts, and improving turnaround times for service delivery. Agency Theory explains this relationship by suggesting that effective internal controls align employee behaviour with organisational objectives, thereby improving efficiency and reducing wastage.

A Stakeholder Theory perspective suggests that improved operational performance reflects the municipality's ability to deliver reliable and efficient services, which enhances stakeholder satisfaction and trust.

With clear controls and accountability mechanisms, staff are better guided in their roles, reducing errors and increasing output (Otoo et al., 2023:146). For example, automated controls in financial systems can reduce manual data entry and free staff for more strategic tasks. Internal control systems promote budget adherence, prevent the misuse of municipal assets, and ensure that procurement processes are transparent and cost-effective. By reducing waste, inefficiencies, and fraud, internal control systems contribute to more reliable and timely service to the public, increasing citizen satisfaction (Adegboyegun et al, 2020:469). In municipalities, improved internal control systems can enhance operational performance by strengthening procurement processes, ensuring timely payment to service providers, improving revenue collection, and reducing the waste of public resources. For example, when a municipality enforces proper authorisation and verification controls in its procurement cycle, it can prevent duplicate payments, reduce delays in service delivery, and ensure that infrastructure projects are completed within the budget. In contrast, inadequate business process improvements, a lack of staff productivity, and inefficient use of resources can lead to operational inefficiency, thereby compromising service delivery (Bruintjies & Njenga, 2024:9). For example, if a municipality lacks strong internal control systems regarding its procurement process, it may lead to delayed acquisition of essential materials or services due to poor planning or unauthorised spending. This can lead to project delays, increased operational costs, and inefficient use of resources, ultimately reducing a municipality's ability to deliver services effectively and undermining overall operational performance. Therefore, enhancing operational performance is imperative for municipalities that aspire to deliver efficient, reliable, and citizen-focused services.

To a greater extent, organisations with improved internal control systems were found to improve customer performance. Customer performance refers to how well an organisation meets the needs, expectations, and satisfaction levels of its customers or service users. In the context of a municipality, "customers" are typically citizens, businesses, and other stakeholders who rely on public services (Naidoo, 2024:38). Therefore, customer performance measures how effectively a municipality delivers services such as water, sanitation, electricity, waste management, and administrative functions (i.e., issuing permits or licences) in a way that satisfies the community (Oliver, 1997:13; Sulhan & Wasistiono,

2017:229). In this study, customer performance measures the extent to which the internal control system impacts quality service and responsiveness and fosters public satisfaction, thereby enhancing effective service delivery and organisational performance within the municipality. Most respondents agreed that customer performance is characterised by quality service, responsiveness and fostering public satisfaction. This is a new contribution, as previous studies (Ayamga & Bagina, 2019; Julius & Alex, 2024; Kalvel & Irumba, 2023) have examined internal control systems and organisational performance focused exclusively on financial performance, such as profitability (asset turnover, net profit, return on assets, and sales turnover) (Mudau, 2021:7), and ignored nonfinancial performance indicators, such as operational and customer performance. This finding suggests that when a municipality strengthens its internal control systems, such as implementing transparent billing, timely response systems, compliance monitoring, and proper service monitoring, citizens receive accurate bills, timely services and repairs, and clear communication, leading to greater public confidence and satisfaction with local service delivery. For example, improved controls in water billing and maintenance reporting can reduce service interruptions and enhance public trust and satisfaction with municipal services (Farook & Alex, 2024:287). In contrast, inadequate internal control systems can result in operational inefficiencies that detrimentally impact customer experience and satisfaction (Chen, Liu, Wan & Wang, 2023:31). For example, if a municipality lacks strong internal control over its water billing and maintenance systems, customers may receive inaccurate bills or experience long delays in resolving service delivery and interruptions. Such inefficiencies and errors can lead to public dissatisfaction, loss of trust, and increased complaints and protests, ultimately reflecting poor customer performance. This finding is supported by Stakeholder Theory, which posits that organisations must prioritise stakeholder needs, including service quality and responsiveness, to maintain legitimacy and trust. Although Agency Theory focuses more on internal relationships, improved customer performance indirectly reflects reduced inefficiencies and better alignment between agents' actions and stakeholder expectations. Therefore, improving internal control systems is not only about meeting regulatory requirements and governance standards but also serves as a strategic means to enhance performance results that are significant to the users of municipal services.

To a greater extent, organisations with improved internal control systems were found to have improved financial performance. Financial performance refers to the overall measure of how effectively an organisation is achieving its financial objectives and using its resources to

generate profits and growth. It reflects an organisation's ability to earn revenue, control costs, maintain liquidity, and efficiently manage assets and liabilities (Atrill & McLaney, 2020:15). In the context of a municipality, financial performance refers to the effectiveness and efficiency with which the municipality manages and utilises its financial resources to deliver public services and achieve development goals. It reflects the municipality's ability to generate sufficient revenue, control expenditures, maintain fiscal stability, and ensure the sustainable use of public funds (Jones & Walker, 2019:102). In this study, financial performance measures the extent to which the internal control system impacts improvements in revenue collection, operating surplus, and gross operating spending; preventing fruitless, wasteful, and irregular spending; and improving return on assets, thereby enhancing effective service delivery and organisational performance within the municipality. Most respondents agreed that an internal control system significantly impacts financial performance. This finding is consistent with the literature (Julius & Alex, 2024; Kisanyanya & Omagwa, 2018; Uwingabiye, 2019), indicating that effectively implemented internal control systems enhance financial results by safeguarding assets, reinforcing compliance, preventing wasteful and irregular spending, and reducing instances of overspending on budgets. This finding suggests that municipalities with stronger internal control systems manage their finances more effectively, leading to improved revenue collection, reduced wasteful spending, and better overall financial performance (Gcabashe & Pillay, 2025:6).

For example, establishing a comprehensive asset management system with regular physical verification and tagging of municipal property helps safeguard assets by preventing theft, misuse, or loss. Compliance can be reinforced through automated approval systems that ensure that all procurement and expenditure processes follow established financial regulations and legislative requirements, supported by regular internal audits and staff training on compliance standards (Van der Waldt, Fourie & Malan, 2024:12). Revenue collection improves when municipalities adopt digital payment systems and reconcile collections with bank deposits daily, minimising leakages and increasing accountability. Similarly, irregular and wasteful spending can be reduced by introducing expenditure pre-approval procedures and closely monitoring the usage of funds (Mofokeng, Ramolobe & Bogopa, 2025:4). Finally, integrating budget monitoring controls that flag transactions exceeding approved thresholds and conducting monthly budget performance reviews helps prevent overspending, ensuring that financial resources are used efficiently and in alignment with strategic priorities (Nkadimeng, 2019:45; Zweni, Yan & Uys, 2022:12). An Agency

Theory perspective suggests that strong internal control systems reduce opportunistic behaviour and financial mismanagement, thereby improving financial performance and accountability. Stakeholder Theory further explains that sound financial management enhances transparency and builds confidence among stakeholders, including citizens, regulators, and oversight bodies. Therefore, improving internal control systems is not only about meeting regulatory requirements and governance standards but also serves as a strategic means to enhance performance results that are significant to municipal financial health and sustainability.

Surprisingly, both operational and customer performance were found to have a relationship with financial performance. Non-financial performance, such as operational efficiency, staff productivity, and customer satisfaction, plays a crucial role in influencing financial performance. Although the organisation's financial health is depicted by figures in financial reports, they reflect operational efficiency and customer satisfaction rather than being standalone measures (Mukui, 2022:4). Most respondents agreed on the financial and non-financial benefits of implementing and effectively executing internal control systems, recognising potential mitigation of irregular and wasteful spending while simultaneously enhancing organisational efficiency. This suggests that an improved internal control system would enhance operational and customer performance, thereby positively affecting the financial performance of the organisation. This finding is consistent with the literature (Kaplan & Norton, 1992; Mudau, 2021; Naidoo, 2024; Refmasari and Supriyono, 2019), indicating that a robust internal control system fosters improvements across financial and non-financial domains. An improved internal control system strengthens this relationship by ensuring that operational processes are properly monitored, risks are mitigated, and resources are used optimally. Consequently, strong internal control systems translate improvements in non-financial performance into enhanced revenue collection, reduced irregular and wasteful spending, and overall financial performance (Naidoo, 2024:115). Empirical evidence demonstrates that internal control systems not only strengthen governance capacity but also enhance the quality, timeliness, and reliability of service delivery, a vital non-financial performance metric that ultimately translates into financial benefits. This finding was expected on the basis of prior literature (Kaplan & Norton, 1992; Mudau, 2021; Naidoo, 2024; Refmasari and Supriyono, 2019); however, the clear relationship between financial and non-financial performance in municipal contexts constitutes a significant contribution. The pliability and scalability of internal control systems align seamlessly with non-financial measures such

as customer satisfaction and operational efficiency, both of which are instrumental in improving revenue collection and positively impact financial performance. Therefore, this study empirically validated, within the context of South African municipalities, that an organisation's financial and non-financial performance substantially affects the effective design and implementation of an internal control system.

In conclusion, this section substantiates that robust internal control systems substantially improve both financial and non-financial aspects of organizational performance. The findings emphasise that internal controls are not merely compliance mechanisms but strategic tools that improve operational efficiency, customer satisfaction, and financial sustainability. By demonstrating the interrelationship of performance dimensions, this study reinforces the importance of adopting a balanced and integrated approach to performance management in municipalities.

5.4. IMPACT OF AN EFFECTIVE INTERNAL CONTROL SYSTEM ON AUDIT OUTCOMES, WITH ORGANISATIONAL PERFORMANCE SERVING AS A MEDIATING FACTOR

This section analyses the impact of internal control system effectiveness on audit outcomes, with organisational performance acting as a mediating factor. The findings indicate that both operational and financial performance have a significant positive effect on audit outcomes, whereas customer performance does not exhibit a statistically significant relationship. These results suggest that audit assessments are more strongly influenced by efficiency and financial management practices than by citizen satisfaction measures. Furthermore, the mediating role of organisational performance highlights the indirect pathway through which internal control systems influence audit opinions. Overall, the findings provide important insights into the mechanisms linking internal control, performance, and audit outcomes in the municipal context.

In addition to the research on the impact of internal control systems on organisational performance, research examining internal control and performance, extending to audit outcomes, is scarce. There is inadequate empirical evidence to substantiate the impact of internal control and organisational performance on audit outcomes (Chalmers, Hay & Khlif, 2018:25). Furthermore, studies on internal control effectiveness that can be utilised as a determinant of enhanced organisational performance, which influences the audit outcome, are lacking (Khasodi, Mahlala & Hofisi, 2023:338). To address this gap, this research has

expanded and integrated the COSO framework with the BSC model, thereby establishing a more comprehensive and holistic conceptual framework. Through the identification and validation of the critical factors underpinning the effective internal control system, the conceptual framework rigorously analysed the extent to which the internal control system impacts audit outcomes through organisational performance, serving as a mediating factor.

Operational performance was found to have a significant positive effect on AO outcomes. Most respondents agreed that a positive AO is characterised by improved operational performance. This is a new contribution, as previous studies (Farook & Alex, 2024; Kalvel & Irumba, 2023; Makhele, 2021; Nqala, 2020) examining internal control and performance did not extend to include audit outcomes. This suggests that organisations demonstrating higher levels of operational efficiency, optimal resource utilisation, and strong service delivery mechanisms are more likely to receive positive audit outcomes (Shuping, 2021:66). Improved operational performance reflects strong internal control systems supported by sound management practices and compliance with established procedures, all of which contribute to greater financial transparency and accountability (Nqobe, Fourie & Tshiyoyo, 2021:102). It reflects an organisational culture that prioritises efficiency, ethical conduct and continuous improvements. Sustained operational performance excellence catalyses improved audit outcomes and long-term institutional sustainability (Ncgobo & Malefane, 2017:75). For example, the City of Cape Town metropolitan municipality has consistently achieved clean or unqualified audit outcomes from the Auditor-General of South Africa over several years. This outcome is largely attributed to its strong operational performance, characterised by efficient service delivery systems, effective utilisation of resources, and adherence to internal control procedures (AGSA, 2025:211). This emphasises the necessity for municipalities to prioritise strengthening their internal control systems to improve operational efficiency, thereby fostering sustained positive AO outcomes.

Financial performance was found to have a significant positive effect on AO outcomes. Most respondents agreed that a positive AO is characterised by improved financial performance. This finding is consistent with the literature (Lustrilanang, Suwarno, Arif & Subowo, 2023; Otoo et al., 2023; AGSA, 2023), which reports a significant relationship between financial performance and audit outcomes. This suggests that municipalities with sound financial management practices, adequate procurement and contract management, effective budget utilisation, and strong revenue collection systems are more likely to achieve clean or unqualified audit outcomes (AGSA, 2025:187). Improved financial performance reflects

prudent use of public resources, adherence to financial regulations, and timely reporting, all of which contribute to greater accountability and transparency (Msindwana & Ngwakwe, 2022:86). For example, the uMshwathi Local Municipality demonstrated how improved financial performance can lead to clean AOs when it received an unqualified audit outcome following the implementation of stringent financial management reforms and enhanced budget monitoring controls. Through effective revenue collection strategies, disciplined expenditure management, and strengthened internal audit processes, the municipality was able to improve cash flow stability and comply with the Municipal Finance Management Act (MFMA) (AGSA, 2025:28). This practical example underscores how municipalities that prioritise financial discipline, transparency, and adherence to sound internal control systems are more likely to achieve sustained positive audit outcomes.

Surprisingly, customer performance was not found to influence AO outcomes. Most respondents disagreed that a positive AO is characterised by improved customer performance. This finding deviates from this study's expectations and prior literature (Agusti-Perez, 2025; Nguyen, Hoang, Do, Tran, Dao & Vu, 2023), emphasising that customer performance indirectly influences audit quality by serving as a reflection of an organisation's operational efficiency and service delivery outcomes. This finding indicates that while the impact of customer performance is central to public sector performance, it is not a primary determinant in audit assessments. Furthermore, this disconnect demonstrates that while customer performance contributes to broader organisational effectiveness, it does not substantially impact audit outcomes (Sambo, 2019:2-4). For example, provinces with high and sustained clean audit outcomes, such as the Western Cape Province, still experience frequent service delivery protests. This finding demonstrates that audit outcomes do not necessarily reflect citizen satisfaction or service delivery effectiveness, reinforcing the minimal role of customer performance in shaping audit outcomes. However, the deviation of the finding underscores a potential gap in how customer performance is valued in audit assessments and prompts the necessity for further research to explore this complex relationship.

In conclusion, this section demonstrates that effective internal control systems influence audit opinions primarily through their impact on operational and financial performance. While customer performance remains important for service delivery, it does not significantly shape audit outcomes. These findings highlight a disconnect between performance dimensions and audit assessments, suggesting that audit frameworks prioritise financial discipline and

operational efficiency. Consequently, this underscores the importance for municipalities to strengthen internal controls as a means of improving both performance and audit outcomes.

5.5. CHAPTER SUMMARY

This chapter presented an in-depth discussion of the empirical results derived from analysing the factors influencing the effectiveness of the internal control system and its impact on the organisational performance and audit outcomes of South African municipalities. The study expanded and integrated the COSO framework with the BSC model, establishing a more holistic conceptual framework. In addition to COSO's five dimensions, this research has also included human resource competency, corporate governance, and BDA as additional factors that affect the effectiveness of internal control systems in South African municipalities. On the other hand, the BSC provided a comprehensive view of organisational performance, including both financial and non-financial dimensions, to capture a balanced view of municipal performance. The findings demonstrated that the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and BDA significantly influence the effectiveness of the internal control system. The inclusion of human resource competency, corporate governance, and BDA represents a significant contribution to fully understanding the factors influencing the effectiveness of the internal control system to fully appreciate the advantages of a robust internal control system in enhancing efficiency, effectiveness, and service delivery within municipalities.

Furthermore, the study validated the positive relationship between the effective internal control system and operational, customer, and financial performance, reinforcing the necessity for municipalities to strengthen their internal control systems as a strategic approach for enhancing service delivery. This study makes a further significant contribution by including operational and customer performance in the measurement of audit outcomes. Additionally, these domains of non-financial performance were measured separately rather than being aggregated. The study extended the work of Kamau, Boiywo and Kiprop by expanding on non-financial performance, such as operational performance and customer performance. Financial performance was identified as a significant predictor of both operational and customer performance, underscoring its essential role in the success of municipalities. The study validated the positive relationship between audit outcomes and financial and operational performance, with improved internal control systems mediating this

relationship, suggesting that effective internal control systems enhance financial and operational performance, which subsequently positively influences auditors' assessments. Surprisingly, the study revealed that customer performance, measured by citizen satisfaction and perceptions of service delivery, does not have a substantial positive effect on audit outcomes. This finding indicates that while the impact of customer performance is central to public sector performance, it is not a primary determinant in audit assessments (Sambo, 2019:2-4). This underscores a potential gap in how customer performance is valued in audit assessments and prompts the need for further research to explore this complex relationship.

In summary, the findings underscore the significance of a multidimensional strategy for an internal control system that combines governance, human resource competency, and technological advancements. This chapter establishes a foundation for the recommendations outlined in Chapter 6, emphasising the necessity for strategic investment in internal control systems to strengthen organisational performance and enhance the quality of audit outcomes across South African municipalities.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1. INTRODUCTION

In Chapter 5, the internal control system success model was validated from a balanced performance perspective. The discussion offered a comprehensive interpretation and analysis of the extent to which the results supported or contradicted prior studies, elucidated potential reasons for the observed outcomes, and emphasised the implications of these results in relation to the research problem. Additionally, it addressed any unanticipated findings and considered their significance for theoretical frameworks, practical applications, and policy development. This chapter provides the conclusions of the research findings. Initially, it provides the overall summary of this research and thereafter indicates the research contributions of the study, which include theoretical, contextual, and practical contributions. In addition, the research limitations and directions for future studies are discussed. The last section provides an overall conclusion of the dissertation.

6.2. SUMMARY OF CHAPTERS

In Chapter 1, the study introduced the main research problem and outlined the key research aim along with the supporting research objectives. *The first objective is to analyse the factors influencing internal control system effectiveness.* Although the COSO framework has been established for several years, the effective implementation of internal control remains a challenge (Makgatho, 2013:61-72). Previous investigations have employed the COSO framework to examine the effectiveness of the internal control system within both private and public sector organisations. However, its application has focused predominantly on the framework's five traditional components: the control environment, risk assessment, control activities, information and communication, and monitoring activities (Zahari, Muhamad & Ramly, 2023:354; Kharbach, Zaam & El Guir, 2022:87). This traditional approach often neglects broader contextual factors influencing the internal control system, particularly in dynamic and complex governance environments such as South African municipalities (Mnguni, 2022:110). While previous studies have attempted to evaluate the factors influencing the effectiveness of internal control systems (Hung & Tuan, 2019; Kazaara & Julius, 2024; Bridget & Catherine, 2024), their findings have been inconsistent, underscoring the necessity for further examination. Additionally, the study explored how the inclusion of human resource competency, corporate governance, and big data analytics (BDA) can

influence the effectiveness of the internal control system, given the persistent challenges, including financial mismanagement, increased wasteful and irregular spending, non-compliance with legislation, poor service delivery, and regressing audit outcomes.

The second objective is to analyse the impact of internal control effectiveness on both the financial and non-financial aspects of organisational performance within municipalities. Research on the impact of internal control systems on organisational performance is still emerging (Ajala, Ololade, Olaleye & Abass, 2023:66). Prior studies have examined internal control systems and organisational performance focused exclusively on financial performance (Ayamga & Bagina, 2019; Julius & Alex, 2024; Kalvel & Irumba, 2023), such as profitability (asset turnover, net profit, return on assets, and sales turnover) (Mudau, 2021:7), and ignored non-financial performance indicators, such as operational and customer performance (Wu, Pan, Zhou & Li, 2020:70-71). Focusing solely on financial performance provides a narrow and incomplete understanding of an organisation's performance. Financial performance is just one part of the organisational performance puzzle (Mudau, 2021:7). The study explored internal control systems' potential to improve not only financial but also operational and customer performance. Examining the impact of internal control systems on a more balanced collection of organisational performance measures could help management justify their efforts in enhancing organisational performance and aiding organisations in adequately measuring their organisational performance (Mudau, 2021:5). Concentrating on both financial and non-financial performance measurement could offer organisations an opportunity to gain deeper insights into how effective internal control systems can impact performance. To address this gap, this research has expanded and integrated the COSO framework with the balanced scorecard (BSC) model, thereby establishing a more comprehensive and holistic conceptual framework.

The third objective is to analyse the impact of effective internal control on the audit outcomes of municipalities, with organisational performance serving as a mediating factor, and test the indirect effect of internal control on audit outcomes via performance. Prior studies that have examined the relationships among internal control, organisational performance, and audit outcomes remain limited (Farook & Alex, 2024; Kalvel & Irumba, 2023; Makhele, 2021; Nqala, 2020). There is inadequate empirical evidence to substantiate the impact of internal control and organisational performance on audit outcomes (Chalmers, Hay & Khlif, 2018:25). Furthermore, studies on internal control effectiveness that can be utilised as a determinant

of enhanced organisational performance, which influences the audit outcome, are lacking (Khasodi, Mahlala & Hofisi, 2023:338).

In summary, this study extends two established models: the COSO framework and the BSC. This extension incorporates critical variables such as human resource competency, corporate governance, and BDA as additional factors influencing the effectiveness of the internal control system. Furthermore, the study integrates financial, operational, and customer performance dimensions to assess the impact of internal control systems on a balanced view of organisational performance and audit outcome (AO).

Chapter 2, which presented a comprehensive literature review, established a foundational understanding of the concepts, components, and implementation of the internal control system. It explored the evolution of the internal control system and its significance in the South African public sector, addressing both its advantages and inherent limitations. The literature review revealed a research gap, highlighting the limited understanding of the determinants influencing the effectiveness of the internal control system. While previous studies have examined the factors influencing the effectiveness of internal control systems, their findings have been inconsistent (Hung & Tuan, 2019; Kazaara & Julius, 2024; Bridget & Catherine, 2024), underscoring the necessity for further examination. Furthermore, it explored the key variables influencing the effectiveness of the internal control system, proposing a conceptual framework that integrates human resource competency, corporate governance, and BDA as the critical determinants of an effective internal control system. Moreover, the literature review thoroughly analysed the potential impact of the internal control system on the financial and non-financial dimensions of organisational performance, striving for a comprehensive and balanced analysis. Additionally, the review underscored a notable research gap in the literature, particularly concerning the mediating role of operational, financial, and customer performance in the relationship between internal control systems and audit outcomes. To address these gaps, this study adopted and extended two models: the COSO framework and BSC. This integration aimed to gather a balanced view of how the internal control system impacts organisational performance and audit outcomes. The findings of this study are expected to offer a clear understanding of the factors influencing the effectiveness of the internal control system and equip municipalities and public institutions with practical strategies to improve their internal control systems, thereby enhancing organisational performance and audit outcomes.

Chapter 3 outlined a comprehensive research methodology pertinent to the study, including its philosophical underpinnings, data collection methods, and analytical techniques employed to analyse the proposed hypotheses. The chapter commenced by outlining the philosophical stance of the research, which was based on the positivist paradigm and endorsed the application of quantitative methods to explore relationships within the conceptual framework. A structured online survey questionnaire, utilising a seven-point Likert scale, was developed to collect the primary data. The questionnaire was structured around the key research model constructs, including the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, BDA, internal control system, operational performance, customer performance, financial performance, and AO. The research design employed snowball and purposive sampling techniques. The chapter further detailed the data analysis strategies and interpretations employed in analysing and interpreting the data acquired. A systematic approach that encompassed descriptive statistics, exploratory and confirmatory factor analysis, assessments of reliability and validity, and structural equation modelling was adopted. The data were analysed using the statistical software version 30 of the Statistical Package for Social Sciences (SPSS) Analysis of Moment Structures (AMOS). The chapter also addressed ethical considerations observed throughout the research process. This comprehensive methodological approach ensured robust statistical validation and generated credible insights into factors influencing the effectiveness of the internal control system and its impact on the organisational performance and audit outcomes of South African municipalities.

Chapter 4 provided an in-depth analytical examination of the data collected to identify and evaluate the factors influencing the effectiveness of the internal control system and its impact on the organisational performance and audit outcomes of South African municipalities. This chapter presented a comprehensive interpretation of the main results of the structural model, focusing on the research objectives SRO1, SRO2, and SRO3. The findings revealed that the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and BDA significantly affect the effectiveness of the internal control system. These results affirm the relevance of the COSO framework while extending and contextualising it to include dimensions that reflect the distinct operational challenges of South African municipalities. Understanding these determinants more holistically is essential to appreciating the benefits

of a robust internal control system in enhancing efficiency, effectiveness, and service delivery within municipalities.

Additionally, the findings confirmed that strong and statistically significant relationships exist between effective internal control systems, operational performance, customer performance, and financial performance. Furthermore, when combined with operational performance and financial performance, these constructs demonstrated positive and meaningful associations with audit outcomes. However, the findings demonstrated that customer performance does not have a significant influence on audit outcomes. The fit indices of the structural model, including NFI, CFI, IFI, RMSEA, and X^2/DF, demonstrated a strong level of statistical adequacy, confirming the robustness and empirical soundness of the proposed conceptual framework. These findings provide substantial empirical support for the integrated model, which combines the COSO framework and BSC. This integration enhances both the theoretical consistency of the model and its practical applicability within organisational contexts.

Chapter 5 presented a comprehensive interpretation of the findings of the study, focusing on the factors influencing the effectiveness of the internal control system and its impact on organisational performance and audit outcomes within South African municipalities. The study extended and integrated the COSO framework with the BSC model, establishing a more holistic conceptual framework. In addition to COSO's five dimensions, this research incorporated human resource competency, corporate governance, and BDA as additional determinants influencing the effectiveness of internal control systems in South African municipalities. Conversely, the BSC provided a comprehensive, balanced viewpoint on organisational performance, including both financial and nonfinancial performance. The results were interpreted in the context of the literature, confirming that the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and BDA significantly affect the effectiveness of the internal control system. These findings reaffirm the relevance of the COSO framework while broadening and contextualising it to include dimensions that capture the distinct operational and governance challenges of South African municipalities.

Furthermore, the study confirmed the positive relationship between the effective internal control system and operational, customer, and financial performance, reinforcing the necessity for municipalities to strengthen their internal control systems as a strategic mechanism for enhancing service delivery. Financial performance had a significant positive

relationship with both operational and customer performance, underscoring its essential role in the success of municipalities. Financial and operational performance were found to have a significant positive relationship with AO outcomes. Improved financial and operational performance reflects strong internal control systems supported by sound management practices, strong financial management systems, and compliance with established procedures, all of which contribute to greater financial transparency and accountability (Msindwana & Ngwakwe, 2022:86; Nqobe, Fourie & Tshiyoyo, 2021:102). For example, a municipality that has improved financial management practices by implementing a robust budgeting process, regularly monitoring expenditures, and ensuring proper allocation of resources to essential services. As part of this, they have also streamlined their operational performance by utilising resources efficiently and improving service delivery, such as ensuring that water and electricity are reliably provided, that waste management systems function efficiently, and that infrastructures are maintained in time (Ngubane, 2025:40). As a result of the municipality's sound financial management and the efficient execution of its operations, the auditors can confidently assess that the financial statements and performance reports are accurate, reliable, and compliant with regulations. This leads to a positive AO, such as a clean or unqualified audit (AGSA, 2025:8). This emphasises the necessity for municipalities to prioritise strengthening their internal control systems to improve operational efficiency, thereby fostering sustained positive AO outcomes.

Surprisingly, customer performance was not found to influence AO outcomes. This finding indicates that while the impact of customer performance is central to public sector performance, it is not a primary determinant in audit assessments. Furthermore, this disconnect demonstrates that while customer performance contributes to broader organisational effectiveness, it does not substantially impact audit outcomes (Sambo, 2019:2-4). For example, provinces with high and sustained clean audit outcomes, such as the Western Cape Province, still experience frequent service delivery protests. This finding demonstrates that audit outcomes do not necessarily reflect citizen satisfaction or service delivery effectiveness, reinforcing the minimal role of customer performance in shaping audit outcomes.

6.3. RESEARCH CONTRIBUTIONS

This study comprehensively analysed the factors influencing the effectiveness of the internal control system within the context of municipal performance. This has enabled the research

to make substantial contributions across various dimensions, consisting of theoretical, contextual, and practical contributions.

6.3.1. Theoretical Contributions

This research provides a substantial theoretical contribution by extending and integrating the COSO framework with the BSC model to include human resource competency, corporate governance, and BDA as factors influencing the effectiveness of the internal control system. This development addresses a significant gap in the understanding of the factors influencing the effectiveness of the internal control system in South African municipalities. Although the COSO framework has been regarded as the global standard for designing, implementing, executing, and assessing internal control systems, its conventional emphasis has focused primarily on operational and compliance aspects. These additional factors are important for effective internal control systems (Darmayanti, Budianto & Hastuti, 2023:2423). The inclusion of human resource competency, corporate governance, and BDA provides a better comprehension of the factors influencing the effectiveness of internal control. By understanding these factors more deeply, organisations can better justify their efforts in building and maintaining robust internal control systems (Makgatho, 2013:26-27).

The addition of human resource competency as a pivotal factor influencing the effectiveness of the internal control system occurs because internal control systems are dependent entirely on the personnel executing them (Hamed, 2023:18). Personnel with in-depth skills and an understanding of systems and professional norms and standards can execute internal control properly, minimise the possibility of misinterpretation, and ensure that norms and standards are adhered to (Dewi & Wirasedana, 2021:32). Corporate governance offers the structural and ethical framework within which internal control systems operate. Robust governance ensures accountability, transparency, and strategic oversight, which are crucial for enforcing control protocols, encouraging compliance, and cultivating a culture of integrity within the organisation. BDA has emerged as a transformative tool in modern internal control systems. By enabling real-time monitoring, predictive analysis, and data-driven decision-making, BDA enhances the ability to detect anomalies, assess risks proactively, and improve the precision and responsiveness of control activities (Ilori, Nwosu, & Naiho, 2024:932). The study revealed that the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and BDA significantly influence the effectiveness of the internal control system.

By employing the BSC method, the study demonstrates that internal control systems influence various non-financial and financial performance. The constructs of financial and non-financial performance within the context of internal control systems have not been adequately investigated previously. Prior studies overlooked non-financial factors, such as operational and customer performance, as the focus was primarily on financial performance. By integrating the various performance dimensions of the BSC (financial, customer, and operational), this research pushes the theoretical limits of internal control literature into the realm of strategic performance management. The BSC provided a comprehensive view of organisational performance, including both financial and nonfinancial dimensions, to capture a balanced view of municipal performance. The combination of these two frameworks addresses an important gap in the literature. It demonstrates how internal control systems can be implemented not only for reducing risks and complying with regulations but also for improving organisational performance and enhancing audit outcomes. This theoretical blend matches recent appeals in the literature for more dynamic and performance-focused models of internal control, especially in public sector governance (Deloitte, 2023). Similarly, Janvrin, Payne, Byrnes, Schneider, and Curtis (2022:109) advocated for the evolution of COSO to fit dynamic business environments and performance-based governance structures. The study additionally analyses the potential impact of effective internal control on the AOs of municipalities, with organisational performance serving as a mediating factor. Therefore, model testing contributes to the formulation of a theory that clarifies how internal control systems impact organisational performance and audit outcomes while also extending our understanding of the factors influencing the effectiveness of the internal control system.

The study also analysed the impact of effective internal control on the audit outcomes of municipalities, with organisational performance serving as a mediating factor, and tested the indirect effect of internal control on audit outcomes via performance. Audit outcome was found to be positively impacted by the internal control system, with financial and operational performance mediating the relationship. In contrast, the study revealed that an internal control system with customer performance as a mediating factor, measured by citizen satisfaction and perceptions of service delivery, does not have a substantial positive effect on audit outcomes. The deviation of the findings from the expectations of the study and prior literature underscores a potential gap in how customer performance is valued in audit assessments and prompts the necessity for further research to explore this complex relationship.

6.3.2. Contextual Contributions

This study provides a contextual contribution by exploring the effectiveness of the internal control system at the organisational level in the South African municipal context. The study significantly contributes to the municipal control environment by determining the factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities. The main focus of this study is its relevance to the South African public sector, especially municipalities, which face specific challenges in terms of governance, resources, and service delivery. The integration of COSO and BSC in this context offers an adaptable framework that meets both compliance and performance needs. This hybrid model is especially well-suited for the municipal landscape in South Africa, where there is an increasing demand for internal control systems that not only ensure compliance with regulations but also promote strategic goals and citizen-focused service delivery. This study shows how internal control systems can be shaped to fit local governance, resource limitations, and social dynamics. This reflects global trends where internal control frameworks are changing to support sustainability, environmental, social, and governance reporting, and strategic flexibility (Deloitte, 2023).

6.3.3. Practical Contributions

The study offers various practical contributions that are particularly pertinent to the governance and operational challenges faced by the South African public sector, particularly municipalities. By identifying and empirically validating the key factors influencing the effectiveness of the internal control system, such as the control environment, control activities, risk assessment, information and communication, monitoring activities, corporate governance, human resource competency, and BDA, this study offers a structured and practical framework. This framework provides actionable insights for public sector managers, auditors, and policymakers in enhancing internal control systems while also improving organisational performance and audit outcomes. The integration of COSO and BSC presents a systematic method for aligning control practices with strategic goals, facilitating better decision-making, resource distribution, and performance tracking. COSO's 2023 sustainability guidance emphasises that internal control systems must change to support real-time data analysis, stakeholder involvement, and integrated reporting (COSO, 2023:7). The findings of this study emphasise the need to invest in both human capital and governance structures. By underscoring the crucial influence of human resource competency and

corporate governance on the effectiveness of the internal control system, this study encourages municipalities to focus on ethical leadership, personnel training, and accountability mechanisms on the basis of performance. The inclusion of BDA as one of the key factors highlights the necessity for municipalities to modernise their internal control systems and embrace data-driven decision-making approaches. This has real-world implications for enhancing real-time monitoring, identifying risks, and facilitating evidence-based planning, all of which are crucial to attaining clean audit outcomes and effective governance.

Additionally, the model acts as a diagnostic tool for internal auditors, policymakers, and oversight bodies to assess the maturity and effectiveness of internal control systems. This can guide focused interventions, capacity-building efforts, and policy reforms aimed at reinforcing public financial management and restoring public trust in the South African public sector.

6.4. LIMITATIONS

While this study provides valuable insight into the factors influencing the effectiveness of internal control systems and their impact on organisational performance and audit outcomes in South African municipalities, several limitations should be acknowledged. Firstly, the study employed a non-probability sampling approach, focusing on municipal managers, audit committee members, chief audit executives, and other assurance providers. This limits the generalisability of the findings to all 257 municipalities, particularly those in rural or under-resourced contexts. To mitigate this limitation, the study included a diverse range of respondents across different roles and municipalities, thereby enhancing the credibility and representativeness of perspectives captured. Secondly, the study adopted a cross-sectional research design, collecting data at a single point in time. This limits the ability to establish temporal precedence and draw causal inferences between internal control effectiveness, organisational performance, and audit outcomes. To mitigate this, the study employed structural equation modelling (SEM) to test theoretically grounded relationships, thereby strengthening the robustness of the inferred associations. Thirdly, the study utilised a quantitative, questionnaire-based approach, which relies on self-reported data. This introduces the risk of response bias and social desirability bias, where participants may provide favourable responses due to reputational or political considerations. To mitigate this limitation, anonymity and confidentiality were emphasised during data collection to encourage

honest and unbiased responses. Fourthly, although the study achieved a relatively large sample size (n = 320), the sample may not fully capture the diversity and contextual differences across all municipalities. This limits the external validity of the findings. To mitigate this, the study ensured participation from a broad spectrum of municipal stakeholders, including both management and assurance providers, thereby improving the breadth of insights obtained. Fifthly, the use of structured questionnaires may have restricted the depth of responses and limited the ability to capture nuanced, context-specific insights. This limits the richness of the data and the exploration of complex governance dynamics. To mitigate this, the questionnaire was carefully designed based on established theoretical frameworks (COSO and BSC) to ensure comprehensive coverage of key constructs. Lastly, the study's design limits the ability to track changes over time in internal control systems and their impact on performance and audit outcomes. This restricts longitudinal understanding of how improvements in controls translate into sustained outcomes. To mitigate this, the study provides a strong empirical baseline that can inform future longitudinal research. Despite these limitations, the study offers meaningful contributions to the understanding of internal control systems within South African municipalities and provides a solid foundation for future research and policy development.

6.5. SUGGESTION FOR FUTURE RESEARCH AND RECOMMENDATIONS

6.5.1. Suggestion for future research

Given the scope and limitations of this study, several actionable avenues for future research are proposed to strengthen the robustness, generalisability, and theoretical development of internal control systems and organisational performance research within municipal contexts. First, future studies should employ longitudinal or panel research designs to track changes in internal control systems, organisational performance, and audit outcomes over multiple financial years. Such designs would enable researchers to establish temporal ordering and make stronger causal inferences regarding the directionality of relationships identified in this study. Second, future research should adopt probability sampling techniques (e.g., stratified or cluster sampling across municipalities) and consider mixed-mode recruitment strategies beyond single-platform approaches (such as LinkedIn), including official municipal databases, professional bodies, and government networks. This would improve sample representativeness and enhance the generalisability of findings, particularly across rural and under-resourced municipalities. Third, researchers are encouraged to utilise multi-source and

objective measurement approaches by combining perceptual survey data with secondary data sources such as AGSA audit outcomes, annual reports, and performance scorecards. This triangulation would reduce common method bias and provide a more rigorous assessment of the relationships between internal control system effectiveness, organisational performance, and audit outcomes. Fourth, future studies should extend the current model by testing alternative structural relationships and mediation mechanisms, particularly those aligned with SRO3. For example, researchers could explicitly model and test the indirect effect of internal control system effectiveness on audit outcomes via organisational performance, using advanced structural equation modelling techniques (e.g., bootstrapped mediation analysis). Additional pathways, such as mediating effects (e.g., governance maturity or resource capacity), could also be explored to refine the explanatory power of the model. Future research could also update the instrument to measure internal control in a more comprehensive manner. Furthermore, the observed non-significant relationship between customer performance and audit outcomes highlights a critical gap in the literature. Future research should investigate this disconnect by examining whether audit frameworks adequately capture citizen-centric performance indicators or whether alternative evaluation models are required to better align service delivery outcomes with audit assessments. Finally, comparative and cross-country studies involving municipalities in other developing economies are recommended to establish international benchmarks and identify best practices for strengthening internal control systems in the public sector. Such studies would enhance the external validity of the proposed model and contribute to the global discourse on public sector governance and accountability.

6.5.2. Recommendations

The findings of this study demonstrated that the control environment, risk assessment, control activities, information and communication, monitoring activities, human resource competency, corporate governance, and BDA significantly influence the effectiveness of the internal control system. This demonstrates that five core components of COSO, in isolation, are insufficient to fully explain the effectiveness of the internal control system in complex municipal environments. Specifically, the study introduces human resource competency (HRC), corporate governance (CG), and big data analytics (BDA) as critical factors of internal control effectiveness. Moving beyond mere inclusion, the findings position these variables as enablers or capability conditions that underpin the successful operationalisation of COSO

components. HRC is shown to be foundational, as the effectiveness of internal controls is inherently dependent on the knowledge, skills, and competencies of personnel responsible for their implementation. CG provides the structural and ethical foundation that ensures accountability, transparency, and strategic oversight, thereby reinforcing the integrity of the control environment. BDA, in turn, introduces a technological dimension that enhances real-time monitoring, predictive risk assessment, and data-driven decision-making. Accordingly, this study proposes a theoretical refinement of COSO as a two-layered model comprising (i) core internal control components and (ii) enabling capabilities that determine the effectiveness of those components. Municipalities should move beyond applying the COSO framework as a checklist of five components and instead adopt a more integrated, capability-driven approach to internal control systems. In practice, this means recognising that the effectiveness of internal control systems depends not only on the formal design of control activities, but also on the underlying organisational capabilities that enable them to function properly.

Furthermore, the study validated the positive relationship between the effective internal control system and operational, customer, and financial performance, reinforcing the necessity for municipalities to strengthen their internal control systems as a strategic approach for enhancing service delivery. Therefore, municipalities should expand how they assess performance by integrating the Balanced Scorecard into their internal control systems. Rather than focusing only on financial outcomes, performance measurement should also include operational efficiency and service delivery (customer) outcomes. This broader perspective enables municipalities to better understand how effective internal control systems contribute to overall organisational performance. Finally, the study empirically validated a performance-mediated pathway between internal control effectiveness and audit outcomes. The findings confirm that financial and operational performance serve as significant mediators in this relationship, thereby clarifying the mechanism through which internal control systems influence audit outcomes. Municipalities should recognise that strong internal control systems can indirectly improve audit outcomes through enhanced organisational performance. As such, efforts to strengthen internal control systems should be aligned with broader performance management strategies, ensuring that compliance, service delivery, and audit performance are addressed in an integrated and mutually reinforcing manner.

The integration of COSO and BSC offers a novel theoretical synthesis that bridges the gap between compliance-oriented control frameworks and performance-driven organisational

models. This study repositions internal control systems as dynamic, capability-driven mechanisms that not only mitigate risk but also enable organisational performance and shape audit outcomes.

6.6. CONCLUSION

In summary, this research offers valuable insights into the factors influencing the effectiveness of the internal control system and its impact on organisational performance and audit outcomes in South African municipalities. The findings provided strong support for the proposed model, with 12 out of 13 hypothesised relationships confirmed as statistically significant. Specifically, the results indicate that Control Environment, Risk Assessment, Control Activities, Information and Communication, Monitoring Activities, Human Resource Competency, Corporate Governance, and Big Data Analytics all have positive and statistically significant relationships with internal control system effectiveness. These findings supported H1 through H8 and suggest that both traditional internal control components and organisational-specific factors are significantly associated with effective internal control systems. These results indicate that a strong internal control system relies not only on traditional COSO components but also on organisational-specific aspects such as personnel competency, effective governance practices, and advanced data management capabilities. This demonstrates that municipalities seeking to strengthen their internal control systems should adopt a holistic strategy that integrates both structural and operational factors to ensure accountability, efficiency, and reliability in the internal control systems. The results further show that internal control system effectiveness is positively and significantly associated with operational performance (H9), customer performance (H10), and financial performance (H11). This indicates that municipalities with more effective internal control systems tend to report higher levels of performance across these dimensions. In addition, operational performance and customer performance are both positively and significantly associated with financial performance, supporting H12a and H12b. This suggests that municipalities demonstrating stronger operational efficiency and higher levels of customer-related performance also tend to exhibit better financial outcomes. With regard to audit outcomes (AO), the findings reveal that operational performance (H13a) and financial performance (H13c) are positively and significantly associated with AO. However, customer performance does not show a statistically significant relationship with AO (H13b). This indicates that, within the context of this study, audit outcomes are associated with internal

operational and financial factors rather than customer-related performance measures. Overall, the study concludes that multiple dimensions of internal control systems, organisational performance, and audit outcomes are significantly associated within municipalities. However, given the cross-sectional nature of the study, these relationships should be interpreted as associations rather than definitive causal effects. The findings nevertheless provide important empirical evidence on the interrelationships between internal controls, performance outcomes, and audit results in the municipal context. By integrating the COSO framework and BSC model, this research enhances both theoretical knowledge and offers practical approaches for strengthening internal control systems, thereby improving organisational performance and audit outcomes in South African municipalities and other government departments.

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APPENDIX A Cover letter

Ethical clearance #:

Research permission #:

COVER LETTER TO AN ONLINE ANONYMOUS WEB-BASED SURVEY

Dear Prospective Participant,

You are invited to participate in a survey conducted by Andile Nzimande under the supervision of Dr. Thanyani Norman Mudau, a professor in the Department of Auditing, towards a Master of Philosophy in Accounting Sciences at the University of South Africa.

The survey you have received has been designed to study *factors influencing internal control system effectiveness and its impact on organisational performance and audit outcomes in South African municipalities*. Your experience in driving internal control systems and enhancing municipal performance at the administrative level makes your participation in this research invaluable.

You have been identified as a potential participant because of your role within a South African municipality, whether in supply chain management, finance, internal control, human resources, operations, or internal or external auditing. Your insights into designing and implementing internal control systems are critical for the success of this study. By completing this survey, you agree that the information you provide may be used for research purposes, including dissemination through peer-reviewed publications and conference proceedings.

It is anticipated that the information we gain from this survey will contribute to findings that may inform stakeholders, including municipalities, provincial and national departments, and public entities. This research seeks to provide actionable insights into strengthening internal control systems for improved performance and audit outcomes. You are, however, under no obligation to complete the survey and you can withdraw from the study prior to submitting the survey. The survey is developed to be anonymous, meaning that we will have no way of connecting the information that you provide to you personally. Consequently, you will not be able to withdraw from the study once you have clicked the send button based on the anonymous nature of the survey, any identifying information that is obtained in connection with this survey will remain confidential and will be disclosed only with your permission or as required by law. If you choose to participate in this **survey, it will take up no more than 45**

minutes of your time. You will not benefit from your participation as an individual; however, it is envisioned that the findings of this study will provide actionable insights into strengthening internal control systems for improved performance and audit outcomes. We do not foresee that you will experience any negative consequences by completing the survey. The researcher undertakes to keep any information provided herein confidential, not to let it out of our possession, and to report on the findings from the perspective of the participating group and not from the perspective of an individual.

The records will be kept for a minimum period of five years for audit purposes where after which they will be permanently destroyed. You will not be reimbursed or receive any incentives for your participation in the survey.

The research was reviewed and approved by the College of Accounting Sciences Research Ethics Review Committee. The primary researcher, Andile Nzimande, can be contacted during office hours at 59052929@mylife.unisa.ac.za. The study leader, Dr. T.N. Mudau, can be contacted during office hours at emudautn@unisa.ac.za. Should you have any questions regarding the ethical aspects of the study, you can contact the chairperson of the College of Accounting Sciences Research Ethics Review Committee, <insert contact details of the ERC here>. Alternatively, you can report any serious unethical behaviour at the University's Toll Free Hotline 0800 86 96 93.

APPENDIX B Informed consent

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____, confirm that Andile Nzimande (the researcher) has explained in the participation invitation letter the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the participation invitation letter.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time.

I give Andile Nzimande consent to use the information I provided in the survey questionnaire in his study as part of his Master's degree.

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

A signed copy of this consent agreement will be sent to me via email and I have permission to follow up with the researcher.

Participant Name & Surname…… (please print)

Participant Signature……..Date……

Researcher's Name & Surname……(please print)

Researcher's signature……..Date……

APPENDIX C Research instrument

The Survey consists of four sections:

Section A: Demographic information

Section B: Internal Control System

Section C: Financial and Non-Financial Performance

Section D: Audit Outcome

This section answers questions related to your demographic information, including your experience. **Please complete the following by marking the statement that applies to you with an (X).**

1. Please select the category your municipality falls under.

Metropolitan municipality	
District municipality	
Local municipality	

2. Please select the size of your municipality.

Less than 1000 employees	
1001 – 2000 employees	
2001 – 3000 employees	
3001 – 5000 employees	
5001 – 10000 employees	
10001 – 15000 employees	
15001 – 20000 employees	
Above 20000 employees	

3. Please select the total revenue of your municipality.

Less than R500 million	
R501 – R1 billion	
R1 billion – R5 billion	
R5 – R10 billion	
R10 - R20 billion	
R20 – R50 billion	
Above R50 billion	

4. Please select your job title.

Municipal Manager	
Chief Financial Officer	
Chief Audit Executive	
Director	
Deputy Director	
Assistant Director	
SCM/Procurement Manager	
Risk Manager	
Compliance Manager	
Internal Audit Manager	
Internal Assistant Audit Manager	

External Audit Manager (AGSA)	
External Assistant Audit Manager (AGSA)	
Operational Manager	
Budget/Finance Manager	
Other (please specify)	

5. Please select your highest educational qualification

Grade 12 or Matric	
National Diploma/Advanced certificate	
Bachelor’s Degree/ Advanced Diploma	
Honours Degree/Postgraduate Diploma	
Master's degree	
PhD	
Other (Specify)	

6. Please select your professional registration.

No professional registration	
Chartered Accountant (CA)	
Certified Public Accountant (CPA)	
Registered Government Auditor (RGA)	
Certified Internal Auditor (CIA)	
Professional Internal Auditor (PIA)	

Registered Auditor (RA)	
Associated Chartered Certified Accountant (ACCA)	
Associate Chartered Management Accountant (ACMA)	
Certified Information Systems Auditor (CISA)	
Other (Specify)	

7. Please select your years of work experience.

Less than 5 years	
5 - 10 years	
10 - 15 years	
More than 15 years	

8. Please select your number of years working in or with the municipality.

Less than 5 years	
5 - 10 years	
10 - 15 years	
More than 15 years	

9. Please select the period you were/have been engaged in designing/recommending or implementing internal controls.

1-2 years	

3-4 years	
5-7 years	
8-10 years	
More than 10 years	

10. Please select your age group.

18 - 25 years	
26 - 35 years	
36 - 60 years	
Above 60 years	

Section B: Internal Control System

The purpose of this section is to obtain your insight into the effectiveness of the internal control system.

11. Please indicate your level of knowledge regarding the internal control system.

Within my knowledge	
Not within my knowledge	

If “Within my knowledge” is selected, please indicate the extent to which you agree with each of the following statements related to the internal control systems. Please indicate whether you Strongly disagree, Mostly disagree, Disagree, Neutral, Agree, Mostly agree, or Strongly Agree with each statement.

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
CE1	A strong control environment ensures that the municipality is governed efficiently, with clear roles, responsibilities, and accountability.	1	2	3	4	5	6	7
CE2	A well-designed control environment provides accurate and reliable data, enabling informed decision-making.	1	2	3	4	5	6	7
CE3	Strong ethical values help mitigate risks associated with municipal operations, such as financial mismanagement, corruption, and reputational damage.	1	2	3	4	5	6	7
CE4	A strong control environment ensures that municipal services are delivered efficiently, effectively, and with a focus on customer satisfaction.	1	2	3	4	5	6	7
CE5	A well-designed control environment enables the municipality to allocate resources efficiently, reducing waste and improving service delivery.	1	2	3	4	5	6	7
CE6	Control environment significantly influences the overall effectiveness of the internal control systems in the municipality.	1	2	3	4	5	6	7
RA1	Risk assessment ensures that municipal operations are aligned with organisational objectives and facilitates the achievement of the municipality's performance targets and helps with the prevention of loss of resources.	1	2	3	4	5	6	7
RA2	Risk assessment informs the municipal budgeting decisions, ensuring that resources are efficiently allocated to address potential risks, and improving service delivery.	1	2	3	4	5	6	7

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
RA3	Risk assessment enables the municipality to address potential material weaknesses, reducing the risk of adverse audit opinions.	1	2	3	4	5	6	7
RA4	Robust risk assessment contributes to effective reporting and monitoring of compliance with laws and regulations and assists with the limitation of damage to the municipality's reputation and associated consequences.	1	2	3	4	5	6	7
RA5	Risk assessment significantly influences the overall effectiveness of the internal control systems in the municipality.	1	2	3	4	5	6	7
CA1	Effective control activities ensure that the financial transactions of the municipality are accurately recorded, reported, and compliant with relevant laws and regulations.	1	2	3	4	5	6	7
CA2	Strong control activities mitigate the risk of errors, irregularities, inefficiencies and asset misappropriations, resulting in improved performance of the municipality.	1	2	3	4	5	6	7
CA3	Control activities streamline processes and promote accountability among employees, reducing the risk of duplication of effort and improving overall efficiency in the municipality.	1	2	3	4	5	6	7
CA4	Control activities significantly influence the overall effectiveness of the internal control systems in the municipality.	1	2	3	4	5	6	7
IC1	Effective communication fosters collaboration among departments, teams, and stakeholders,	1	2	3	4	5	6	7

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
	promoting a cohesive and coordinated approach to municipal operations.							
IC2	Accurate and timely information enables informed budgeting decisions, reducing the risk of budget variances and financial mismanagement.	1	2	3	4	5	6	7
IC3	Effective communication ensures that citizens receive accurate and timely information about municipal services, improving overall service delivery.	1	2	3	4	5	6	7
IC4	Open and transparent communication promotes trust and accountability, enabling citizens to hold the municipality accountable for its actions.	1	2	3	4	5	6	7
IC5	Information and communication significantly influence the overall effectiveness of the internal control systems in the municipality.	1	2	3	4	5	6	7
MA1	Monitoring activities help identify areas for improvement, enabling the municipality to streamline its processes and improve productivity.	1	2	3	4	5	6	7
MA2	Monitoring activities ensure better implementation of municipal policies, programmes and productivity.	1	2	3	4	5	6	7
MA3	Strong monitoring activities ensure that the SDBIP (organisational scorecard) is adequately linked to the Integrated Development Plan and budget.	1	2	3	4	5	6	7
MA4	Effective monitoring activities play a crucial role in ensuring that municipal projects and services	1	2	3	4	5	6	7

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
	meet the needs of the community and achieve desired outcomes.							
MA5	Monitoring activities significantly influence the overall effectiveness of the internal control systems in the municipality.	1	2	3	4	5	6	7

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
HRC1	Competent human resource personnel ensure that internal control policies and procedures are clearly communicated, understood, and adhered to by all employees, fostering a culture of compliance within the municipality.	1	2	3	4	5	6	7
HRC2	HR competency plays a critical role in identifying skill gaps and providing targeted training to equip staff with the knowledge required to implement and maintain robust internal control systems effectively.	1	2	3	4	5	6	7
HRC3	Human resource teams with strong competencies in organisational development contribute to the regular evaluation and improvement of internal control systems by incorporating feedback, lessons learned, and evolving best practices.	1	2	3	4	5	6	7
HRC4	Human resource competency fosters a positive work environment in municipality, leading to	1	2	3	4	5	6	7

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
	increased employee engagement, motivation, and job satisfaction.							
HRC5	Human resource competency ensures that municipal services are delivered efficiently, effectively, and with a focus on customer satisfaction.	1	2	3	4	5	6	7
HRC6	Human resource competency significantly influences the overall effectiveness of the internal control systems in the municipality.	1	2	3	4	5	6	7

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
CG1	Corporate governance ensures that roles and responsibilities related to internal control implementation are clearly defined, enabling effective oversight and accountability within the municipality.	1	2	3	4	5	6	7
CG2	Strong governance frameworks cultivate an ethical organisational culture, which underpins the effective functioning of internal control systems by discouraging fraud and non-compliance.	1	2	3	4	5	6	7
CG3	Corporate governance aligns the internal control systems with the municipality's strategic objectives, ensuring that controls are designed to support overall performance and service delivery goals.	1	2	3	4	5	6	7

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
CG4	Through mechanisms like audit committees, Municipal Councils and regular reporting, corporate governance provides the oversight needed to assess the adequacy and effectiveness of internal control systems, ensuring they address risks and operate as intended.	1	2	3	4	5	6	7
CG5	Corporate governance significantly influences the overall effectiveness of the internal control systems in the municipality.	1	2	3	4	5	6	7

The use of information technology (big data analytics)

The purpose of this section is to obtain your insight into the use of information technology (big data analytics).

12. Please indicate your level of knowledge regarding big data analytics.

Within my knowledge	
Not within my knowledge	

If “Within my knowledge” is selected, please indicate the extent to which you agree with each of the following statements related to big data analytics. Please indicate whether you Strongly disagree, Mostly disagree, Disagree, Neutral, Agree, Mostly agree or Strongly Agree with each statement.

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
BDA1	The use of big data analytics enhances the detection of fraud and financial irregularities in internal control systems.	1	2	3	4	5	6	7
BDA2	Big data analytics enable management to make better decisions regarding internal control adjustments and improvements.	1	2	3	4	5	6	7
BDA3	Big data analytics enhances the organisation's ability to comply with regulatory requirements and standards related to internal control systems.	1	2	3	4	5	6	7
BDA4	Big data analytics enhances management's ability to detect, mitigate, and prevent fraud risks.	1	2	3	4	5	6	7
BDA5	The integration of big data analytics streamlines the process of monitoring and reporting on internal control systems.	1	2	3	4	5	6	7

Improvement in the internal control system

The purpose of this section is to obtain your insight into the improvement in internal control systems.

13. Please indicate your level of knowledge regarding improvement in the internal control system.

Within my knowledge	
Not within my knowledge	

If "Within my knowledge" is selected, please indicate the extent to which you agree with each of the following statements related to the improvement in internal control systems. Please indicate whether you Strongly disagree, Mostly disagree, Disagree, Neutral, Agree, Mostly

agree or Strongly Agree with each statement.

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
ICS1	Effective internal control systems enhance the functioning and oversight capabilities of Councils and Municipal Public Accounts Committees, thus leading to good governance, transparency, and accountability in the use of municipal resources and ultimately improved service delivery.	1	2	3	4	5	6	7
ICS2	Effective internal control systems significantly reduce irregular, fruitless, and wasteful expenditure.	1	2	3	4	5	6	7
ICS3	Effective internal control systems make compliance processes more efficient and less prone to errors, thus leading to more consistent compliance with regulatory requirements.	1	2	3	4	5	6	7
ICS4	Effective internal control systems significantly enhance the municipality's risk management capabilities.	1	2	3	4	5	6	7
ICS5	Robust internal control systems enhance the adequacy and credibility of financial and performance reporting.	1	2	3	4	5	6	7

Section C: Financial and Non-Financial Performance

The purpose of this section is to obtain your insight into the performance of your municipality.

14. Please indicate your level of knowledge regarding Financial and Non-Financial Performance.

Within my knowledge	
Not within my knowledge	

If “Within my knowledge” is selected, please indicate the extent to which your municipality has performed compared to the expectations it set for itself.

No	Statements	Much worse than expected	Worse than expected	Somewhat worse than expected	Neutral	Somewhat better than expected	Better than expected	Much better than expected
NOP1	Business process performance has been____	1	2	3	4	5	6	7
NOP2	Business process continuous improvement has been_____	1	2	3	4	5	6	7
NOP3	Staff productivity has been____	1	2	3	4	5	6	7
NOP4	Dissemination of information to lower levels has been_____	1	2	3	4	5	6	7
NOP5	Allocation of resources has been_____	1	2	3	4	5	6	7
NOP6	Prioritization of critical issues affecting communities has been_____	1	2	3	4	5	6	7
NOP7	Achievement of the service delivery targets as outlined in the service delivery and budget implementation plan (SDBIP) has been_____	1	2	3	4	5	6	7
NCP1	Customer satisfaction has been_____	1	2	3	4	5	6	7
NCP2	Response time to customers has been_____	1	2	3	4	5	6	7
NCP3	Service delivery improvement rate has been_____	1	2	3	4	5	6	7
NCP4	The rate of service delivery protests has been_____	1	2	3	4	5	6	7
FP1	The increase in operating surplus has been_____	1	2	3	4	5	6	7

No	Statements	Much worse than expected	Worse than expected	Somewhat worse than expected	Neutral	Somewhat better than expected	Better than expected	Much better than expected
FP2	The increase in gross operating expenditure has been_____	1	2	3	4	5	6	7
FP3	The improvement in revenue collection rate has been_____	1	2	3	4	5	6	7
FP4	The improvement in preventing fruitless, and wasteful expenditures has been_____	1	2	3	4	5	6	7
FP5	The overspending of operational budgets has been____	1	2	3	4	5	6	7
FP6	The increase in return on assets has been_____	1	2	3	4	5	6	7

Section D: Audit Outcomes

The purpose of this section is to obtain your insight into the audit outcome of your municipality.

15. Please indicate your level of knowledge regarding Audit opinions.

Within my knowledge	
Not within my knowledge	

If “Within my knowledge” is selected, please indicate the extent to which you agree with each of the following statements related to the audit outcome. Please indicate whether you Strongly disagree, Mostly disagree, Disagree, Neutral, Agree, Mostly agree or Strongly Agree with each statement.

No	Statements	Strongly Disagree	Mostly Disagree	Disagree	Neutral	Agree	Mostly Agree	Strongly Agree
AO1	Sound financial performance ensures accurate reporting, reducing the risk of adverse audit findings.	1	2	3	4	5	6	7
AO2	Effective performance management systems improve the achievement of set performance targets and contribute to better audit outcomes.	1	2	3	4	5	6	7
AO3	Strong service delivery and operational efficiency reflect positively on compliance and governance, enhancing audit outcomes.	1	2	3	4	5	6	7
AO4	Robust internal control systems prevent errors and fraud, ensuring reliable financial and non-financial data for audits.	1	2	3	4	5	6	7
AO5	Effective financial performance through disciplined budgeting supports transparent financial reporting for better audit results.	1	2	3	4	5	6	7
AO6	Non-financial performance measures, like adherence to service delivery standards, strengthen the municipality's credibility during audits.	1	2	3	4	5	6	7
AO7	Internal control systems mitigate financial and operational risks, directly contributing to improved audit opinions.	1	2	3	4	5	6	7

APPENDIX D Ethical clearance

UNISA university of south africa

College of Accounting Sciences_RERC

NHREC Registration # : (if applicable)
Ref #: 6405
Name: Mr Andile Nzimande
Student #: 59052929
Staff #:

Date: 13/03/2025

Dear: Mr Andile Nzimande

Decision: Ethics Approval from 5 March 2025 to 4 March 2028

Researcher: Mr Andile Nzimande

506 Sheraton Lane, 3 Saint James Street, Parklands

Cape Town

59052929@mylife.unisa.ac.za 0722951645

Supervisor: Dr Thanyani Norman Mudau emudautn@unisa.ac.za

Co-Supervisor: Dr Audrey Legodi elegodah@unisa.ac.za

Co-Researcher(s):

Email address:

The factors that influence the effectiveness of the internal control system and its impact on the organisational performance and audit outcomes of South African municipalities

Qualification: MCOMPT

Thank you for the application for research ethics clearance by the College of Accounting Sciences_RERC for the above mentioned research study Ethics approval is granted for three years.

The **low risk application** was **reviewed** by College of Accounting Sciences_RERC on 5 March 2025 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College of Accounting Sciences_RERC .
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.

7. No field work activities may continue after the expiry date (4 March 2028). Submission of a completed research ethics progress report will constitute an application for renewal, for Ethics Research Committee approval.

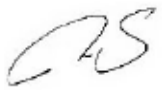
Additional Conditions

1. Disclosure of data to third parties is prohibited without explicit consent from Unisa.
2. De-identified data must be safely stored on password protected PCs.
3. Care should be taken by the researcher when publishing the results to protect the confidentiality and privacy of the university.
4. Adherence to the National Statement on Ethical Research and Publication practices, principle 7 referring to Social awareness, must be ensured: "Researchers and institutions must be sensitive to the potential impact of their research on society, marginal groups or individuals, and must consider these when weighing the benefits of the research against any harmful effects, with a view to minimising or avoiding the latter where possible." Unisa will not be liable for any failure to comply with this principle.

Note

The reference number 6405 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Kind regards,



Prof Lourens Erasmus
Chair of College of Accounting Sciences_RERC
E-mail: erasmlj1@unisa.ac.za

Executive Dean / By delegation from the Executive Dean of College of Accounting Sciences_RERC
E-mail: chikucn@unisa.ac.za

APPENDIX E Language & Technical Editing Certificate

LANGUAGE & TECHNICAL EDITING CERTIFICATE

BK EDITORIAL AND PUBLISHING (PTY) LTD [REG: 2020157767/07] [WWW.BKEDITORIALS.COM]

certifies that the work titled

"FACTORS INFLUENCING INTERNAL CONTROL SYSTEM EFFECTIVENESS AND ITS IMPACT ON ORGANISATIONAL PERFORMANCE AND AUDIT OUTCOMES IN SOUTH AFRICAN MUNICIPALITIES"

authored by Andy Nzimande

has been edited and proofread to improve grammar, consistency, readability, flow, and logic.

29 NOVEMBER 2025

Mr KM Leshaba, Managing Editor
bkeditorials@gmail.com

European Association of Science Editors Membership 5471