

**THE SIGNIFICANCE OF CLEAN AUDITS ON THE PROVISION OF ELECTRICITY IN
SOUTH AFRICAN LOCAL MUNICIPALITIES**

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DECLARATION

I, *Sakhile Manyathi*, do hereby declare that this minor dissertation is my original work, that all the sources contained in it have been accurately reported and acknowledged and that this document has not been previously submitted by me for a degree at another university.



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- Finally, I dedicate this Master of Management in Development and Economics dissertation to all my family members. A special dedication goes to all of you, my children, and to you, once again, I say this: *Ngilindele kini okungaphezulu kwalokhu engikwenzile; ningangiphoxi ziNyath'eziniMnyama.*

ABSTRACT

The South African Constitution specifies the various responsibilities of local governments. Responsibilities include providing their respective jurisdictions with reliable basic municipal services (Constitution, 1996: 74). Municipalities must abide by specific municipal and procurement legislation while providing basic municipal services. Local and metropolitan municipalities were chosen to be part of this study as they are mandated to ensure quality electrical grid connection, which is the main focus of this study. Electricity connection for citizens was chosen as a measure of service delivery because all local and metropolitan municipalities have this competency.

The main aim of this study was to determine whether a relationship exists between clean audits and improved service delivery, specifically new electricity connections, in local municipalities, and service delivery was measured in new connections to the national electricity grid.

According to the analysis of the previous studies, none of them found a connection between clean audit opinions and improved service delivery, confirming the gap and research niche for the current study. The study applied a quantitative approach using secondary data sourced from Stats SA and AGSA. This is mainly because the quantitative approach enables the study to consider statistical data to quantify service delivery performance measurements: residents' electricity connections to the grid together with clean audits.

The results suggest that electricity provisions in these municipalities are most likely to be explained by other variables that were not part of the current study. Overall, according to the analysis conducted in the current study, the researcher cannot rule out the possibility that clean audits have no effect on electricity provision. Therefore, the Null Hypothesis (H_0), which states that *there is no relationship between the achievement of clean audits and an improvement in the provision of municipal electricity*, cannot be rejected.

Keywords: *Local and metropolitan municipalities, service delivery, clean audits, electricity, public governance, relationships.*

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ABBREVIATIONS

AGSA	Auditor-General of South Africa
ANC	African National Congress
CoGTA	Department of Cooperative Governance and Traditional Affairs
CPI	Corruption Perception Index
IDP	Integrated Development Plan
IGR	Intergovernmental relations
IGRFA	Intergovernmental Relations Framework Act
MFMA	Municipal Finance Management Act
MIGs	Municipal Infrastructure Grants
MPACs	Municipal Public Accounts Committees
MSA	Local Government: Municipal Systems Act
NGO	Non-Governmental Organisation
NPA	National Prosecuting Authority
NPM	New Public Management
PMG	Parliamentary Monitoring Group
PPPFA	Preferential Procurement Policy Framework Act
PSA	Public Service Act
PSC	Public Service Commission
SAPS	South African Police Service
SCM	Supply Chain Management
SDBIP	Service Delivery and Budget Implementation Plan
Stats SA	Statistics South Africa

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction

The sphere of government that is closest to the citizens is the local government (municipalities). They have been given the responsibility of providing municipal services and stimulating community development to enhance citizens' quality of life in their jurisdiction (Reddy, 2016). This study aims to determine whether a relationship exists between clean audits and improved service delivery, specifically new electricity connections, in local municipalities, where service delivery was measured with new electricity connections to the national electricity grid.

This chapter will briefly present the background, problem statement, and rationale for the study, along with the main research aim, question, and hypotheses. Furthermore, the essential literature review covers high-level themes such as the degree to which municipal services are rendered, the meaning of clean audits in municipalities, challenges municipalities face in accelerating municipal services, and the impact of those challenges on municipal service delivery. Next is a description of the theoretical framework used in this study. Details about the research methodology used in the study encompassing the various research design choices as they relate to the research philosophy, type, and strategy, are then outlined. Methods for collecting data and analysing it are also described. The descriptions of the study validity, dependability, limitations, feasibility, and positionality come next. Finally, the study significance is discussed, and a summary of the individual chapters.

1.2 Background

The South African Constitution Chapter Seven specifies the various responsibilities of local governments. These include providing their respective jurisdictions with reliable basic municipal services (Constitution, 1996: 74). Municipalities must abide by the Municipal Finance Management Act (MFMA) (Act 56 of 2003) and other procurement laws while providing these services. For purposes of this research, local and metropolitan municipalities are expected to ensure quality electrical grid connection, which is the main focus of this current study.

Consequent to their underspending, some municipalities across the country often return funds or conditional grants to the National Treasury. A total of R11 295 774.00 (excluding equitable share) in the form of a Municipal Infrastructure Grant (MIG) was returned by various municipalities across the country over a five-year period between the 2013/14 and 2017/18 financial years (National Treasury, 2020). Among other reasons for underspending is the rigidity of procurement regulations, such as the prohibition of municipalities to re-invite bids for any infrastructure-related tenders within half a year after the withdrawal of an initial invitation (Construction Industry Development Board (CIDB), 2006).

In most cases, there are frivolous, vexatious and without merit litigation where aggrieved bidders apply for court interdicts resulting in tender cancellations. A few of these litigation cases are outlined below:

Dr JS Moroka Municipality v Bertram (Pty) Ltd 2014 1 All SA 545 (SCA) paragraph 8 indicated that the necessity to comply with the obligations imposed by section 217 of the Constitution relating to public procurement policies and procedures to be adopted by organs of state, including municipalities, has resulted in the enactment of numerous interrelated statutes, regulations and directives. This, in turn, has given rise to a convoluted set of laws and requirements that have proved to be fertile ground for litigation with the law reports becoming littered with cases dealing with public tenders (Mubangizi, 2017).

PRASA v Swifambo Rail Agency (Pty) Ltd [2017] ZAGPJHC 177 (3 July 2017); the summary of the case was that an award of a tender vitiated by irregularities, corruption and 'fronting' within the meaning of the Broad-Based Black Economic Empowerment Act 53 of 2003 set aside: delay in instituting review proceedings reasonable in the circumstances, and condonation would be granted if it was unreasonable (Stoop, 2016).

Freedom Stationery (Pty) Ltd v MEC for Education, Eastern Cape [2011] ZAECELLC (16 March 2011); in the last few years there has been increasing interest in the process of public procurement. The emphasis is often on the flaws of the tender processes, such as corruption and disregard for the rule of law, and there is seldom sufficient attention paid to the consequences of the flawed tenders on the rights of the beneficiaries of procured services. The case of *Freedom Stationery (Pty) Ltd v The Member of the*

Executive Council for Education, Eastern Cape (the “Freedom Stationery” case) is an exception to this lack, largely due to the intervention of the Centre for Child Law as an amicus. Acknowledging that the realisation of the rights of children was affected by the irregular tender process, the court considered the children’s education rights when deciding on whether or not to grant the interim interdict in favour of the applicants. The case illustrates how the constitutional rights of children provide the courts with the tools to consider the impact on children’s rights and interests of the irregular tender processes regarding services for children. The decision of the court to consider the impact on children of an alleged irregular tender indicates an acceptance by the court that the rights of children may shape the rights (and responsibilities) of those directly involved in the tender process (the state and the bidders respectively).

Some clarity is provided in that the judgment suggests that despite the importance of the rights of children, these rights will not be given priority at all costs. Respect for the rule of law and the basic legal principles are justifiable limitations on children’s rights and interests. In other words, prioritisation of the rights of children cannot be used as a justification for breaking the law or for maintaining a status quo created as a result of breaking the law (Couzens, 2012).

Azcon Projects CC v National Minister Department of Public Works, Mthatha [2011] JOL 27630 (ECM) (hereafter *Azcon*); *Azcon* persuaded the court that it should not treat the timing of the submission of a tax clearance certificate as peremptory. *Azcon* posted a valid tax certificate to the first respondent department a day after the closing day for bids. Neither its certificate nor the explanation for the delay in submitting it came to the attention of the BEC. The sole reason for excluding *Azcon*’s bid from the tender process was its failure to submit its tax certificate with its tender documents. In *Azcon* the court considered itself bound by *Millennium Waste Management (Pty) Ltd v Chairperson, Tender Board, Limpopo Province and Others* 2008 (2) SA 481 (SCA) to condone ‘innocent omissions and/or bona fide errors’ in the bid process (Volmink, 2019).

VDZ Construction (Pty) Ltd v Makana Municipality [2011] ZAECGHC 64 (3 November 2011); the municipality called for tenders and required bidders to submit, inter alia, an original and valid Municipal Billing Clearance Certificate. The applicant’s tender was disqualified because only page one of its certificate was in an original form and page 2 was a copy. The court noted that the municipality is bound by section 217 of the

Constitution and that its decision to disqualify the applicant's tender amounted to administrative action. The court then looked at the definition of an "acceptable tender" for the purposes of the Preferential Procurement Policy Framework Act 5 of 2000 (PPPFA) and placed reliance on the decision in the JFE Sapela Electronics case, where the court held that the definition of an "acceptable tender" in the PPPFA must be construed against the broad principles in section 217(1) of the Constitution, i.e., fairness, equity, transparency, competitiveness and cost-effectiveness.

On the facts before the court, it was clear that the submission by the applicant of page two of the certificate in a copy form was "inadvertent", in other words, a mistake. The court then held that this mistake could have been clarified by means of "a quick telephone call to the municipality who issued the certificate". The court then concluded that condonation of the applicant's failure to furnish a full original Municipal Billing Certificate would have served the public interest as it would have facilitated competition among the bidders. It also would have promoted the values of fairness, competitiveness and cost-effectiveness which are listed in Section 217 of the Constitution (Couzens, 2012).

The State Information Technology Agency's (SOC) Limited v Gijima Holdings (Pty) Ltd was seminal in establishing that the Promotion of Administrative Justice Act, 2000 is not available to an organ of state wishing to set aside its own decision while acting in its own interest. The case is also significant for the impact it has had on the delay rule. This paper identifies a problem presented by what will be referred to as the Gijima principle. The principle suggests that a court may be required to declare a decision unconstitutional in accordance with section 172(1)(a) of the Constitution even if there is no basis for overlooking the unreasonableness of the delay. This paper considers the impact of the Gijima judgement on the delay rule and the continued relevance of the delay rule in administrative law post-Gijima. It will be argued that there are three major challenges this principle poses to the rule of law namely, it promotes arbitrary and opportunistic self-serving reviews by state officials. Secondly, it indirectly promotes disregard of public procurement laws by making it easy for organs of state to undo their decisions. Lastly, it undermines the finality and certainty of decisions, which have the potential to deter prospective suppliers from contracting with the state. This paper critically assesses trends emerging from lower courts in response to the Gijima principle and provides recommendations as to how some of the issues raised by the judgment

approach may be rectified. Overall, I argue that the Gijima principle effectively eradicates the delay rule and that there is a need for continued relevance of the rule in administrative law. The Constitutional Court needs to strike a balance between preserving the delay rule on the one hand and exercising its prerogative to develop the common law on the other (Basini-Gxokonyeka, 2022).

Based on the above-mentioned litigation cases, such litigation compels a municipality or an organ of the state to put service delivery projects (such as new electricity connection) on hold and attend to the litigation by bidders (Gomez, 2015). As a consequence, the resulting unspent funds have no bearing on the annual Auditor-General of South Africa (AGSA) audits, giving the municipality a chance to receive a clean audit even though the service has not yet been provided. This brings up the main research question: *Is there a relationship between clean audits and improved service delivery, specifically new electricity connections, in local municipalities?*

As part of the procurement of municipal services, there are laborious auditing processes in which all municipalities should annually comply with the requirements of the MFMA. Each municipality is expected by law to set up internal audit teams under the guidance of Municipal Public Accounts Committees (MPACs) in order to carry out performance, risk, and loss management to prevent misconduct or fraud (Craythorne, 2006). For smooth auditing processes, by the end of August annually, all South African municipalities are obliged by law to publish their certified financial statements for AGSA to examine. This is carried out in accordance with Public Audit Amendment Act 5 of 2018, which was published in Government Gazette No. 42045 on November 20th, 2018 (Public Audit Amendment Act, 2018).

1.2.1 New electricity connection as a measure of service delivery

New municipal electricity connection was chosen as a measure of service delivery because all local and metropolitan municipalities have this competency although not all municipalities would have a licence to connect new electricity. Furthermore, the choice of electricity was due to the fact that electricity can be measured in larger and more reliable quantities rather than water, which is not easy to measure. Each electricity connection is almost guaranteed to a specific metre number which is linked to a specific household or owner and can be traced.

On the other hand, water connections can be more challenging to measure compared to electricity connections for several reasons, such as the devices used to measure water connection and flow (i.e., water metres) are more complex and prone to wear and tear than electricity meters. Water connections can be communal in the village servicing more than 100 households, which can make them less straightforward to install, measure and maintain. Location of measurement, water connections are typically located underground or in hard-to-reach places, making it more challenging to install and access measurement devices compared to electricity connections, which are often more accessible.

In contrast, electricity flows through conductive wires and can be more easily measured using relatively simple devices like electrical metres, which rely on the principles of electromagnetism and voltage. Additionally, electricity is not affected by factors like viscosity or sediment, making it more straightforward to measure accurately. Overall, while both water and electricity measurements have their complexities, the unique physical properties and challenges associated with water make it harder to measure accurately compared to electricity, hence electricity was chosen as a proxy for service delivery in this study.

1.3 Problem Statement

Various measures have been instituted to improve service delivery and ensure clean audits, such as the *Back to Basics Municipal Programme* unveiled by the government in 2014 in line with some of its pillars of putting citizens and their concerns first and ensuring quality municipal services. The assumption is that clean audits lead to improved service delivery. However, the opposite can also be expected, where clean audits can lead to poor service delivery due to the perceived bureaucracy while local municipalities attempt to comply with, for example, public procurement regulations (Ngumbela, 2021).

Clean audit outcomes are widely celebrated in South African municipalities. However, little is known about whether they translate into improved municipal services. Because of the aforementioned underspending due to the rigidity of procurement regulations (Quinot, 2012), the resulting unspent funds have no bearing on annual AGSA audits, making it possible for the municipality to receive clean audits without service delivery being achieved or accelerated.

Municipalities are responsible for the critical function of providing sustainable basic services to their respective citizens in terms of Section 152 of the Constitution (Constitution, 1996). As such, the new municipal electricity connection will serve as a proxy for the service delivery understudy.

It is essential to define service delivery at a broader level, service delivery refers to the process by which government or publicly funded organizations provide a wide range of services and resources to the general public (Tummers et al., 2015). These services are typically aimed at meeting the needs and demands of citizens, residents, or other stakeholders within a particular jurisdiction. Public service delivery encompasses various essential functions and sectors, including education, healthcare, transportation, law enforcement, social welfare, and utilities, in this study, electricity connections by municipalities are a key focus (Boyne, 2003).

According to Bovaird et al. (2023), critical characteristics of public service delivery include accessibility, where public services should be accessible to all individuals within the defined geographic area or jurisdiction, regardless of their socioeconomic status, age, gender, or other characteristics. Equity indicates that public services should be distributed fairly and equitably, ensuring that disadvantaged or marginalized groups receive adequate support and resources, this is more evident in South Africa because during apartheid few to none of the black communities were allowed to have electricity connections. Accountability indicates that state organs responsible for service delivery must be transparent and accountable for their actions and decisions, often subject to oversight and regulation by the South African authorities. Efficiency in public service provision indicates that effective public service delivery involves optimising resource allocation and its management, as such public services should meet established standards of quality and effectiveness to ensure they meet the needs and expectations of the public thereby achieving desired outcomes with nil to minimal waste.

The effectiveness and efficiency of public service delivery can significantly impact the well-being and quality of life of a nation's citizens, making it a critical focus of government and public policy efforts, in this study, the electricity connection is critical in uplifting the lives of ordinary citizens.

The present study was conducted in 183 local and metropolitan municipalities that had received clean audits (unqualified audits) and those that did not receive clean audits (qualified audits) during the 2013/14 to 2017/18 financial years. Previous studies have suggested that the best measurement of substandard municipal services is community protests relating to service delivery as they are violent, and their number increases year on year (Alexander et al., 2016). Thus, some reasons relating to substandard service delivery are poor financial governance and ineffective communication channels between municipalities and citizens (Masiya et al., 2019). This study research gap was made evident by the other similar studies' lack of emphasis on the relationship between clean audit findings and improved service delivery and that is the focus of this study.

Additionally, according to Aadnesgaard and Willows (2016), there is little relationship between audit findings and overall municipal performance. The abovementioned authors did not thoroughly investigate the relationship between service delivery and clean audits, but they only studied general municipal performance as a measure. Furthermore, the authors did not specifically examine local municipalities but only examined district municipalities, which are tasked with different service delivery competencies, such as water provision in rural areas, not the electrical grid connection. Biljohn and Lues (2020) identified poor municipal service delivery as the major reason for violent protests in local municipalities. However, Biljohn and Lues (2020) shed no light on the correlation between clean audits and improved service delivery, as this was not their primary study focus.

The City of Johannesburg metropolitan municipality in the Gauteng province and its Protea Glen suburb were the subjects of research by authors such as Kemp and Vyas-Doorgapersad (2020). Their study only looked at one province, one metropolitan municipality, and one suburb. It only studied challenges, not the correlation between clean audits and service delivery. According to their results, in Protea Glen, poor sanitation, inadequate sewage services, a lack of garbage collection, and inadequate electricity services are all caused by various variables. Ndevu and Muller (2018) further studied service delivery improvement conceptual frameworks relating to local municipalities. The authors' findings concluded by identifying various important municipal performance improvement instruments without studying, again, the correlation the current study is probing. In addition, Motubatse et al. (2017) studied how clean audit opinions were affected by good governance in municipalities and discovered that

adopting good governance practices has long-lasting effects on achieving clean audits. However, the study only looked at the effects of good governance, not studying the correlation between clean audit opinions and improvement in service delivery. According to the analysis of previous studies, none of the studies in question found a connection between clean audit opinions and improved service delivery, confirming the gap and research niche for the current study.

Therefore, not much is known about the empirical correlation between the achievement of clean audit opinions and the acceleration of municipal services. A scientific study is required to ascertain the correlation between the achievement of clean audit opinion and improved municipal services. The present study findings might aid the government in ensuring that clean audits translate into accelerated service delivery in the government's attempt to avoid protests relating to service delivery, which are often coupled with damage to property and confrontations with law enforcement agencies.

1.4 Rationale of the Study

What the researcher will do about the earlier-mentioned research problem is detailed in this study rationale section. The simplest way to craft an academically sound rationale is to establish the research 'golden thread', which includes the aims, objectives, and questions of the study. The scope of the study will be determined by these three components of the golden thread, which is described below.

The study main aim is to *determine whether a relationship exists between clean audits and improved service delivery, specifically new electricity connections, in local municipalities, specifically new electricity connections, in local municipalities.*

The main research question is: *Is there a relationship between clean audits and improved service delivery, specifically new electricity connections, in local municipalities?*

Hypotheses

The following are hypotheses as linked to the aforementioned golden thread, which will be tested during data analysis processes.

Null Hypothesis (H₀):

There is no relationship between the achievement of clean audits and the improvement of municipal electricity provision.

Positive Alternative Hypothesis (H₁):

Achievement of clean audits is more likely to lead to improved municipal electricity provision.

Negative Alternative Hypothesis (H₂):

Achievement of clean audits is less likely to lead to improved municipal electricity provision.

The hypotheses are tested against data from 183 local and metropolitan municipalities over the period from 2014 to 2018. The studied municipalities are geographically spread throughout the country in the form of rural, semi-urban, urban and metropolitan municipalities. Owing to the competency of electricity provision vested in local and metropolitan municipalities, the study excluded district municipalities.

1.5 Essential Literature Overview

The establishment of South African municipalities and the degree to which municipal services are rendered are discussed in the following sections. The meaning of clean audits in municipalities is also discussed in this section. There will also be a discussion of the challenges and impacts on municipalities that are experienced during the service delivery process. The relationship between clean audit opinions and the improved provision of municipal services is also discussed in the sections that follow. The governance structure and historical facts pertaining to service delivery are discussed in this section together with the municipal legislative framework, these will be discussed in detail under section 2.3 of this report.

1.5.1 The degree to which municipal services are rendered

According to the Constitution (1996), Chapter 7 under section 152, local governments are tasked with the difficult task of providing sustainable basic services to their respective communities. According to Mfene (2009: 212), service delivery is an “encompassing activity aimed at promoting the general welfare of the community”; the

definition confirms that for a responsible local government to thrive, there should be a relationship between the local government concerned and the citizenry. Furthermore, the Parliamentary Monitoring Group (PMG) (2010: 5) roughly defined what service delivery is, “an outcome of which the scale and quality depend on factors such as clear and realistic policies; appropriate allocation of powers, functions and financial resources; performance and accountability of state organs for implementing policies; coordination between organs of the state; public participation and involvement as well as the level of self-reliance of communities.” This definition is compatible with the theoretical framework that will guide the current study, which includes the following good governance concepts: effectiveness, efficiency, and responsiveness (stewardship theory).

1.5.2 The meaning of clean audits in municipalities

According to section 4(1)(d) of the Public Audit Amendment Act No. 5 of 2018, “The Auditor General must audit and report on the accounts, financial statements and financial management of all municipalities” which provides a legal framework for the Auditor-General’s mandate and sets out the responsibilities, powers, and functions of the Auditor-General’s office. As such, in South Africa, public auditing for public institutions is required and compulsory by law (Public Audit Amendment Act, 2018). Public auditing can be described as a review by government auditors and accountants of all public officials’ actions, decisions and expenditures to ensure that the officials follow set procedures and rules (Barton, 2006). This ensures that all actions are reasonable, lawful and procedurally rational. For this study, clean municipal audits refer to unqualified audit opinions by the AGSA. ‘Clean audit’ relates to the three core auditing principles: (1) There should be no material financial misstatements; (2) annual performance reports should have no material findings; and (3) non-compliance to key legislation should not exist (AGSA, 2020). For this study, the second auditing principle, i.e., annual performance reports relating to service delivery, is closely studied.

According to Mokgopo (2016), prescripts’ compliance is the main focus of most municipalities while they neglect the speed and quality of services delivered. According to Mnguni and Subban (2022:165), there is a proposal that “leadership should pursue the achievement of clean audit outcomes and improved service delivery.” As such, there is also a notion that suggests that lack of innovation and under-expenditure are due to officials trying to attain clean audits, which are said not to improve service delivery on a

larger scale (Mnguni & Subban, 2022). Twala (2014) argued that the National Treasury sometimes fails to strike a balance between improving service delivery and complying with public procurement regulations. Therefore, it is important for one to take a firm position to recognise clean audit opinions only after predetermined municipal deliverables have been achieved as detailed in an approved municipalities' Integrated Development Plan (IDP) and Service Delivery and Budget Implementation Plan (SDBIP). Clean audits would be meaningless if they did not lead to improved service delivery in all respects. Thus, an in-depth investigation of the correlation between the attainment of a clean audit opinion and improved service delivery is urgently required. The results of such an investigation will aid the provincial and then later the national government in linking achieving clean audits to improved service delivery.

1.5.3 Challenges encountered by municipalities in delivering services

According to Twala (2014), the main challenges municipalities are faced with in relation to achieving improved service delivery and clean audits are two-fold. First, there are challenges relating to service delivery backlogs, financial constraints, leadership and governance failures, inadequate human capital development, poor performance management, corruption and fraud, lack of skills leading to inadequate capacity, poor financial management, high vacancy rates and unskilled cadre deployment. Second, municipalities face challenges in terms of prescripts' multiplicity and complexity, which prohibit innovations in operational matters and make it hard for them to obey the regulations thus achieving improved service delivery.

Emanating from the aforementioned challenges faced by municipalities, the *Back to Basics Municipal Programme* was launched by Zuma (2014: 3), who indicated that it was meant to "improve the functioning of municipalities in order to better serve communities by getting the basics right." To put this in perspective, all spheres of South African government should collaborate to carry out the *Back to Basics Municipal Programme* goals, which include putting the needs of citizens first while delivering basic municipal services of the highest quality, improving good governance, ensuring sound public financial management, and improving human capital development. The aforementioned objectives, if accomplished, will provide citizens with the power to hold the government to account and ensure the delivery of basic services of the highest quality. Consequently, audit committees, oversight structures, ward committees, section 79 committees and

district intergovernmental relations forums would be fully operational. That would lead to proper monitoring of financial performance data and ensure proper appointment of duly qualified municipal officials to deliver quality basic services.

Numerous responsibilities have been passed on to municipalities during the decentralisation of the South African governance system; unfortunately, the process, especially financial decentralisation, did not necessarily result in adequate resources (Siddle & Koelble, 2017). The crucial question is whether the developmental state objectives can be realised through the existing decentralised system of governance. Regarding this important question, municipalities are facing a growing population, leading to an increased demand for services, yet few residents can afford to pay their municipal rates and other paid services because of the prolonged socio-economic difficulties. According to Khalil and Adelabu (2012), the Modified Quantitative Service Delivery Model is a service delivery blueprint whose aim is to strengthen funding, managerial accountability, human capital development and leadership to ensure that government institutions provide services in a way that is effective, prompt, and efficient. Therefore, the aforementioned challenges relate to two elements of the Modified Quantitative Service Delivery Model, namely funding and leadership, and exclude others, which are crucial in linking the rest of the challenges to provide a workable solution for them in order to improve service delivery by local municipalities.

1.5.4 The impact of municipal challenges on the acceleration of service delivery

The main service delivery challenge for municipalities, in general, relates to the unavailability of financial resources, as most rural municipalities rely heavily on the national government for funding and are incapable of generating their own revenues (Do Vale & Cameron, 2017). Municipalities are supposed to generate some revenues by selling potable water and electricity, issuing traffic fines and charging any assessment rates (various licences, such as business occupational health assessments, etc.) and property rates. Nonetheless, municipalities from rural areas struggle to adopt some of the revenue-generating strategies, because of unfavourable socio-economic conditions within their communities, including poverty and joblessness.

Botes et al. (2007) alluded that violent protests and societal unrest have been ignited by municipal challenges of poor service delivery. According to survey data from the South African Police Service, estimate that there are often four to five violent service delivery protests each day (Alexander et al., 2016). Most frequently, protesters cite a lack of municipal services, such as electricity and water, as one of the biggest challenges (Craig, 2017).

Gumede (2009: 58) supports some of the notions about sluggish service delivery, saying that “one problem in South Africa is that appointments to crucial posts in the civil service are still often based on political connections. The politicization of job appointments, moreover, leads to the estrangement of the best potential managers, economists and professionals from the government, leading to best people not always recruited [sic] to manage crucial jobs”. This indicates that candidates with skills required to deliver the most needed public services are not identified by municipalities, especially if the candidates do not network with influential politicians.

Another challenge is that municipal planning and programming lack genuine public participation, even though they are required by law and are not an option; thus, the eruption of service delivery protests becomes unavoidable. Corruption, political instability and interference by politicians in municipal administration are challenges confronting South African local authorities. As a result, decisions are not made on time; this leads to failure in providing accountable governance and effective service delivery. According to survey data of Masiya et al. (2019), the decay and lack of core infrastructure in urban areas and rural areas, respectively, is also a challenge, and water was cited by more than 63% of the participants as a major service delivery failure in municipalities. Sanitation challenges and reliable electricity connection were respectively cited by 40% and 20% of participants, these warrant further empirical studies.

1.5.5 Summary of essential literature review

The review of the literature showed that there was a need to strike a balance between achieving clean municipal audits and improved service delivery. The information analysed thus far indicates that public auditing is an effective instrument for capturing any municipality’s financial management capabilities, which also have constrained externalities that positively improve service delivery in general. Most research also

demonstrates a weak but positive correlation between clean audits and municipal service delivery. Overall, it appears that the audit findings are not positively correlated with service delivery; this claim should be proven as it is stated above in the form of a negative alternative hypothesis.

1.6 Theoretical Foundation

In general, good governance in many corporates such as state-owned enterprises (SoEs) like Eskom with municipalities included may be understood in terms of mainly five theories, namely the agency theory, the stewardship theory, the shareholder theory, the new corporate governance theory, and Wong's three pillars of SoEs reform (Singh & Sachdeva, 2011). An overview of the above five theories is outlined below:

- a) Stewardship Theory: stewardship theory emphasises the alignment of interests between managers and shareholders. It suggests that managers act as stewards who prioritise the long-term well-being of the organisation and act in the best interest of the shareholders of each municipality which are usually citizens represented by a municipal council. Trust, shared values, and collaboration between managers and shareholders are considered crucial in this theory rather than enforcement through performance-based incentives and monitoring as is the case in the Agency theory.
- b) Agency Theory: This theory focuses on the relationship between the principal (shareholders) and the agent (management) in a corporation such as Eskom. This theory is relevant because the corporate structure of Eskom was established to have a principal often referred to as shareholder minister in the South African cabinet to represent the citizens. Over and above, the Eskom corporate structure has agents which are often referred to as management. The theory suggests that conflicts of interest may arise due to divergent goals between the two parties (the principal and the agents). The theory proposes mechanisms, such as performance-based incentives and monitoring to align the interests of agents with those of principals.
- c) Shareholder Theory: This theory asserts that the primary goal of a corporation such as Eskom is to maximize shareholder value. According to this perspective, management should make decisions that prioritise the financial interests of

shareholders. The theory emphasises the importance of profit maximization and suggests that shareholders should hold management accountable for their actions.

- d) **New Corporate Governance Theory:** This theory emerged as a response to various corporate scandals and emphasises the need for effective governance mechanisms. It advocates for transparency, accountability, and ethical behaviour in corporate decision-making. The theory suggests that corporations should consider the interests of multiple stakeholders, including employees, customers, and the community, alongside shareholder value.
- e) **Wong's Three Pillars of SoEs Reform:** This theory, proposed by Andrew Wong, focuses specifically on the reform of SoEs. It highlights three key pillars for successful reform: commercial orientation, professional management, and market discipline. The theory suggests that SoEs should adopt commercial practices, implement professional management systems, and face market competition to improve efficiency and performance.

Against the above backdrop, it is important to note that these theories represent different perspectives and approaches to corporate governance and management. Each theory provides insights and recommendations for how organisations can be structured and governed to achieve their objectives effectively.

This research will explore and opt for stewardship theory which ensures that all actions are reasonable, lawful, and procedurally rational. Furthermore, with accountability, one party is responsible and must account for their activities and decisions to another party. As such, there is a link between accountability and stewardship theory. Notably, stewardship theory focuses on the control of public resources that have been placed in someone's (municipal leadership) care, as it is not owned by that individual or organisation entrusted with it. The principles of accountability and stewardship can be compromised by the 'personalisation of political power' at every local government level (Lodge, 2014).

Mazibuko and Fourie (2013) state that the mayor, councillors, municipal manager, and municipal officials should ensure accountability to achieve clean audits and improve

good governance to ensure better service delivery. In this regard, Shah (2006: 22) identifies basic principles of local governance in terms of “responsive governance, responsible governance, and accountable governance”.

There are four main types of accountability relationships that exist in any operation, particularly in municipalities (Sikhakane & Reddy, 2011). These are hierarchical, professional, legal, and political accountability relationships. The aforementioned accountability relationships will be used with stewardship theory for the purposes of this study.

Stewardship theory was chosen as a key theoretical framework for this study because it will help explore inter alia the role of internal and external stakeholders in the municipality who are responsible for promoting accountability and thereby improved service delivery in the form of new electricity connections.

Stewardship theory is a concept from corporate governance that emphasises the responsibility of managers and executives to act in the best interests of shareholders or stakeholders (Mnguni & Subban, 2022). In the context of clean audits, which are conducted to ensure the accuracy and transparency of financial and performance statements, in this study, performance statements are measured by electricity grid connections. Stewardship theory can be applied to promote ethical behaviour, transparency, and accountability within a state organ while conducting electricity grid connection. As such, stewardship theory can be used in clean audits and electricity grid connections in the following structured method:

- a) Management's responsibility: Stewardship theory highlights that managers and executives have a fiduciary duty to safeguard the assets of the state organs and act in the best interests of shareholders (citizens represented by the municipal mayor and the relevant cabinet minister). This principle can be applied to emphasise that management is responsible for providing accurate financial information for audits while conducting users' electricity grid connections.
- b) Transparency and disclosure: Clean audits require transparency and disclosure of financial and performance information. Stewardship theory encourages management to disclose all relevant financial information and provide a clear

picture of the state organ's financial health, which is crucial for auditors to conduct a thorough examination.

- c) Ethical behaviour: Stewardship theory promotes ethical behaviour among managers and executives. Clean audits rely on the integrity of financial and performance reporting, and stewardship theory can be used to stress the importance of honest and ethical financial and performance reporting practices.
- d) Accountability: Stewardship theory emphasizes the accountability of managers and executives to shareholders (citizens). This accountability can extend to the audit process, where management is accountable for the accuracy of financial and performance statements and must cooperate fully with auditors.
- e) Internal controls: Stewardship theory can encourage the establishment and maintenance of strong internal controls within the state organ. These controls help prevent fraud, errors, and irregularities, which are essential for clean audits while improving the electricity grid connections.
- f) Whistleblower protection: To ensure clean audits, state organs should have mechanisms in place for employees or ordinary citizens to report any unethical or fraudulent behaviour without fear of retaliation and South Africa is doing well on this front (Schillemans & Bjurstrøm, 2020). Stewardship theory that is properly adhered to can support the creation of such whistleblower protection policies and also be properly implemented.
- g) Auditor-General of South Africa independence: Stewardship theory also relates to auditing body independence. Auditors should maintain their independence from the management of the state organ to provide an objective and unbiased evaluation of financial and performance statements. This independence is critical for clean audits combined with electricity grid connection processes.
- h) Board of directors oversight: The board of directors especially in the case of Eskom's electricity grid connection as a power utility plays a crucial role in stewardship theory by overseeing management's actions. In the context of clean audits, the board should ensure that adequate audit procedures are in place and that management cooperates fully with auditors, otherwise, consequence management should be instituted.
- i) Shareholder engagement: Stewardship theory encourages shareholder (citizen) engagement in state organs. Shareholders can play a role in demanding clean audits by exercising their rights to request relevant information.

In summary, stewardship theory can be used in clean audits to reinforce the ethical and accountable behaviour of municipal and Eskom's management, promote transparency, and disclosure and ensure that financial and performance statements accurately represent the state organ's financial and performance position. By aligning audit practices with stewardship principles, state organs can enhance their credibility and trustworthiness in the eyes of shareholders and various stakeholders as it relates to performance in terms of the electricity grid connections.

Ultimately, the stewardship theory expects that managers ought to be doing right as expected, therefore, there shouldn't be any strong statistically significant relationship between clean audits. It is important and possible to find out whether the relationship will be positive or negative.

According to Motubatse et al. (2017), good governance literature suggests that given the clean audit relationship that could influence the improvement of service delivery, stewardship theory ought to embrace leadership accountability that builds citizens' trust in local municipalities. Stewardship theory is defined by Nzimakwe and Mpehle (2012: 280) as an "obligation to provide municipal services in an efficient and effective manner that meets the needs of the citizens without exception". Stewardship theory, in its broadest sense, revolves around the control over something that has been given into someone's custody but does not belong to them. Therefore, the responsibility of managing public resources to improve citizens' quality of life through improved municipal services serves as the best example of good stewardship.

The mayor, councillor, municipal manager, and other municipal officials are expected to be good stewards of accountability during the process of achieving clean audits and improving service delivery (Mazibuko & Fourie, 2013). Shah (2006: 22) outlined the key principles as they relate to local governance as, "responsive governance, responsible governance and accountable governance". Therefore, the above statement can assist local municipalities to improve service delivery effectively and sustainably, thus conforming to good governance principles. The chosen theoretical framework will help to explore in detail the role of, among other things, the local government equitable share funding, managerial accountability (which includes clean audit outcomes) and municipal effectiveness in the acceleration of service delivery. Therefore, the *stewardship theory* as part of a broader good governance principle will be used in this study.

1.7 Research Methodology

This section describes how the research was conducted and the reasons for the choice of methods that were used in this study. The research methods assisted the researcher in determining whether improved clean audits are related to improved service delivery, which was measured in annual electricity connections to the national grid for five years from 2014 to 2018. Study contribution to the body of knowledge is demonstrated through the presentation of the opportunity to review contemporary public governance reforms for them to focus on not only legislative compliance to attain clean audits but also an acceleration of service delivery. Furthermore, the study might ensure value for money through improved and quality municipal services in general.

1.8 Research Design

This section presents (more details in chapter three) the research design to the reader, thereby explaining and justifying all the design choices in a manner that is academically clear and logical. It shows how the researcher may accomplish the study aim and answer its question, which in turn addresses the study research problem (Thomas et al., 2022).

1.8.1 Research philosophy

The research philosophy serves as a foundation and guide for all other research design choices. A research philosophy presents underlying beliefs or world views of how data should be obtained, examined, and utilised. The two main philosophies of research are positivism and interpretivism, which remarkably influence various research approaches (Clarke, 2009). The positivist paradigm gave rise to post-positivism, which is the philosophy of the current study. It shies away from the logical positivists' objective viewpoint in favour of one that is more concerned about the subjectivity of the social world (Ryan, 2006). Post-positivism views all observation, including objective reality, as imperfect (allowing the probability analysis); this led to the post-positivist paradigm being adopted by the present study.

1.8.2 Research type

After the research philosophy is identified, explained, and justified, the research type, either inductive or deductive, is chosen. In inductive research, a theory is generated from collected data (i.e., from the ground up), and the research tends to be exploratory in

nature. By contrast, deductive research is the type of research that builds upon or tests an existing theory (which is often related to the literature review) (Bryman, 2004). The research in this study is deductive because hypotheses will be tested utilising the secondary data acquired. Additionally, a deductive approach is preferable when one tests a set of hypotheses that were drawn from the literature, as is the case in this study, or determines whether a theory holds true in a particular situation.

The researcher adopted a quantitative approach using secondary data sourced from Stats SA and AGSA. This is mainly because the quantitative approach enables the study to consider statistical data in order to quantify performance measurements of service delivery: residents' electricity connections to the grid together with clean audits (Motubatse et al., 2017). As stated by Gray et al. (2007), a study can apply the core philosophies of quantitative methods. The study, therefore, will test the researcher's assumption that a strict focus on clean audits leads to poorer service delivery because it becomes a compliance exercise that creates bureaucratic barriers that hinder accelerated service delivery. Thus, to achieve the goals of the current study, the researcher applied stringent practical standards inherent in quantitative research methodologies.

1.8.3 Research strategy

The research strategy research design, which follows the research type, refers to the methods and approaches the researcher wants to use to carry out the study, from specified methods of sampling to data collection and analysis (Mertens, 2010). In brief, the research strategy refers to how the researcher conducted the research in practical terms, based on the elements of the aforementioned golden thread.

1.8.4 Sampling strategy

This section explains and justifies the selection of the research population since all South African local and metropolitan municipalities were studied, therefore, the sample was all municipalities per observation year for the five studied years. Data was given from the 183 local and metropolitan municipalities throughout a full five-year period, from 2014 to 2018. Rural, semi-urban, urban, and metropolitan municipalities are all included in the study a geographically diverse group of municipalities. Because local and metropolitan

governments have the power to deliver electricity, district municipalities were excluded from the analysis.

1.8.5 Data collection method

The data collection method used for this study explains and justifies how the research data were obtained and/or collected, as well as the approach chosen by the researcher and the justification for that choice. The research problem, aims, objectives, questions, and hypotheses of the study are all directly tied to this justification. In other words, the researcher places attention on how the data-gathering method chosen will fit into this study (more details in Chapter Three).

1.8.6 Data analysis method

The methods or procedures used for data analysis make up the final choice in the research design. In this section, the researcher describes how he analysed the data that were gathered and/or collected in the study and provides justification for that analysis. This reason, as usual, is closely related to the study problem, goals, objectives, questions and hypotheses. In other words, the researcher emphasises how the selected data analysis method fits the present study.

In addition, this section details the general approaches to data analysis, followed by the two processes relating to secondary data analysis. Secondary data analysis is also described. This section also discusses the basic steps for secondary data analysis as well as the advantages and disadvantages of doing so for this study.

Before analysis, the gathered data had been prepared, for them to be suitable and be the best fit for this study. The datasets were therefore checked for outliers and missing data; for this study, the outlier labelling rule was applied. Using the statistical analysis program SPSS V.28, the data were analysed.

1.9 Ethical Considerations

Secondary data were collected in this study, and they are publicly available from the AGSA and Stats SA. Therefore, the study is of low risk in terms of the ethical clearance procedure. Moreover, no harm was expected to be done to any studied municipality and

its citizens as no respondents were expected to partake in this research or reveal their identity. Since the nature of the study allowed for a rigorous and honest analysis of the data, the researcher took care to ensure that the data collected was manipulated as part of data sorting. The analysed data and reported information in this study are done ethically.

1.10 Validity, Reliability and Dependability

The researcher ensured that the study data quality was maintained, as dependability and credibility are indicators of the data's trustworthiness and quality (Johnson & Onwuegbuzie, 2004). As the data were gathered by renowned government statistical and auditing institutions (Stats SA and AGSA, respectively), the data collected are believed to be reliable. When the data are tested again in comparable circumstances, they should produce almost identical findings, in compliance with measurements of dependability. The researcher planned to use a *sound-boarding* technique to confirm that the data were accurate. During this phase, the researcher also consulted his peers, mentors and other industry experts who have a thorough understanding of the study subject.

1.11 Limitations, Feasibility and Positionality

The main limitation of this study is delays between reporting and the impact of audit findings; for example, the impact of a 2014 audit report might be observed in 2015 or 2016. Although such delays might be longer than a year, the researcher assumed that the delays are one year later; that is, for example, the impact of a 2014 audit was observed in 2015. The geographical spread of the study's chosen municipalities which are rural, semi-urban and urban is another drawback because different dynamics and levels of development are not the same in rural versus urban municipalities. To guarantee that the data fit well into all elements of the study, only secondary data from Stats SA and the AGSA pertaining to metropolitan and local municipalities were acquired, processed, structured and analysed without compromising the data integrity.

In this study, the variable to be used to measure service delivery from local and metropolitan municipalities is, therefore, the following in Table 1 below are the measures or types of electricity levels and their strengths:

Table 1. Degrees of measure of municipal service delivery (electricity connection).

Service Type	Basic: Level 1	Intermediate: Level 2	Full: Level 3
<i>Electricity connection</i>	Non-grid	20 Amp grid	60 Amp grid

Source: Adapted from SALGA (2015)

According to Table 1, for the municipal service delivery to be satisfactory (full), communities connected to the national grid should receive at least 60 Amps of electricity (SALGA, 2015). Therefore, the reason for the above Table 1 is to highlight what types of grid strengths are connected by the municipalities; furthermore, to clearly outline how municipal services in terms of electricity connection will be measured according to the above scales and rubric to determine the degree to which the services are rendered.

1.12 Significance of the Study

The current study will advance the body of knowledge by offering new perspectives on the connection between improved delivery of services and audit outcomes. The assertions made by Mokgopo (2016) that the majority of municipalities prioritise statutory compliance at the expense of accountability, responsiveness and service quality may or may not be true. The determination of accountability and adoption of a firm stance to recognise clean audits only when the intended municipal deliverables have been met, as specified in an approved municipalities' IDP, is therefore more important. Clean audits would be useless if they did not result in better service delivery to encourage municipalities' responsibility.

Therefore, it is vitally essential to conduct a thorough investigation into the connection between increased audit outcomes and improvements in the delivery of municipal services. The results of such an investigation will be considered in the determination of ways of improving service delivery, especially electricity connections to the grid, and to determine further into finding explanations for improvements in service delivery in local and/or metropolitan municipalities.

1.13 Study Outline

The outline of the five chapters of this study is provided in Table 2.

Table 2. Five chapters of the present study

Chapter One: Introduction and Background	This chapter provides an <i>introduction to and the background of the study</i> by presenting the problem statement, the main research questions and the essential literature to put the study into context.
Chapter Two: Literature Review	The literature is reviewed in this chapter as it relates to the <i>establishment of a South African local government system</i> , the degree to which municipal services are rendered and the meaning of clean audits in local municipalities. <i>Challenges faced by local municipalities</i> in delivering public services and their impact on the acceleration of service delivery are discussed. The <i>theoretical framework</i> as it relates to public governance and public auditing will also be reviewed, thus providing definitions and backgrounds of public governance, public auditing and service delivery.
Chapter Three: Research Methodology	The chapter outlines the <i>research methodology</i> that will be used in this study. The <i>research design, sampling procedure, research instruments and data collection and analysis</i> are discussed.
Chapter Four: Data Analysis and Interpretation	In this chapter, <i>a presentation and analysis of study results</i> are made as they relate to the correlation between the attainment of clean audits and improved service delivery in local municipalities.
Chapter Five: Recommendations and Conclusion	<i>Research objectives</i> are revisited as presented in previous chapters to check whether they were achieved. The study's <i>summary, recommendations, and selected critical conclusions</i> will also be outlined in this chapter.

Source: Researcher's own

1.14 Chapter Summary

This chapter started by providing the study background, problem statement, and rationale, together with the main research aim, question, and hypotheses. Furthermore, the essential literature review covered high-level themes such as the degree to which municipalities render services, the meaning of clean audits in municipalities, and the challenges municipalities confront and how they impact the pace of municipal service delivery. Additionally, a description of the theoretical framework for the current study was provided. Details on the study methodology, including research methodology that encompasses various research design choices relating to the research philosophy, type, strategy, and strategy, were provided. Furthermore, data collection and analysis methods were clearly outlined. The study validity, dependability, limitations, feasibility,

and positionality were further discussed. Lastly, the study significance and its high-level chapter outline were provided; then, this introductory chapter concluded with key takeaways from its contents.

The next Chapter Two reviews the literature according to the identified themes of this study.

CHAPTER TWO

LITERATURE REVIEW: MUNICIPAL SERVICES AND GOVERNANCE

2.1 Introduction

Chapter one included the problem statement, research objectives, research questions, study assumptions and hypotheses, preliminary research design, and research design. The themes found in the primary literature for this study are used to structure the literature review. This chapter attempts to review the literature in response to these assertions. The chapter specifically reviews the literature pertaining to the municipal governance structure and its municipal legislative framework and historical facts relating to municipal governance structures. The chapter also defines service delivery, the degree to which municipal services are rendered, and municipalities' mandate in delivering public services. Additionally, the background of municipal service delivery is discussed in relation to how public procurement affects municipal service delivery.

This chapter then evaluates Eskom's capacity to generate electricity for municipalities, including the provision of reliable, affordable, modern, and sustainable energy and electricity as a municipal service. Municipal challenges, their solutions, and their impact on the acceleration of service delivery are described. Furthermore, trends of serious service delivery protests are determined and analysed per province. Municipal accountability mechanisms of service delivery, the meaning of clean audits in municipalities, and the national audit outcomes are also described. Furthermore, there is a description of corruption and municipal service delivery and an overview of corruption in South Africa, combating corruption in public procurement, the application of the law, effective systems of governance, and key role players in the delivery of municipal services. The chapter will then wrap up by outlining its key take away.

2.2 Background of the Study Problem

For the longest time, South African government institutions, especially municipalities, have celebrated the clean audits they achieve, which is public knowledge. However, little is known about how clean audits affect improved service delivery (Motubatse et al., 2017: 92). That is, to check whether the achievement of clean audits has a positive or negative and a strong or weak relationship with an improvement of service delivery. Clean audits are used in this study to measure good governance, whereas improved

service delivery is measured by annual electricity connections to the national grid over five years, from 2014 to 2018, in all local and metropolitan municipalities in South Africa.

According to experts, municipalities face significant challenges in properly directing and coordinating their supply chain management operations across the whole value chain for service delivery (Lee, 2002). Municipalities must therefore adopt strategies to ensure that service delivery is always enhanced in light of the challenges that will be covered in this chapter. Hence, public auditing should be intensified, and the AGSA be given more power to act when wrongdoing and maleficence are discovered (Public Audit Amendment Act, 2018).

This chapter primary goal is to review the literature relating to the study topic, i.e., '*The significance of clean audits on the provision of electricity in South African local municipalities.*' The study main aim is to *determine whether a relationship exists between clean audits and improved service delivery, specifically new electricity connections, in local municipalities.*

The main research question is: *Is there a relationship between clean audits and improved service delivery, specifically new electricity connections, in local municipalities?* The following specific research questions will be covered in this chapter based on the main research question.

Multiple regressions are performed on the data collected for each year (2014–2018) to determine the determinants of service delivery improvements using audit outcomes from the previous year. Multiple regression analysis also explains how a set of explanatory variables relate to one another, namely audit outcomes (main predictor), governance by the ANC, the population size of each municipality, and one outcome variable, electricity provision. Hypothesis testing is used in this analysis to examine whether there is a statistically significant link between the dependent and independent variables and whether it can be established from the collected data.

It is essential to look at the connection between audit findings and service delivery in order to ensure proper municipal financial management, good governance, and, ultimately, increased service delivery (in this instance, more electricity connections) (Pautz, Watermeyer & Jacquet, 2003).

De Vos et al. (2005: 125) describe an important reason for reviewing the literature as to understand the problem clearly and deeply under study. Moreover, Aitcheson (1998) indicated that reviewing the literature is in the form of collecting and analysing published and interrelated scientific information in order to measure the gravity of information already in the public space that relates to the intended study. It is proper to start the present study by reviewing some literature pertaining to it. In order to understand municipal service delivery as it relates to electricity provision by local and metropolitan municipalities in South Africa, as such the current chapter attempts to achieve this research objective of the study. The researcher evaluates all relevant literature and, using the results of statistical tests, draws a conclusion that may or may not agree with some of the academic work that has been published.

2.3 Municipal Governance Structure

The governance structure and historical facts pertaining to service delivery are discussed in this section together with the municipal legislative framework.

2.3.1. Municipal legislative framework

Section 53 of the Republic of South Africa's 1996 Constitution declares that “a municipality must structure and manage its administration, budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community and participate in national and provincial development programmes”. To reverse apartheid's atrocities, South Africa had to drastically undergo transformation. As a result, the state bureaucracy was primarily involved in creating the legislation that would bring about the intended reform during the two terms of democratic government between 1994 and 2004. There are several laws and regulations, as well as parliamentary acts, proclamations, white papers, and by-laws, were produced as a result of the legal, political, and policy processes. However, concerned stakeholders thought that the results of service delivery were unsatisfactory despite these legislative developments, particularly from civil society movements (Kanyane, 2014). Despite the fact that there is a strong regulatory framework that includes, among other things, acts such as the Local Government Municipal Demarcation Act (Act No. 27 of 1998), the Local Government: Municipal Structures Amendment Act (Act No. 1 of 2003), the Local Government: Municipal Systems Amendment Act (Act No. 7 of 2011), the Local Government: Municipal Finance

Management Act (MFMA) (Act No. 56 of 2003), and the Local Government: Municipal Property Rates Act (Act No. 6 of 2004), municipalities are still failing to address community needs satisfactorily (Du Plessis, 2009: 5).

2.3.2. Historical facts on the municipal governance structure

It is important to lay out some historical facts about municipalities that relate to municipal governance structures. This is to provide a clear and convincing argument for why service delivery has fallen short of what citizens have come to expect. As part of this investigation, questions about the resource capability of municipalities are brought up and discussed as a precursor to the analysis of causes and effects that explain the challenges local government faces generally.

There were 284 municipalities instead of 843 transitional local councils in 2000 as a result of municipalities achieving full municipal status (Sibanda et al., 2020: 2). Due to the Municipal Demarcation Act (Act No. 27 of 1998) process, the total number of municipalities fell to 283 in 2006. Thus, there were 231 local municipalities, 46 district municipalities, and six metropolitan municipalities (Reddy, 2010: 67). After the municipal elections in May 2011, the reduction was again made, this time from 283 to 278. (Sibanda et al., 2020: 2). At that time, efficient and effective service delivery was expected from fully-fledged municipalities. However, due to political immaturity on the part of political parties, ward council members and municipal councils were not prepared to fulfil their obligations.

Gumede (2009) concluded that local politicians are rarely more akin to the political equivalence of a used car salesperson in that they instil confidence as a result of the aforementioned failure to provide services. In fact, it seems that those of average skills who were passed over for other, higher-profile political positions end up working in local government. The political leadership in local government should be proficient in both institutional management and technical management. The absence of these essential features is a formula for disaster that jeopardises the municipal ability to provide their specific communities with crucial services like electricity.

2.4 Definition of Service Delivery

Now that the municipal evolution has been described, it is important for us to define service delivery at a high level. The ultimate goal of all governments, especially

democratic ones, is accelerated service delivery. According to Mfene (2009: 210), providing public services is broadly defined as “encompassing activity aimed at promoting the general welfare of the community”; this definition establishes a contract of public service delivery that ought to exist between citizens and a government.

In addition, service delivery was broadly described by the PMG (2010: 4) as an “outcome, of which the scale and quality depend on factors such as clear and realistic policies; appropriate allocation of powers, functions and financial resources; performance and accountability of state organs to implement policies; coordination between organs of state; public participation and involvement as well as the level of self-reliance of communities.” The community's well-being lies in both definitions of service delivery, despite the fact that the two definitions were provided in different contexts.

2.5 The Degree to which Municipal Services are Rendered

As early as the year 1996, the African National Congress (ANC), South Africa's then-new democratic government, was expected to face challenges in delivering services (Moosa, 1996: 6). It was anticipated that the government would find it difficult to deliver the services that the formerly underserved communities needed. Using the aforementioned broad definitions and descriptions of service delivery; it is evident that citizens expect their governments to provide efficient and effective service delivery, mostly through public procurement, when they collect taxes and levies. It is for this reason that public procurement is essential for providing residents with high-quality public services, and this is the reason why the research was conducted, i.e., to check whether achievement of clean audits has a positive or negative and strong or weak relationship with improvement of service delivery. The South African government cannot meet residents' expectations for service delivery, as evidenced by the rise in serious service delivery protests each year, as shown in Figure 1 under section 2.12, which depicts protests over the lack of service delivery.

2.5.1 Mandate of municipalities in service delivery

Local government is responsible for the critical job of providing sustainable basic services to their respective citizens by Section 152 of the Constitution (Constitution, 1996). Municipalities, as they are the branches of government closest to the people, have the significant job of developing their communities and providing municipal services to raise the standard of living in their localities (Reddy, 2016). The following five

requirements are expected of services rendered by municipalities under the Local Government: Municipal Systems Act (Act No. 32 of 2000):

- be accessible and provided equitably to inhabitants,
- be an efficient, prudent, economical, and effective use of available resources and ensure quality over time,
- be financially sustainable,
- be environmentally sustainable, and
- be regularly reviewed with a view to upgrade, extend and improve.

The aforementioned legislation does not explicitly spell out the process municipalities must take to comply with the aforementioned requirements; thus, each municipality is expected to devise strategies for compliance; this ensures municipalities' accountability. Furthermore, all municipalities and their leadership are expected to pay full attention to the aforementioned stipulations and develop programmes and policies to satisfy broad and more specific legislative obligations.

2.5.2 Municipal service delivery in context

The primary responsibilities of government entities go beyond simply providing direct services; they also include things like contract management that speed up service delivery. As a result, public procurement is essential to guaranteeing better service delivery performance by national, provincial, municipal, and other service delivery-related government agencies (Uyarra & Flanagan, 2009). Public procurement is involved in essential service delivery operations for a number of reasons, including the fact that payments for goods, services, and works are part of this process. This shows that it's nearly impossible to divorce government institutions from the direct or indirect service delivery that comes from using the public procurement system.

Regarding public service delivery by municipalities, according to section 217 of the Constitution (1996), "when an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective." The Constitution also indicates that it is not prohibited for state institutions to "implementing a procurement policy providing for (a) categories of preference in the allocation of contracts; and (b) the protection or advancement of persons, or categories of persons, disadvantaged by unfair

discrimination.” Consequently, as aforementioned, in order to include public procurement in its constitution, the South African government saw it as an essential part of providing services. This is because the government anticipated that, following 1994, the public sector would procure a significant number of public services, the cost of which is now estimated to be R900 billion (2017/18); this category of expenditure rises annually (Nene, 2018). Therefore, without efficient and effective municipal public procurement processes, there would be no service delivery.

2.5.3 Impact of public procurement on municipal service delivery

According to the World Bank (2012), which was cited earlier, public procurement is necessary for the delivery of effective and efficient public services. Government officials are advised by the World Bank (2012) to not consider service delivery alone as a success when they follow all rules and regulations pertaining to public procurement. However, they must also accomplish various other government policy objectives, such as the advancement of development and effective and efficient public services. Much emphasis has been given to public procurement which complies with numerous public laws, such procurement should provide the needed public services. According to the World Bank (2012: 11), “public procurement systems should be measured not merely by formal compliance with procedures but also by the achievement of developmental and other policy objectives.”

All South African citizens are required to have proper access to basic services like water, electricity, a clean environment, and housing, among many other needs (Constitution, 1996). These public services are the cornerstone of what any legitimate government should provide its citizens. Moosa (1996: 2) advised: “government would require wisdom and creativity to meet those expectations in the shortest possible time due to the great reservoir of unfulfilled needs.” The claim supports the notion that if government services fall short of citizens' expectations, there may be major protests.

South African public procurement processes including some public procurement legislations are linked to World Bank pronouncements. World Bank (2012) indicated that public procurement urgently needs four interconnected reforms to accelerate the delivery of effective and efficient public services. The first is the harmonisation of all laws governing public sector procurement; this reform's major objective is to better guide public procurement officials. Inefficiencies and instances of diminished public

service outputs are also minimised. The current analysis concludes that in order to properly implement this reform, procurement authorities should eliminate instances of obsolete and deficient public procurement legislation.

Efficiency and effectiveness in public procurement systems, which comprise adequately qualified personnel, efficient procedures, and sound oversight in public procurement units of each institution, are the second urgently needed public procurement reform. This reform, in the opinion of the researcher, is essential, particularly because some public services ought to be centralised while others ought to be decentralised. For specialised strategic services like mobile communication, travel, and accommodation for state employees, South Africa uses a transversal contracting procurement method.

The third reform is the professionalization of the workforce in public procurement, which closely relates to the second recommended reform. Professionalization will help to ensure that all practising officials uphold professional ethics and that those who violate public procurement legislation are disqualified to practice further (World Bank, 2012).

Related to the third reform is the fourth reform in that it calls for certain modernization of public procurement, including e-government and e-procurement. The Central Supplier Database in South Africa will eventually develop into a fully functional e-procurement system.

2.6 Overview of Eskom's Capacity to Generate Electricity for Municipalities

The vertically integrated state-owned electrical company Eskom generates over 95% of the electricity used in South Africa and a sizeable amount of the electricity is generated on the continent of Africa (Wassung, 2010). Among other countries, Eskom exports power to Botswana, Lesotho, Mozambique, Namibia, eSwatini, and Zimbabwe. This is despite the fact that Mozambique is also a net electricity exporter, and this situation is due to bilateral agreements for selling and buying energy the country has with South Africa. South Africa has one of the highest rates of electrification on the continent, with an urban electrification rate of over 93 percent and a rural electrification rate of about 66 percent (Sarkodie & Adams, 2020). Municipalities' primary responsibility in this regard is to purchase electricity from Eskom and sell it directly to its industrial or residential clients. The general citizens in South Africa often insinuate that the rolling blackouts result from

municipalities competing with neighbouring countries that are also purchasing electricity from Eskom, a matter that has not been verified.

The most recent proposals for the government to split up Eskom into three different entities in charge of generating, transmission, and distribution first surfaced in 2010. (Wassung, 2010). Eskom's significant debt burden, which has recently been reported to exceed R400 billion, was the driving force for this decision. Despite Eskom's financial hardship, South Africa plans to implement a very successful Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) for utility-scale projects. With a potential installed capacity of up to 250 MW, the rooftop solar photovoltaic (PV) industry in South Africa has also expanded dramatically over the past few years. This extra electricity is produced to feed the national grid.

Rolling blackouts, also known as load shedding, have been happening often in the South African economy since 2008 and the study period (2014-2018) was chosen because it covers the first ten years of the introduction of load-shedding in SA since 2008. Electricity load-shedding in South Africa has been more frequent in recent years, increasing from 9.7% of the time (an average of 3 calendar days per month) in 2015 to 33.4% of the time (an average of 10.4 calendar days per month) in 2022 until the end of October. During the third quarter of 2022, load-shedding reached an all-time high of 1 054 hours, or 47.7% of the time (an average of 14.8 calendar days per month). This included a severe period of power outages when 187 hours of stages 5 and 6 load-shedding were implemented (South African Reserve Bank, 2022). Since its inception, load-shedding has had a detrimental effect on local industries and economic growth.

The above assertions are mostly caused by Eskom's inability to produce enough electricity to meet the needs of the entire country. In order to address the ongoing problem of rolling blackouts, Mineral Resources and Energy Minister Gwede Mantashe outlined plans for a new round of power generation procurement in September 2020 to obtain an extra 11,813 MW of capacity. However, additional load shedding will be needed in the short and medium term because the first additional power will not really start feeding to the grid until mid-2023. As much as 5,000 MW or more of renewable energy could be added to the national electricity grid by 2024 if President Ramaphosa is successful in lowering the licensing requirements for self-generation of electricity from 1 to 100 MW, as he announced. In August 2021, the new regulations came into force allowing more flexibility in the renewable energy sector.

Approximately 85% of the electricity used in South Africa is currently generated by coal-fired power plants. Despite environmental concerns, coal will continue to provide the bulk of South Africa's electricity in the future decades, although the share from renewable sources will rise quickly (Ndzelu, 2016). South Africa is attempting to improve its poor environmental performance while being the world's 14th largest producer of greenhouse gases (Chapungu et al., 2022). Following a severe fall in 2020 caused by the coronavirus 2019 (Covid-19) pandemic, energy consumption is gradually recovering, with an average annual rate of growth of 0.3 percent over the projection period from 2021 to 2030 (The Economist, 2021). The slow economic growth rate will be due to sustained slow improvements in energy efficiency in South Africa.

It's important to remember that new electricity connections are heavily dependent on the existence of electricity generation, distribution, and transmission arrangements with various municipalities, which are audited during the connection of households to the grid, especially in light of the aforementioned sluggish economic growth.

2.7 Access to Reliable, Affordable, Modern and Sustainable Energy

Accomplishing the UN's Sustainable Development Goals, especially Goal Seven, which calls for ensuring that everyone has access to modern, cheap, dependable, and sustainable energy sources. South Africa was amongst the countries that signed the Paris Agreement, which was aimed at decreasing the global average temperature to be below 2°C by the year 2100. Neighbouring countries rely on South Africa for 50% to 90% of their electricity needs, thus bringing about an extra burden to the South African national electricity grid. In South Africa, electricity is viewed as a strategic commodity with the ability to accelerate socio-economic growth, eradicate poverty, and bridge the persistent and resistant inequality population. Despite the massive connection of households to the national electricity grid, South Africa still remains a highly unequal society. According to Stats SA (2017), by the end of 2016, the number of new homes the government managed to connect to the national electricity grid was 207 436, which was way above the targeted 169 722 households. This meant that since South Africa gained freedom in 1994 and electricity access was available to the entire population, the country effectively connected more than 4.7 million new homes to the electricity grid.

South Africa is making a bold effort to develop renewable energy sources and reduce its reliance on coal, the Integrated Resource Plan of 2010 was drafted as a blueprint

document aimed at achieving South Africa's goal of reducing carbon emissions. Two large power plants (Kusile and Medupi) are currently being finalised and are envisaged to produce more than 9.6 GW of energy, which is the largest to ever be produced in Africa. In addition, South Africa has built Ingula Hydropower Station, which is a water-pumped-storage hydro scheme that brings about a hydro energy mix in South Africa that includes Independent Power Producers recently approved by the government cabinet.

South Africa has set an ambitious goal of increasing electricity provision to almost 90% of its entire population by 2030; the remaining 10% is to be solely supplied by various renewable energy programmes that are currently being developed. By 2030, South Africa is expected to have an additional demand of above 40 000 MW, because around 11 000 MW capacity will be decommissioned soon (Wassung, 2010). Therefore, in order to achieve the 2030 target, South Africa needs to increase investment in renewable sources of energy by more than 30 000 MW.

2.8 Electricity Provision as a Municipal Service

The primary responsibility for providing electricity to households and businesses as basic services rest with local and metropolitan municipalities. Although some metropolitan municipalities do have small power plants that are meant to satisfy their city's electricity needs, they mainly rely on Eskom's supply. The condition of the transformers, cables, and metering systems used for the distribution of electricity should also be inspected by the municipalities. Municipalities jointly account for 43% of the overall volume of electricity sales, while Eskom directly provides the remaining 43% of electricity users (Mashaba, 2014). The biggest challenges with electricity distribution are cable theft, inadequate routine maintenance of the cables (most distributors only do breakdown maintenance), flawed operating processes, outdated equipment, and overloading of electricity substations. Deficits in municipal budgets pose a serious barrier to the maintenance and distribution of electricity (Mashaba, 2014). Major and frequent power outages crippled South Africa's electricity distribution infrastructure throughout the 2015–2016 financial year, having an impact on both residential and industrial areas. The primary causes of the blackouts have been poor routine maintenance and refurbishments (Ndzelu, 2016).

In some urban townships, angry citizens frequently take to the streets to protest the poor or total lack of service delivery, particularly the provision of electricity, in their

communities. These violent protests have claimed some lives over the years while also causing extensive property and infrastructural damage. When angry residents demand the resignation of the municipal authorities, sometimes their lives are at risk. The violent service delivery protests are caused by a number of problems, such as inadequate sanitation, the slow process of housing delivery, no connection to the national electrical grid or frequent power outages, among others (Shaidi, 2013).

The local government's responsibility to address apartheid-related backlog in service delivery is outlined in the Constitution (1996). From this view, local government has clear legislative obligations to be effective, efficient, and responsive to community needs. Municipalities should effectively and efficiently plan, manage, and carry out their service delivery projects. Local government should achieve the following, among other things:

- encouraging community involvement in local governance matters,
- improving socio-economic development,
- promoting a safe and healthy environment, and
- providing sustainable service delivery (Constitution, 1996).

It is a fact that many municipalities are facing difficulties in providing services (Abraham, 2017). Municipalities' efforts to achieve sustainable service delivery are impacted by ongoing local administrative, political, and budget constraints, according to the Department of Cooperative Governance and Traditional Affairs (CoGTA) (Ngcobo, 2020). Here are a few of these challenges:

- Poor administrative and financial management,
- difficulty clearing service delivery backlogs,
- poor councillor-community communication,
- mismanagement of municipal resources, corruption, and fraud are some of the issues that need to be addressed (CoGTA, 2009: 12).

Another significant setback faced by municipalities is the failure of local citizens (customers) to pay for services rendered, which results in high municipal debt. According to the National Treasury (2020: 28), municipalities' inadequate debt management and collection practices are the primary reason for the increase in municipal debt. Around R32 billion worth of municipal debt was owed at the national level in 2007, and that amount is thought to be rising at a rate of R3.2 billion per year (Graves & Dollery, 2009).

This demonstrates that municipal financial management is ineffective (CoGTA, 2009: 13).

2.9 Challenges Faced by Municipalities in Delivering Public Services

Twala (2014) states that there are two main challenges that municipalities must overcome in order to improve service delivery and achieve clean audits. First, there are challenges relating to service delivery backlogs, such as the provision of electricity that was not accessible to black and other marginalised communities. Furthermore, there are financial constraints, leadership and governance failures, inadequate human capital development, poor performance management, corruption and fraud, lack of skills leading to inadequate capacity, poor financial management, high vacancy rates and unskilled cadre deployment. Second, municipalities face challenges in terms of regulations' multiplicity and complexity that prohibit innovations in operational matters and make it hard for the municipalities to achieve improved service delivery and clean audit outcomes due to poor compliance with regulations.

In response to the aforementioned challenges that municipalities were experiencing, Zuma (2014: 3) introduced the Back to Basics Municipal Programme, and he stated that it was intended to "improve the functioning of municipalities in order to better serve communities by getting the fundamentals right." Given the above, collaboration amongst all government levels is essential to achieving the objectives of the Back to Basics Municipal Programme, which embraces prioritising the needs of citizens while delivering basic municipal services of the highest quality, enhancing good governance, ensuring sound public financial management and enhancing human capital development. If implemented successfully, the aforementioned objectives would enable citizens to hold municipal governments accountable and guarantee the provision of the best quality basic needs. Thus, District Intergovernmental Relations Forums, Ward Committees, Section 79 Committees and Audit Committees would all be fully functional. Consequently, financial performance data would be properly monitored, and qualified municipal officials would be properly appointed to deliver essential services, such as electricity.

Although the South African governance system was decentralised, a lot of duties were transferred to the municipalities. However, the process may not have adequately

decentralised resources, particularly finances (Siddle & Koelble, 2017). The major question is whether the developmental state objectives can be realised through the existing decentralised system of governance. Regarding this important question, municipalities are faced with a growing population, leading to an increased demand for services, yet few residents can afford to pay their municipal rates and other paid services because of the prolonged socio-economic difficulties.

The Modified Quantitative Service Delivery Model, according to Khalil and Adelabu (2012), is a service delivery blueprint with the objective of strengthening funding, managerial accountability, human capital development and leadership to ensure that service delivery by state institutions is effective, efficient and responsive. Consequently, the challenges listed above only addressed two components of the Modified Quantitative Service Delivery Model, namely funding and leadership, and left out others that are essential in linking the remaining challenges together to offer a practical solution to problems of improvement of service delivery by municipalities.

2.10 The Impact of Municipal Challenges on the Acceleration of Service Delivery

The main challenge for municipalities when it comes to providing municipal services is the lack of financial resources, which prevents most rural communities from generating their own income (Do Vale & Cameron, 2017). Municipalities must generate revenue by selling drinkable water, electricity, traffic fines, assessment fees, and property taxes. However, municipalities in rural areas find it challenging to adopt some of the revenue-generating strategies due to the unfavourable socio-economic situations in their communities, such as high unemployment and poverty rates.

Botes et al. (2007) alluded that violent protests and societal unrest have been ignited by municipal challenges of poor service delivery, especially the provision of electricity. Alexander et al. (2016) reported that the South African Police Service survey indicates that South Africa is experiencing approximately four to five violent service delivery protests per day on average. In most cases, one of the main challenges cited by protesters is the lack of municipal services, such as water and electricity (Craig, 2017).

Some of the aforementioned notions of lack of service delivery are endorsed by Gumede (2009: 58), who states that “[one] problem in South Africa is that appointments to crucial posts in the civil service are still often based on political connections. The politicization of job appointments, moreover, leads to the estrangement of the best potential managers, economists and professionals from the government, leading to the best people not always recruited to manage crucial jobs.” This notion indicates that the skills required to deliver the most needed municipal services are not identified by municipalities, especially if the candidates do not network with influential politicians.

Another challenge is that municipal planning and programming lacks genuine public participation, even though such participation is required by law and is not an option. Therefore, the eruption of service delivery protests becomes unavoidable as communities are left in the dark about any plans for or progress of service delivery. The challenges that South African municipalities face include corruption, political instability, and political interference in municipal administration. Consequently, decisions are not made in due time, resulting in municipalities’ failure to provide accountable governance and effective service delivery. According to Masiya et al. (2019), the decay and lack of core infrastructure in urban areas and rural areas, respectively, is also a challenge; water was cited by more than 63% of participants as a major service delivery failure in municipalities. Sanitation challenges stood at 40%, and reliable electricity connection was at 20%. Further empirical studies are required as the current study only focuses on electricity provision.

2.11 Proposed Solutions to Municipal Challenges of Service Delivery

Municipal audit concerns, rampant corruption, particularly in supply chain management (SCM), unsatisfactory municipal service delivery in most municipalities, community protests, and undue party-political influence are a few examples of the challenges, that are characteristics of both the current and previous municipal administrations. Municipal audit concerns, rampant corruption, particularly in supply chain management (SCM), unsatisfactory municipal service delivery in most municipalities, community protests, and undue party-political influence are a few examples of the challenges. Powell (2012: 28) provides six propositions in response to pressing issues raised in the municipal environment.

Firstly, the majority of municipalities are in financial distress and unable to provide essential services like electricity because they lack economic activity and financial viability. Municipalities are unable to sustainably generate their own income to offer effective services. Given this difficulty, it is suggested that local governments improve their methods for raising revenue and managing debt in order to diversify their sources of income and lessen their dependency on bailouts and equity from the National Treasury. The equitable distribution of higher-quality services to the communities is achieved by expanding the revenue base and managing debt dynamics. Revenue collection must be in proportion to the services rendered in order to promote the community's culture of payment and prevent the accumulation of large consumer debts (De Wet, 2004: 8).

Secondly, protests against service delivery have a reason. Understanding the causes of service delivery protests is crucial before attempting to address them since their effects are more difficult to manage. Simply said, one of the reasons for these protests is a breakdown in communication between the local governments and the community. Municipalities must therefore improve on meaningful community participation. Community engagement should be a two-way activity rather than a one-way checklist exercise by the municipalities to demonstrate they comply with public participation legislation. It should be about the community's active participation in every stage of the policy cycle rather than counting the number of community meetings held in order to vigorously engage and confront municipal challenges as a group. This should be accompanied by effective monitoring and evaluation that is integrated and coherent across all three spheres of government.

Thirdly, since service delivery is not simply an administrative process but also a complex political one, it would be wise to create an interface between the municipal council and the municipal executives as well as between the municipal council and the community. This interface should not be left to chance in order to prevent municipal mayors and council members from trying to interfere with the administrative processes of the municipalities. Municipal administrators must manage, but they also need to be held accountable by the mayor or council. The Local Government: Municipal Structures Amendment Act (Act No. 1 of 2003) contains built-in accountability mechanisms that both municipal politicians and municipal officials must follow because the latter can thwart the former.

Fourth, accountability mechanisms cover council members who have been charged with being haughty and indifferent to community needs. For this reason, Paradza, Mokwena, and Richards (2010: 89) advocate a number of measures, including routine councillor performance evaluation carried out in a systematic, transparent manner and based on a set of norms and standard indicators applied across all municipalities, to restore residents' faith in local government's ability to provide services.

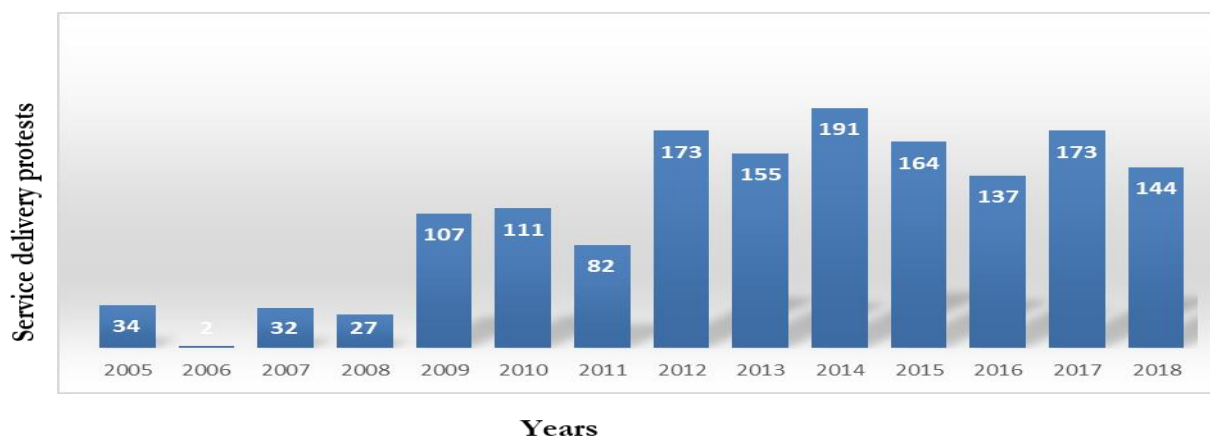
Fifthly, municipalities are not exempt from this challenge because corruption continues to be a significant barrier to political and economic progress. As a result, municipalities ought to have an ethical and integrity architecture. The Municipal Structures Act section 79, the Audit Committee section 166, the SCM Chapter 11 requirements, and other council committees in section 79 standards must all be tightened. Due to this, municipal council monitoring needs to be strengthened, and for this reason, all levels of government, especially municipalities, should adopt a policy of zero tolerance for corruption. For instance, it is commendable that the current Minister of Public Service and Administration (DPSA) recently established the Anti-Corruption Bureau (ACB), which should work closely with other law enforcement and anti-corruption government agencies like the Asset Forfeiture Unit (AFU), the Office of the Chief Procurement Office (CPO) in the National Treasury, the Special Investigation Unit (SIU), and Financial Investigation Unit (FIU) (Sisulu, 2013).

Sixthly, the importance of planning as a hindrance to municipal service delivery cannot be overstated; however, the national developmental agenda, including that of the provincial administration when compared to the municipal planning they all are not integrated. In certain cases, IDPs and Local Economic Development (LED) are excluded from provincial and national governments' plans. As a result, the forthcoming planning process at the IDP and LED levels should now take into account broader planning influenced by the priorities of the provincial and national governments. Communities regard all three branches of government as equal partners in delivering services or, more significantly, pursuing the municipal development plan, the bottom-up and top-down approaches should interact. Monitoring and evaluation according to Mackay (2006: 8), should spot outrageous situations and afterwards offer guidance on how to take corrective action while the work is still being done. To try to address the challenges with service delivery mentioned earlier, in order to support effective integrated planning,

policymaking, and intervention, the information gathered should be processed into analytical, action-oriented reports.

2.12 Trends of Serious Service Delivery Protests in South Africa from 2005 to June 2018

Figure 1. Trends of Serious Service Delivery Protests in South Africa from 2005 to June 2018.

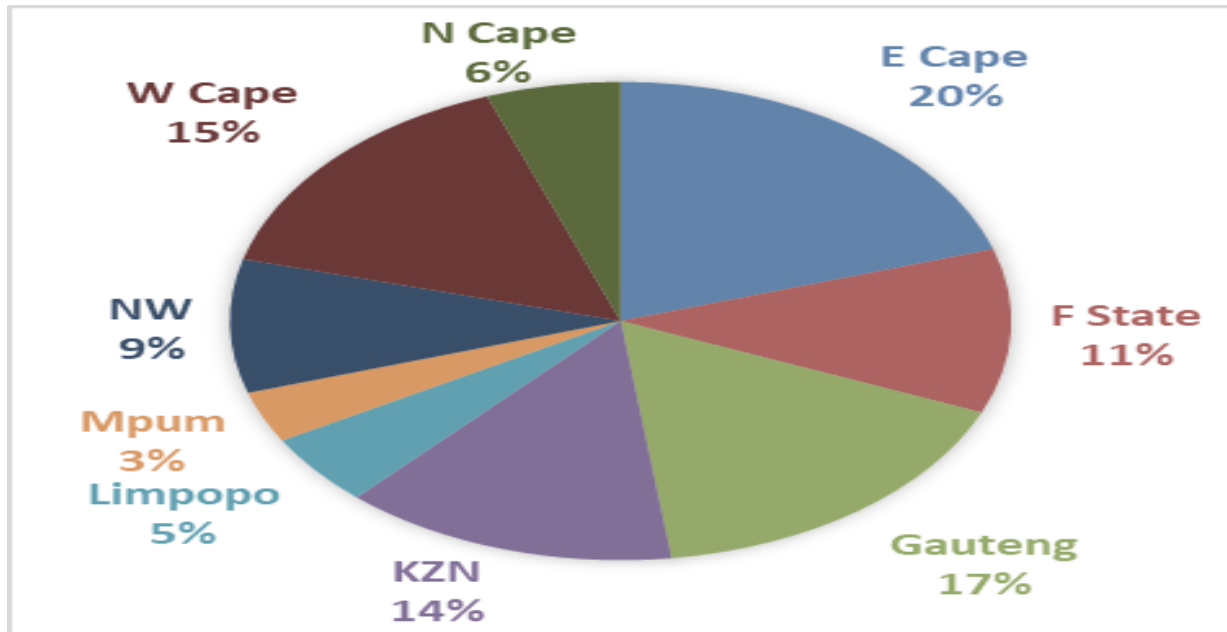


Source: Municipal IQ (2018)

Electricity connection is part of service delivery, so some of the protests relate to citizens' electricity connection to the grid. The ultimate impact of municipal challenges (including electricity connection) is serious service delivery protests. According to Figure 1, there was a record-breaking total of 1,532 serious service delivery protests from June 2018 to June 2018. This is a significant increase in the number of serious service delivery protests, which are regularly tracked in South Africa. A record-breaking 191 serious protests occurred in the year 2014, but it is quite possible that 2018 will top that total because there have already been 144 protests as of June 30. This confirms Moosa's (1996) predictions that the government will have a difficult time providing the speedy and high-quality services that the people of South Africa expect. Figure 1 further shows that the number of serious protests resulting from substandard service delivery in South Africa increased by more than 100% from the years 2005 to 2011 to the years 2012 to 30 June 2018. (Municipal IQ, 2018).

2.13 Analysis of Serious Protests Against Poor Service Delivery by Province (January–June 2018)

Figure 2. Analysis of Serious Protests Against Poor Service Delivery by Province (January–June 2018)



Source: Municipal IQ (2018)

Figure 2 displays the percentage of each province’s contribution to the overall number of significant protests nationwide from January to June of 2018. According to this data, the Eastern Cape accounted for 20 percent of all national protests during the studied period and had the largest number of service delivery protests. Gauteng is the province with the second-highest percentage with 17% and Western Cape follows with 15%.

“Service delivery protests have become a daily feature of South African life, with an alarming increase in violent confrontations between protesters and police. As a result, the opportunity for communities to engage constructively on grievances is lost, and municipalities or the government need to work hard to ensure that channels for such communication remain accessible and relevant”, states the Municipal IQ (2018) in its annual analysis, it essentially shows that protests against the poor delivery of services are getting out of hand and are becoming the new normal.

The two provinces with the most significant protests against the provision of services were Gauteng and the Eastern Cape. In protesting areas, especially in the Eastern Cape, law enforcement agencies found it challenging to uphold the rule of law. The housing shortage that the province of the Western Cape is experiencing is what sparked the majority of the protests there (Municipal IQ, 2018). Mpumalanga, with only 3 percent of protests, is the province with the lowest number, followed by Limpopo, with 5 percent. The aforementioned numbers show that there is still a long way to go before the government can fulfil its primary goal of providing services effectively and efficiently, especially because Figure 2 only shows the half-year figure for 2018.

2.14 Municipal Accountability Mechanisms of Service Delivery

For sound municipal governance to exist, public trust is important; this is where the public expects municipal leadership to fairly fulfil their interests and needs while properly allocating public resources. Normally, public trust is inspired by predictable decision-making and reliable public services (Armstrong, 2005). Therefore, Public trust is a prerequisite for municipal leadership's accountability, integrity, and ethical behaviour. The primary responsibility of accountability is to provide an explanation for actions committed; it further demands that the actions of municipal leadership be publicised to promote open criticism and public debate (Vyas-Doorgapersad & Muller, 2006: 393).

In South Africa, auditing for public institutions is required and compulsory by law (Public Audit Amendment Act, 2018). Public auditing can be described as a review by government auditors and accountants of all public officials' actions, decisions and expenditures to ensure that they follow set procedures and rules (Barton, 2006). Due to the New Public Management's (NPM) adoption, the public sector now has managerial-style accountability as a result of the transfer of the private sector's accountability practices (Hood, 1995). This "new" accountability resembles the manager–official relationship, where an official is only accountable to the manager by meeting the demands set by the manager (Parker & Gould, 1999). Thus, the present study contends that accountability (clean audit outcomes) is way more important than being only a compliance exercise.

Previously, accountability underscored stewardship as a centre of its operation; it considered the interests of all-important stakeholders (including citizens), not only those

of the principals (managers) (Kluvers & Tippett, 2010). The current narrative suggests that managerial-style accountability has side-lined stewardship, which was the centre of accountability (Funnell, 2003). Stewardship ensures that all actions are reasonable, lawful and procedurally rational. Furthermore, in accountability, one party is responsible and should account for his/her activities and decisions to another party. The idea of accountability, in accordance with Parker and Gould (1999), displays a commitment to give accounts and answers for the execution of obligations to those (citizens) who trust an organisation (municipalities); in this case, municipalities are represented by their officials (municipal leadership). Therefore, accountability is clearly evident when the municipal leadership accepts public resources and deliverables expected by the citizens by way of the Local Government: Municipal Systems Act (Act No. 32 of 2000). In this study, the term "accountability by municipal leadership" essentially refers to the efficient and effective delivery of public services by municipalities. Therefore, to achieve accountability, municipalities ought to achieve clean audits and deliver quality services.

Compliance with prescripts is the main focus of most municipalities while they pay attention to aspects of accountability, speed and quality of services (Mokgopo, 2016). There is also a notion that lack of innovation and under-expenditure are due to officials trying to obtain clean audits, which are said to hinder service delivery on a larger scale (Mazibuko & Fourie, 2013). Otherwise, clean audits would be meaningless if they did not translate into improved service delivery to promote accountability. Thus, an in-depth investigation of the correlation between accountability mechanisms (audit outcomes) and improved service delivery (electricity) is urgently required.

2.15 The Meaning of Clean Audits in Municipalities

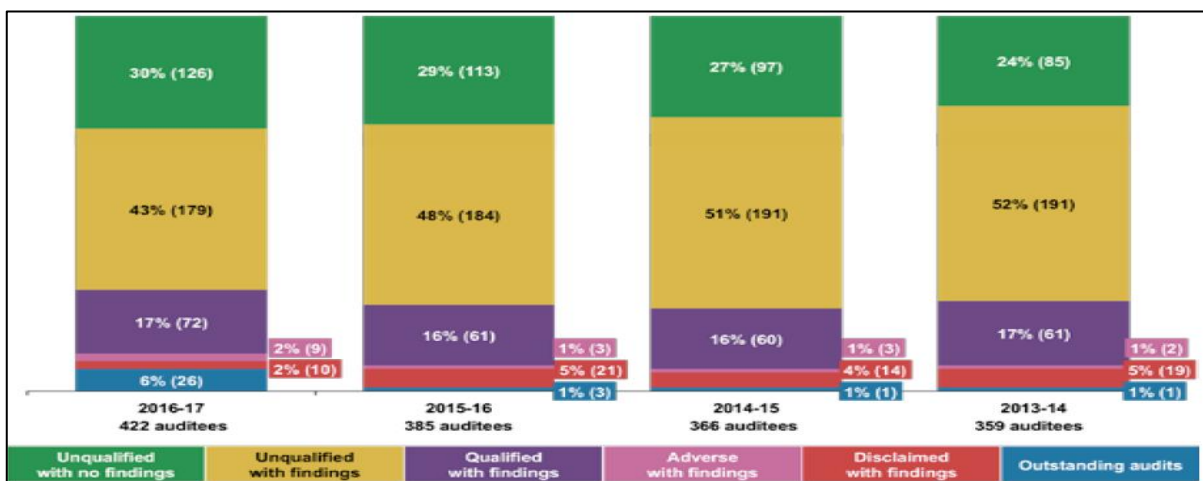
Emanating from the above accountability discussion, public auditing for public institutions is required and compulsory by law in South Africa (Public Audit Amendment Act, 2018). As described earlier, public auditing is a review by government auditors and accountants of all public officials' actions, decisions and expenditures to ensure that they follow set procedures and rules (Barton, 2006). This ensures that all actions are reasonable, lawful and procedurally rational. In this study, clean municipal audits are an unqualified audit opinion issued by the AGSA, where 'clean audit' relates to the three core auditing principles: There should be no material financial misstatements; annual performance reports should have no material findings; and non-compliance to key legislation should not exist (AGSA, 2020). The second principle, i.e., annual performance

reports relating to service delivery will be closely studied, is the focus of the present study.

According to Mokgopo (2016), prescripts' compliance is the main focus of most municipalities while they neglect the speed and quality of services provided. There is also a notion that lack of innovation and under-expenditure is due to officials trying to attain clean audits, which are said not to improve service delivery on a larger scale (Mazibuko & Fourie, 2013). Twala (2014) revealed that the National Treasury fails sometimes to strike a balance between improved delivery of services and adherence to public procurement regulations. Therefore, it is important for one to take a firm position to recognise clean audit opinions only after predetermined municipal deliverables have been achieved as detailed in an approved municipalities' IDP. Otherwise, clean audits would be meaningless if they did not lead to improved service delivery in all respects. Thus, an in-depth investigation of the correlation between the attainment of a clean audit opinion and improved service delivery is urgently required. The current study findings might help the national government establish a relationship between improved clean audits and improved municipal service performance.

2.16 Auditor-General Audit Outcomes for the Years 2013–2016

Figure 3. Auditor-General Audit Outcomes for the Years 2013–2016



Source: AGSA (2017)

Overall general outcomes in the public sector have slightly improved. Clean audits increased from 24 to 30 percent, with an actual increase of 6 percent, according to Figure 3, which tracked audit outcomes from 2013 to 2016. The percentage of audit results that were disclaimed has decreased from 5% to 2%, a substantial improvement of 3 %.

Qualified audit outcomes, on the other hand, have been quite consistent, remaining around 17 percent between 2013 and 2016. The aforementioned information emphasises the study focus on whether clean audits result in improved service delivery.

The ultimate objective of public auditing is to make sure that public resources are used for the intended purposes in line with appropriate public procurement legislation, as achieving clean audits without providing services is pointless. One of the reasons for the study to be conducted is the aforementioned assertion, that is, to *determine the relationship between clean audits and improved service delivery, specifically new electricity connections, in local municipalities.*

2.17 Corruption and Municipal Service Delivery

The study aim in this section is to link how corruption (as it manifests itself in public SCM) affects service delivery as it is measured in terms of electricity provision. Creating tools for precisely measuring corruption is a difficult task since it begins with an attempt to define corruption. Since in various locations, cultures, events, conventions, and standards, corruption can mean a variety of things. Therefore, developing a universal definition that is accepted uniformly and consistently presents the biggest challenge in measuring corruption (Transparency International, 2015).

The definition given by Nwabuzor (2005) is used in this study. Corruption is the immoral conduct of privately earning or profiting from the use of public resources. Corruption can take many different forms. Focus is placed on three different types. The first one being Clientelism corruption which is built on the idea of "give and take," according to Rose-Ackerman and Palifka (2016), and it includes both a client and a patron. Grand corruption is the second type of corruption, which is characterised by no "give and take" obligation and typically involves rich, well-connected elite individuals who squander vast sums of money in a society where the rule of law is weak. State capture is the third type of corruption, where a small group of influential people take over state institutions for their own benefit at the expense of normal citizens. The State Capture Commission of Enquiry in South Africa, which was led by the then-Deputy Chief Justice Zondo and recently published its report, is explicitly brought up in this context. In South Africa, these three types of corruption are widespread, particularly in public procurement processes, which form the basis of the delivery of services such as electricity.

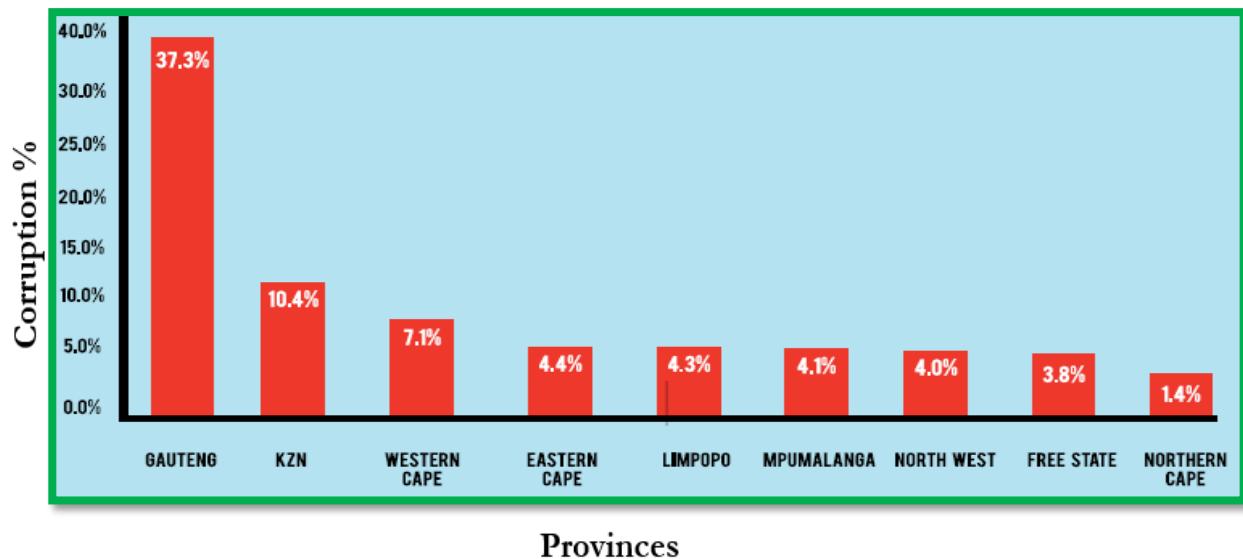
Sarakinsky (2015) simplified the clarity of the corruption formula as $\text{Corruption} = (\text{Monopoly} + \text{Discretion} - \text{Accountability}) - \text{Ethics}$, in an effort to measure corruption in public procurement. As a result, development is hampered and the public faith in the ability of government institutions to effectively carry out their constitutional obligations is weakened. According to the corruption formula, corruption rises when decision-making in public procurement is left to the unchecked discretion of individual decision-makers. The formula also shows that if we reduce ethics and accountability, corruption will increase even more. Corruption costs the government a lot of money and resources, and because it denies the most vulnerable and disadvantaged communities with basic municipal services, it constantly makes poverty worse. The front pages of national newspapers regularly publish stories about bribery and corruption, usually highlighting violations of government procurement processes; as a result, corruption in South Africa seems to be the norm rather than an exception (Afrobarometer, 2016).

Some academics argue that the majority of corruption indices are not reliable enough to be used alone. According to Sarakinsky (2015: 193), “the most problematic aspect of Transparency International’s Corruption Perception Index (CPI) measure is that it measures perceptions, and perceptions do not always reflect reality”. Consequently, Transparency International’s CPI might not accurately reflect the extent of the problem and using this data would call for a highly analytical researcher. According to Sarakinsky (2015: 195), “supply chain and human resource management systems, as reflected in the government effectiveness measure, may be far more important in controlling corruption” (Sarakinsky, 2015: 195). Therefore, effective emphasis on SCM and effective human resource management systems could improve control or prevention of the scourge of corruption. The 51,000 respondents were polled in 34 countries as part of the 2016 Afrobarometer study to measure their perceptions of corruption (Afrobarometer, 2016). Participating countries included South Africa, and the study revealed that there has been a dramatic rise in public perceptions that corruption is rising, particularly after 2008. On the other hand, countries like Zambia, Malawi, Mozambique, Senegal, and Botswana were thought to have control over the corruption problem.

2.17.1 Overview of South Africa's corruption

The subsections that follow go into further detail about corruption in South Africa and divide it down by province. The three types of corruption that are most prevalent in South Africa include bribery, irregularities in public tendering and financial theft or resource theft, which are all covered in Corruption Watch analysis (Corruption Watch, 2018).

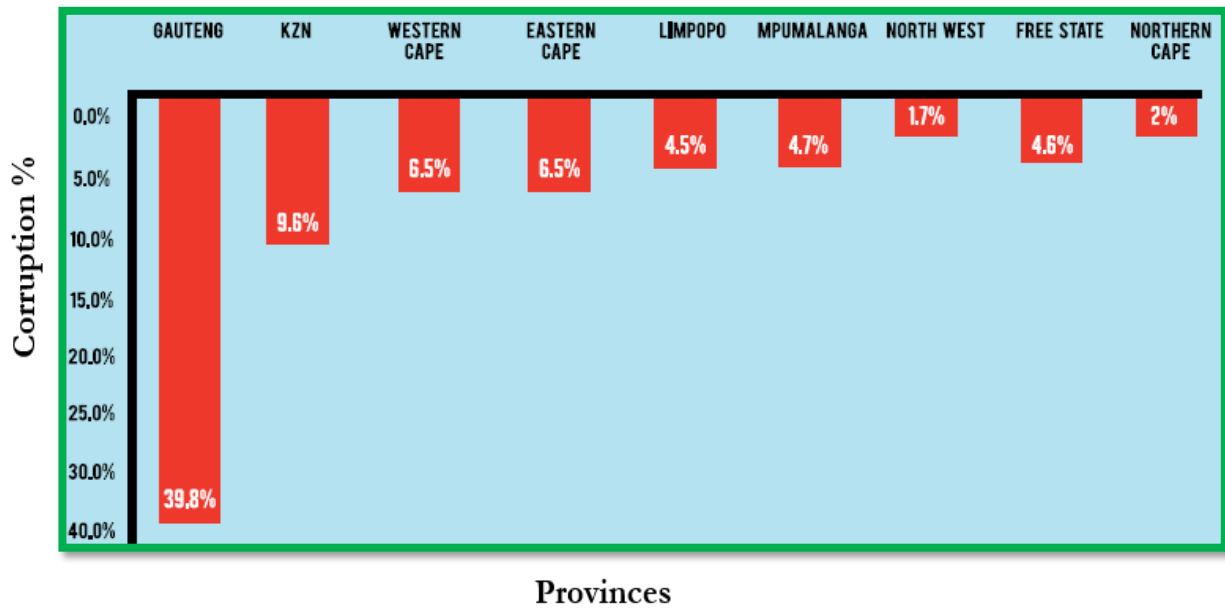
Figure 4 Corruption in South Africa per province in 2017



Source: Corruption Watch (2018)

Figure 4 shows that Gauteng, which had 37.3% of all corruption cases in South Africa in 2017, was the most corrupt province in the country. Due to a rise in its population, Gauteng has replaced KwaZulu-Natal as the province that is allocated the largest portion of the national budget. According to a profile, 10.4% of the country's corruption cases occurred in KwaZulu-Natal. Western Cape and Eastern Cape came in second and third, with 7.1% and 4.4%, respectively. These numbers also highlight the wide corruption disparity (nearly 20%) between KwaZulu-Natal and Gauteng. These two provinces stand out because they receive the largest budgetary allocation from the national government.

Figure 5. South African corruption per province in 2018



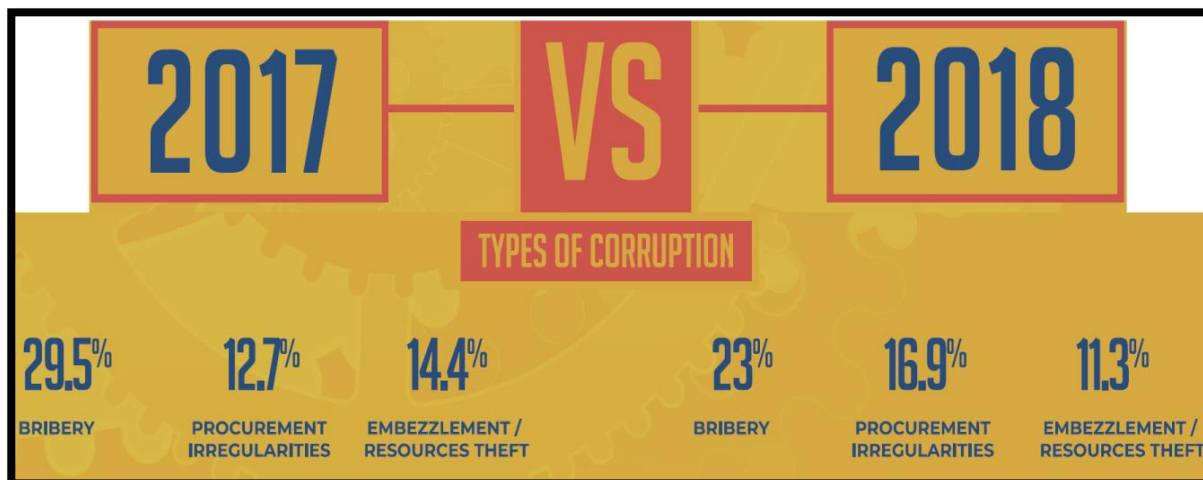
Source: Corruption Watch (2018)

Gauteng increased from 37.3 percent to 39.8 percent in terms of corruption cases monitored by Corruption Watch (2018) between 2017 and 2018, whereas KwaZulu-Natal slightly decreased from 10.4 percent to 9.6 percent during the same time period. The Eastern Cape experienced a significant increase of just over 2 percent from 4.4 percent to 6.5 percent, while the Western Cape experienced a minor decline from 7.1 percent to 6.5 percent. A small increase from 3.8 percent to 4.6 percent was observed in the Free State. while the North West saw a decrease from 4 percent to 1.7 percent. As certain well-known criminal cases investigating various irregularities in public procurement are currently in courts, the latter two provinces have a protracted history of political instability and ineffective governance.

The number of corruption cases in South Africa has slightly increased, according to the 2017 corruption figures. According to Corruption Watch, numerous types of corruption increased in the first two quarters (Corruption, 2018). According to Figure 5, bribery, which mostly involves government employees soliciting civilians for money, has slightly decreased and now makes up 23% of all corruption in South Africa, which is a fall of over 6.5 percent from the previous year's figure. Irregularities in public procurement increased from 4.2 to 16.9 percent in proportion; these irregularities included disregard for the rules and procedures governing public procurement. Embezzlement or theft of

government resources, the third type of corruption identified, declined by 3.1 percent to 11.3 percent in the first two years.

Figure 6. Total high-level corruption in South Africa: 2017 compared to 2018



Source: Corruption Watch (2018)

The total amount of corruption reported between 2017 and 2018 is shown in Figure 6. Three specific cases where corruption was most common in 2017 as identified in the Corruption Watch (2018) analysis. According to reports, bribery accounts for 29.5% of all cases of corruption in South Africa. Bribery came in second place, accounting for 12.7% of all public procurement irregularities in South Africa. Theft of funds or resources from the government came in third place, accounting for 14.4%. These statistics make it clear that there is still a long way to go in South Africa's fight against corruption.

2.17.2 Combating public procurement corruption

There are various definitions of corruption, and they vary significantly depending on factors including culture, time, place, and discipline. The abuse of public office for personal benefit is referred to as corruption, according to Rose-Ackerman's (2013) definition of the term corruption. The South African government's adoption of democratic institutions and practices has resulted in advancements in the fight against corruption and efforts. To assist in the fight against corruption, the South African government established the Public Service Commission (PSC), Special Investigating Unit (SIU), National Prosecuting Authority (NPA), South African Police Service (SAPS) and other institutions. Recent statistics support the effectiveness of these institutions.

Gumede (2017) proposes five strategies for combating corruption. As they directly address public procurement corruption, which has a detrimental impact on service delivery, these five strategies should be used. Gumede (2017) suggests that the first strategy be to instil anti-corruption constitutional values. It has been demonstrated that people are hesitant to disclose information that could expose politicians or other high-ranking individuals, enforcement of witness protection programs would be tied to this strategy. The most recent instance, in which a witness was unlawfully revealed on television during Zondo Commission proceedings (Sidimba, 2016).

Gumede (2017) offers a second strategy: creating an independent "corruption-watch agency" with Chapter 9 powers, identical to the public protector. The corruption crisis in South Africa needs to be monitored and addressed by this agency, especially in public procurement, where this slows down the provision of public services. The third strategy is simply for the government to make all information or choices pertaining to procurement public in order to allow for scrutiny of government procurement decisions. This strategy relates to promoting citizen participation through openness and unrestricted access to important information for better decision-making.

The fourth strategy is intensifying lifestyle audits of elected representatives and other public servants, notably those in charge of managing public procurement. It is stated that lifestyle audits might assist one in comprehending how wealth is acquired. When used in conjunction with other strategies, lifestyle audits may be successful in gradually reducing corruption, especially in state procurement (Pillay & Mantzaris, 2015).

The sixth suggested strategy is the implementation of a demerit system for electing public office bearers and government representatives, notably those in charge of the government's procurement procedures. This strategy would significantly reduce corruption if combined with public procurement professionalization, which mandates that all public procurement officials belong to a professional body and bars corrupt officials from practising in any capacity, particularly in procurement units and everywhere.

2.17.3 Public procurement corruption and the rule of law

The challenges with public procurement stated above have an impact on how services are delivered in South Africa. The restoration of the rule of law was proposed by Nwabuzor (2005), as all citizens should benefit from the rule of law in a democracy.

Politicians and government officials alike are subject to the law in a democracy. Since the country's constitution is its supreme law, maintaining the rule of law ensures both equality before the law and law and order in general.

Rule by law, on the other hand, implies that some wealthy, well-connected people, politicians and government representatives are exempt from the law and are not subject to its sanctions. Public procurement faces a challenge from rule by law since elite people and politicians break the law to further their own interests (Nwabuzor, 2005). When a state is governed by law, there is judicial prejudice, which lowers the state's quality and disadvantages all of its citizens. Rule by law does not ensure that there will be law and order since the constitution is not regarded as the supreme law of a country and there is inequality before the law. It is assumed that rule by law would directly affect service delivery and public procurement when a public procurement official is allowed to leave one government department or institution owing to public procurement fraud and scandals, only to reappear at another government institution to defraud the state once more.

2.18 Good governance Role to Municipal Service Delivery

During any public procurement process, public institutions are obliged to follow fairness principles, and they are also expected to provide legal recourse in the event that good governance is violated. The basic procurement pillars of accountability, transparency, fairness, integrity and equity are ensured through practising good governance. Up until the government and the supplier sign the contract, public procurement is generally seen as an administrative operation. Once this happens, the contract is handled in accordance with contract law rules. Consequently, both private and public law theories are used in the majority of public procurement processes (Roos & De la Harpe, 2008).

Performance in public sector SCM must mainly show good governance in all its operations (McAdam et al., 2005). To promote better accountability and improved performance, several public procurement organisations are paying more attention to reporting and performance measurements (Berman & Wang, 2000; Barry, 2000). Furthermore, budgeting procedures should be re-examined to ensure that annual procurement plans are adhered to and linked to budgets. Many countries throughout the world have put public procurement reforms into place in order to improve performance, including New Zealand, Zambia, South Africa, and the United Kingdom. Consequently,

for good governance in public procurement, change management principles are crucial (Boyne, 2003).

To maintain effective public procurement governance, monitoring needs to be improved. The Supply Chain Operations References (SCOR) model, the Balanced Score Card, and benchmarking are three examples of 21st-century performance metrics for public procurement (Handfield et al., 2011). Being largely used as a benchmark for procurement and a tool for process improvement in procurement operations to promote efficiency, SCOR is simple for a government to slightly modify and implement (Wisner et al., 2008). Additionally, the Balanced Score Card is largely used to ensure that the strategic plans, objectives, and performance of the buying organisation are aligned. The majority of industries use this benchmarking tool extensively around the world to boost performance and ensure good governance. It is also simple to implement in South African public procurement procedures (Wong & Wong, 2008).

In the public sector, good governance principles improve the efficiency and effectiveness of a procurement system, enabling the government to provide the services to its citizens at the right quantity, at the right time, and at the right quality (Barry, 2000). The management of total cost and quality must continue to be improved in order for the government to obtain the most value out of the money it spends on procurement activities. Good governance principles also ensure the development of effective procurement systems with standardised rules, tendering procedures, and contract administration across all governmental spheres, that is national, provincial, and local governments. The majority of developing countries, including South African municipalities, have control and accountability over their procurement processes. Furthermore, it is necessary to follow good governance principles in accordance with the requirements of the relevant procurement legislation. Moreover, this ensures that all public procurement agencies will adopt public procurement reforms, upholding the good governance principles of public procurement and enhancing service delivery (provision of electricity in this case).

2.18.1 Good governance systems

To the extent of this study is concerned, good governance is regarded as the opponent of corruption, particularly when it comes to public procurement processes. Whether or

not a government is democratic, according to Fukuyama (2013: 4), "governance is a government's ability to set and enforce rules and to deliver services." Bevir (2012) provided a broader definition of good governance, stating that it encompasses all governing processes carried out by public or private entities using laws, regulations, norms, and standards. Furthermore, according to Rotberg (2016), governance refers to the effective operation of governments and the delivery of services through the application of the law. In this study, public procurement regulations were mainly used to govern the delivery of essential municipal electricity services.

An important element of accelerating service delivery through public procurement is good governance. Good governance is based on two interrelated dimensions for the purposes of this study, which are discussed in the next section.

Political stability is the first element, where Heywood (2002) describes politics as "the art of government to exercise control within the society through the making and enforcement of rules and collective decisions." Politicians are mostly driven by specific socio-political ideologies or goals, and they carry them out by establishing a formal affiliation such as political parties. Political upheaval is therefore a formula for poor governance, which leads to poor public procurement procedures that impede the delivery of municipal services such as electricity.

The second element is transparency, which Heywood (2002) claims must be inclusive, equitable, effective, and accountable in addition to promoting the rule of law, particularly when it comes to violations of public procurement legislation. When municipalities decide on electricity connection through public procurement, good governance is essential to ensuring that societal, economic, and political priorities are founded on broad citizen consent and that the voices of the most underprivileged and poor community members are taken into account.

2.18.2 Key role-players in a good governance system

Fukuyama (2013) indicates that good governance is a set of ordered standards for delivering public services using systematic procedures. This definition aligns well with South Africa's public procurement system, which uses a number of ordered rules to procure goods, services, and work, such as the provision of electricity. Good

governance, or the general practice of governance, is one of the key procedures for achieving efficient and effective delivery. The whole configuration of political and social power, as well as how power relations affect the conceptualization and implementation of technical procedures involved in public procurement, are all aspects of good governance that ensure effective service delivery (Pieterse, 2002).

The government, civil society organisations, and the business community work closely together to promote good governance, which is essential to realise an efficient acquisition of municipal services. The three pillars support the interconnectedness; the first is that civil society, or citizens, are the end users of municipal services and, at times private sector (business) too. The public sector (government) is the second pillar, as it purchases goods and services for the general public as well as sometimes for the private sector. The third pillar is the private sector (business), which offers goods, services, and works that municipalities need to fulfil their core responsibility of delivering all basic municipal services.

The coexistence of the government, especially municipalities, the private sector, and civic society is important for an emerging nation like South Africa to understand and cherish because it promotes good governance, which in turn ensures the effective and efficient delivery of public services.

2.19 Chapter Summary

Some conclusions from this chapter are from the literature on the municipal governance structure with its municipal legislative framework and historical facts. Initially, 843 transitional local councils went down to 284 municipalities, and 278 municipalities were further reduced after the local elections in May 2011. Service delivery was described as an action intended to advance the community's general welfare, with an emphasis on public procurement in municipal service delivery. This chapter also provided an overview of Eskom's capacity to generate electricity for municipalities, including ambitious access to reliable, affordable, modern, and sustainable energy and electricity provision as a municipal service.

Challenges to the acceleration of municipal service delivery and their impact and solutions were discussed. First, there are broad challenges relating to service delivery

backlogs, such as electricity that was not accessible to black and other marginalised communities. Second, there are challenges relating to the prescripts' multiplicity and complexity, which prohibit innovations in operational matters and make it hard for municipalities to achieve improved service delivery and clean audit outcomes simultaneously. A channel for communication between the municipal council and the municipal officials, as well as between the council and the community, was proposed as one of the solutions for improving municipal revenue enhancement and debt management. Other suggestions included implementing a periodic review of councillor performance in a transparent and systematic manner, developing the municipal ethics integrity architecture, and implementing effective and integrated municipal planning. Some trends of serious service delivery protests and their analyses per province were tabled.

Municipal accountability mechanisms of service delivery, the meaning of clean audits in municipalities, and the national audit outcomes were also described. Furthermore, there was a description of corruption and municipal service delivery and an overview of the South African corruption trends, public procurement corruption prevention, good governance systems, the rule of law processes, and management of its key role players in municipal service delivery. The chapter then concluded by drawing on key takeaways from this study literature review.

In the following Chapter Three, a summary of the research methods and study design is discussed.

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1 Introduction

This chapter discusses the study design and research methodology. The background information about the research problem and the research framework is also provided in this chapter. Furthermore, research design choices are described, which comprise research philosophy, research type, and research strategy. This chapter also unpacks the study golden thread of research aims, objectives, and questions, which will lead to the detailing of the study hypotheses. The time horizon, sampling strategy, data collection method, and some critical questions relating to the choice of secondary data are described in detail.

There are two types of secondary data analysis, considerations for secondary data analysis, basic steps in secondary data analysis, and the advantages and disadvantages of secondary data analysis, in addition to approaches to data analysis, will be discussed. This chapter further unpacks the data analysis method. The chapter also gives a high-level research structure, ethical considerations, validity, reliability, dependability, limitations, feasibility, and positionality of the study. The chapter then concludes by highlighting key takeaways from its contents.

3.2 Background of the Research Problem

South Africa has been known for its slow or lack of service delivery for many years. The government would likely find it difficult to bring services to the formerly underserved populations, as predicted by Moosa (1996: 6), and one of the biggest challenges with service delivery the country is facing is electricity user connections.

The acceleration of municipal service delivery is hindered by a myriad of problems, according to Van der Nest, Thornhill, and De Jager (2008); among these problems is how municipal officials understand and implement the legislation when procuring goods, services, and works. A deep determination is essential to ascertain whether achieving clean audits translates into improved service delivery in the form of new electrical connections.

3.3 Research Methodology

This section is an opportunity for the researcher to share how the research was conducted and reasons for the choice of methods that were used in the current study. This study section also demonstrates that the study was undertaken rigorously and can be replicated; it also details the limitations of the present study its design choices, and how they can be mitigated (Thomas et al., 2022).

The research methods assisted the researcher in determining whether improved clean audits are related to improved service delivery, measured in annual new electricity connections to the national grid for the five years from 2014 to 2018. The study broadens the body of knowledge by providing a chance to review the contemporary public governance reforms for them not only to focus on legislative compliance to attain clean audits but also to accelerate service delivery. In case the study reveals that improved clean audits are related to improved service delivery and shares some light on how to improve new grid connections; as such, the study might ensure value for money through improved and quality municipal services.

3.4 Research Design

The heart of the methodology chapter is this section. Its goal is to present (in depth) the research design to the reader, outlining and defending each design choice in a logical and academically sound way. In other words, the researcher's choices of research design help achieve the study aim and provide answers to its questions, thus addressing the research problem (Thomas et al., 2022).

3.4.1 Research philosophy

The foundation of the study is its research philosophy, which also serves as the basis and guide for all other research design choices. A research philosophy presents underlying beliefs or the world view of how data should be gathered, analysed, and used. This is the highest-level design choice, so it should be logically discussed first. Several types of research philosophies exist, and many are specific to certain disciplines. In general terms, research philosophies that are positivism and interpretivism, are the two most common, and they significantly influence many research methodological approaches (Clarke, 2009).

This study philosophy is classified as positivism philosophy, which argues that a phenomenon exists on its own, independently without it being studied, suggesting that the social world is subject to objective understanding. The researcher in this research philosophy is an impartial analyst, and on that basis, researchers dissociate themselves from personal views and values and accept the outcomes of the research as they are, data was manipulated as part of data sorting (Clarke, 2009).

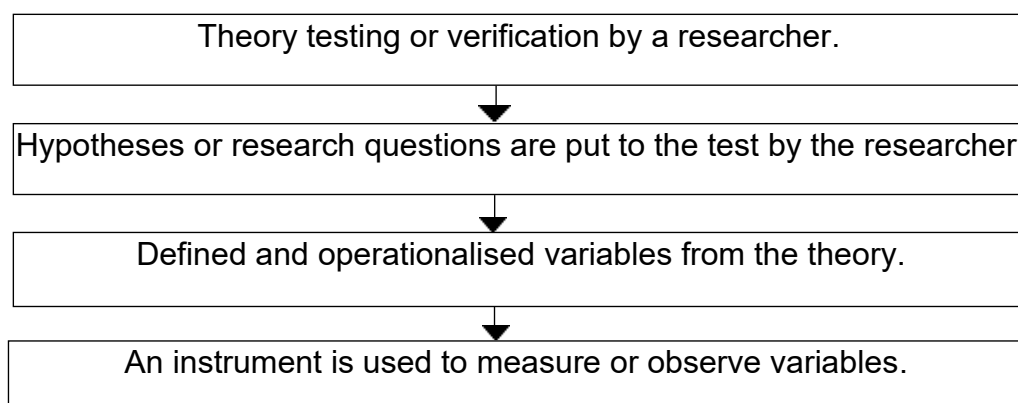
3.4.2 Research type

In this section, the researcher should first state whether the current study used a deductive or an inductive approach. Inductive research tends to be exploratory in nature because the hypothesis is built from the ground up from the data that have been gathered. In other words, inductive research is appropriate when a researcher attempts to develop a theory, particularly when there is a minimal prior study on the investigated topic.

Deductive research, by contrast, begins with a theory that has already been developed (often based on a literature review) and builds from or tests it. This study tested this using the secondary data gathered; therefore, the nature of the research tends to be confirmatory. As is the case with this study, confirmatory studies often use a quantitative methodology. A deductive approach is also more suited when a researcher wants to determine whether a theory holds true in a certain context or to test a set of hypotheses that were drawn from the literature; the latter is true in the current study.

Therefore, linking the research type section to the research philosophy discussed as positivist typically translates into a research type that adopts a deductive, quantitative approach.

Figure 7. The deductive approach



Source: Adopted from Creswell (2014)

The deductive approach is often used in quantitative research to achieve a study aim, as seen in Figure 7. When using the deductive approach, researchers examine research questions and/or hypotheses that are developed from a theory to evaluate or verify the theory. Variables in these research questions or hypotheses should be identified before a measurement tool can be created. Scores of instruments were gathered by the researcher to support or refute theories. As a result, the deductive approach (the one chosen for this study) is frequently utilised in extensive research strategies and is also referred to as testing or validating the hypothesis.

The researcher should describe whether a study uses a qualitative, quantitative, or mixed-methods approach as the next crucial step in choosing a type. Epistemological presumptions can be understood as a question of what is (or should be) regarded as acceptable knowledge in a certain discipline, as shown in Table 3.

Table 3. The differences between qualitative and quantitative research strategies

Orientations	Qualitative	Quantitative
Ontological orientation	Subjectivism/constructivism	Objectivism
Epistemological orientation	Interpretivism	Positivism
Principle orientation to the role of theory in research	Inductive: generation of theory	Deductive: testing of theory

Source: Bryman (2004)

The researcher adopted a quantitative approach using secondary data sourced from Stats SA and the AGSA. This is mainly because the quantitative approach helped the study to consider the statistical data in order to quantify performance measurements of service delivery (residents' electricity connections to the grid) while achieving clean audits (Motubatse et al., 2017). As Gray et al. (2007) stated, a study can apply core philosophies of quantitative methods. Thus, the researcher developed the golden thread, i.e., aims, objectives, questions and hypotheses in chapter one of the present study. The

study, therefore, tested the theoretical assumption that a strict focus on clean audits leads to poorer service delivery because it becomes only a compliance exercise that creates bureaucratic barriers that hinder the acceleration of service delivery. The study applied the stringent practical ideas contained in quantitative research methods to achieve its aims.

Quantitative research, as used in this study, is mostly characterised by deductive approach philosophies. The deductive approach, according to Bryman (2004: 8), is "an approach to the relationship between theory and research in which the latter is conducted with reference to hypotheses and ideas inferred from the former." The study theoretical concept, the stewardship theory, was proposed by the researcher using deductive reasoning. The theory used in the study provides the framework for the entire study, it organises the research questions and/or hypotheses and lastly acts as a technique for data collection and analysis (Creswell, 2014).

3.4.3 Research strategy

The research strategy, which refers to the methods and strategies the researcher intends to use in the study, is the next research design choice layer to be discussed, from detailed methods of sampling, population, and data collection to data analysis (Mertens, 2010). Based on the elements of the golden thread described below, the research strategy explains how the researcher actually carried out the research.

Chapter One outlined the aim of this study, which was to examine critically the link between clean audits and improved delivery of services in local and metropolitan municipalities, with service delivery being measured in new residents' connection to the electricity grid. As a result, the golden thread, i.e., aims, objectives, questions and hypotheses are unpacked as follows.

3.4.3.1 *The main research question and the main research aim*

The present study main research question and main research aim i.e., golden thread, are detailed below.

The main research question can be stated as: *Is there a relationship between clean audits and improved service delivery, specifically new electricity connections, in local municipalities?*

The research main aim is to *determine whether a relationship exists between clean audits and improved service delivery, specifically new electricity connections, in local municipalities.*

3.4.3.2 Hypotheses

The following are hypotheses linked to the golden thread outlined earlier; they were tested after the data had been analysed.

Null Hypothesis (H₀):

There is no relationship between achieving clean audits and improved municipal electricity provision.

Positive Alternative Hypothesis (H₁):

Achievement of clean audits is more likely to lead to improved municipal electricity provision.

Negative Alternative Hypothesis (H₂):

Achievement of clean audits is less likely to lead to improved municipal electricity provision.

3.4.4 Time horizon

The time horizon basically simply indicates how frequently data is collected for a study. Cross-sectional and longitudinal time horizons are the two different types commonly used in various studies. The data were only collected once, according to a cross-sectional time horizon. A longitudinal time horizon, however, indicates that data are collected from the identical sample taken at several times intervals. In most cases, a cross-sectional process is a practical choice, as the short timeline involved in a dissertation or thesis makes longitudinal research impractical. As such, data were only collected once rather than periodically over a long period of time, as is the case with longitudinal time horizons, a cross-sectional process played a crucial role in this study.

3.4.5 Sampling strategy

As for the sampling strategy, all South African local and metropolitan municipalities that were relevant to the study were included in the research; as such, the sample was all municipalities per observation year for the five studied years. A reminder that not all municipalities have the license nor the mandate for example, deep rural municipalities do not have the license nor the mandate to connect electricity. This section clarifies how the study population was chosen and the rationale behind that choice. Data were obtained from 183 local and metropolitan municipalities for five years from 2014 to 2018. The municipalities under study are geographically dispersed across the country and include rural, semi-urban, urban and metropolitan municipalities. The district municipalities were not included in the analysis because local and metropolitan governments have the responsibility and capacity to provide electricity.

3.4.6 Data collection method

Now that the foundation for the research design has been laid, this section describes how the researcher collected the required research data and provides the researcher's reasons for choosing that particular data collection method. As always, this justification is tightly linked to the study's golden thread of research problem, aims, objectives, questions and hypotheses. In other words, the researcher highlights how the data collection method chosen was a good fit for this study. This section also describes specific quantitative secondary methods used to collect data for the current study and addresses the important questions regarding the selection of secondary data.

3.4.6.1 Quantitative secondary data collection methods

Stats SA routinely collects data when carrying out various community surveys, for example, surveys regarding the provision of services such as electrical connections. For the purposes of this study, only service delivery data for all South African local and metropolitan municipalities were sourced from Stats SA and the AGSA. A census which is a procedure of gathering data from a given population at a given time is one of the common tools used by Stats SA. In this study, community members' data extracted from all South African local and metropolitan municipalities were gathered. Furthermore, the AGSA conducts annual public auditing in all municipalities around the country to ensure

compliance with legislation and achievement of performance targets (Public Audit Amendment Act, 2018).

The above two administrative data Stats SA and the AGSA are gathered to conduct research at specific intervals. For this study, the interval is the past five years from 2014 to 2018 and is used by Stats SA to observe and assess service delivery trends and by the AGSA to assess compliance with legislation. The quality, reliability, and public availability of the secondary data from Stats SA and the AGSA are the major considerations, which make it easier for one to carry out further niche research and analysis. Furthermore, the availability of this type of data saved time and costs for the researcher. According to Sherif (2018), secondary data are normally trusted to have qualities of reliability and validity, which assisted the researcher to have confidence in the data kept by Stats SA and the AGSA. Because the researcher chose the secondary data, there was no need for research instruments and informed consent from any participants and their municipalities as the data are already in the public domain. Data were obtained from 183 local and metropolitan municipalities for five years from 2014 to 2018. The studied municipalities are geographically spread throughout the country in the form of rural, semi-urban, urban and metropolitan municipalities.

According to Johnston (2017), secondary data are those that have previously undergone statistical analysis and were collected for a purpose unrelated to the researcher's current research aims. Other than rearranging the data to match the researcher's current study goals, specific data collection procedures in secondary data can be easily obtained from trusted sources, a detailed methodology used by Stats SA is discussed in section 4.2.2 of this study. Researchers and governmental organisations like Stats SA and the AGSA collect and archive enormous volumes of data. As a result, using such existing data for any study is becoming more and more practicable (Andrews, Higgins, Andrews & Lalor, 2012). Basically, secondary data is data that was gathered for another primary objective, such as the AGSA to enforce accountability and compliance with legislation and Stats SA for statistics to improve service delivery.

According to Andrews et al. (2012), using existing data gives researchers who might have limited resources and time a viable option. In this instance, it was difficult to conduct interviews in South Africa due to Covid-19 lockdown regulations. As with any research strategy, there are measures to be taken when gathering secondary data. It is an

empirical approach that follows the same basic principles of research as studies using primary data. This study contends that secondary data collection can be an effective instrument in the study process when a systematic procedure, like the one in the present study is used.

Sources of secondary data can be either private or public organisations that collected data previously for other purposes (Largan & Morris, 2019). The researcher can obtain data from government censuses, such as the population census and official public auditing reports for this study. Such secondary data can also be obtained from government surveys, government institutions' financial statements and official government statistics. In an attempt to maximise the outcomes of their data-gathering efforts, new researchers frequently examine many more variables than are actually necessary to answer the original hypothesis. Due to limitations in time, resources, or interest, the original research team often does not fully utilise or analyse this data. Fortunately, most of these completed datasets are made available by the public or private organisations that produced them. Additionally, academic researchers' willingness to share their data with other researchers who have broader interests, skills, and resources to conduct additional studies using the same data can dramatically boost the productivity of the research team that conducted the first study (Sherif, 2018). In this type of exchange, the data collection team and the new data analysis team often come to an understanding regarding the specifics of data-sharing protocols and possible uses of the data. In the case of data published by Stats SA and the AGSA, this is freely available in the public domain. In most cases, secondary data provide the most representative samples of the studied population, leading to a greater likelihood of high external validity. In most cases, the secondary data provide stronger theoretical results than the primary data (Wood, 2019).

In summary, one of the main advantages of secondary data is that it takes less time to assemble all the necessary information because secondary data are readily available. Additionally, gathering it costs less than gathering primary data. The data may not be specific enough to the researcher's objectives and may be insufficient for the researcher to develop a firm conclusion, which is a significant shortcoming. However, this was not the case in the present study as the secondary data had been published by reputable government agencies, Stats SA and the AGSA, and they cover exactly the unit of analysis contained in the broad study variables.

3.4.6.2 Critical questions relating to the choice of secondary data

The researcher consulted the critical questions relating to secondary data usage as suggested by Stewart and Kamins in Largan and Morris (2019), before using secondary data, Stewart and Kamins suggested that a researcher consider the following broad questions:

- What was the purpose of the original study?

Stats SA and the AGSA collect/audit various datasets, to inform the government in order for the government to make informed decisions regarding improvement of service delivery, and the AGSA publishes audit outcomes after each audit cycle as mandated by the South African Constitution.

- Who was responsible for collecting the original data?

Stats SA and the AGSA are reputable government agencies in the fields of conducting population statistics and auditing public institutions, respectively.

- What expertise, resources, and potential biases are used in conducting the survey?

None

- What information was actually collected?

Datasets relating to population count and audit outputs from Stats SA and the AGSA, respectively, as both mandated by the South African Constitution.

- When was the information collected?

During the 2014 to 2018 years

- How was the information obtained?

Datasets are publicly available as they get published by Stats SA and the AGSA.

Upon positively answering the above crucial questions, the researcher decided to go ahead and use secondary datasets as he realised that the dataset would serve the purpose and assist him in answering the study main research question: *Is there a*

relationship between clean audits and improved service delivery, specifically new electricity connections, in local municipalities?

3.4.7 Data analysis method

The final and most important component of the research design is the method for data analysis. The researcher discusses in this section how he went about analysing the data that were gathered and/or collected. In this part of the research design, the researcher also explains how exactly the necessary research data were analysed and justifies why he chose that particular data analysis method. As always, this justification is tightly linked to the study's golden thread, which is the research problem, aims, objectives, questions and hypotheses. In other words, the researcher highlights how the chosen data analysis method was the right fit for this study.

As part of the data analysis method, this section details general approaches to data analysis, followed by the two processes relating to secondary data analysis. There are also considerations for secondary data analysis to be discussed. This section also discusses the basic steps for secondary data analysis as well as the advantages and disadvantages of doing so for this study secondary data.

Before analysis, the gathered data were prepared, in order for them to be suitable and be the best fit for this study. The datasets were assessed for outliers and missing data. No missing data was found. Univariate outliers were not removed at this point since multivariate normality would be addressed during the regression analysis. Following that, the data were examined using SPSS V.28 and Microsoft Excel.

The researcher incorrectly and only chose the cross-sectional data analysis instead of the time-series data analysis because the researcher misunderstood the nature of the data sourced from Stats SA, that is, the municipal electrification data which was different for each given point in the five-year study period and this was actual the time-series data not a pure cross-sectional data. This has been acknowledged in the study limitations section of Chapter Five of this report.

3.4.7.1 General approaches to data analysis

To determine the correlation (no relationship, positive relationship or negative relationship that is strong or weak) between the examined variables, the correlation coefficients of the variables being studied, and the statistical significance of those coefficients were determined using a multiple-regression analysis. In this study, data formatting, sorting, and analysis came after data preparation. Secondary data from Stats SA and the AGSA were analysed with Microsoft Excel and SPSS V.28. Sekaran and Bougie (2016) detailed four different but related objectives relating to data analysis, which are to get a sense of data make-up and the sense of data quality, test the study hypothesis and check the correlation among various study variables through the calculation of correlation coefficients and other statistical tests.

The study used both descriptive and inferential statistical analysis. Typically, Data from a sample is used in inferential statistics to make inferences about the larger population from which the sample was collected (in this case, the entire population was used) (Marshall & Jonker, 2011). The researcher needed to be confident that the sampled population is accurately representative since inferential statistics' goal is to infer conclusions about the population from a sample (South African local and metropolitan municipalities over the period from 2014 to 2018) and generalise them to a population (local and metropolitan municipalities beyond the study period).

Furthermore, multiple regressions were conducted for each year to determine improvements in electricity connections, using audit outcomes from the previous year. In essence, a relationship between a number of independent variables and a dependent variable is described by a multiple-regression analysis. In order to ascertain whether the relationships observed in the collected data are indeed present in the population, this study used hypothesis tests, which are described in more detail below.

In this research, a relationship was determined between improved delivery of service (measured by new electricity connections to the grid) as the dependent variable and improved clean audits of South African municipalities as the independent variable. To provide insightful information to any interested stakeholder and for scholarly analysis and conclusions, collected data was transformed into charts and tables.

3.4.7.2 Two types of secondary data analysis processes

Two typical approaches for analysing secondary data are the research question-driven approach and the data-driven approach (Cheng & Phillips, 2014). The research topic-driven strategy encourages researchers to begin with a hypothesis or question in mind before searching for relevant datasets to address the question (mostly quantitative studies). The data-driven strategy, in contrast, involves researchers scanning variables in a data set to decide what types of questions the provided data can answer (mostly qualitative studies). In most cases, researchers start with a general idea of the topic or hypothesis and then search for datasets that contain the relevant variables to address their specific research questions. Researchers often change the research question(s) or the analysis plan depending on the best data available if datasets lacking all necessary variables are not found. As for this study, the variables were already drafted, and they perfectly matched the available datasets. This study's variables are improved clean audits and delivery of services measured in new electricity connections to the grid (Johnston, 2017).

It's important to remember that data analysis is a process where the researcher has massive and meaningless data that he/she subsequently processes into meaningful information from which he/she draws valuable insights (Creswell, 2014). In this current study, because the main aim of the study was to draw conclusions about the studied municipalities, statistics were used to analyse the data and then generalise. and then generalise those conclusions to a large population of South African municipalities. Secondary data analysis is the examination of the secondary dataset that has already been compiled by another researcher, typically to answer a different research question. The term "primary data collection" refers to the gathering of first-hand information by a researcher; secondary data are then used in other studies to supplement primary data. Researchers often use secondary data analysis when analysing qualitative data, and it has only recently been applied in the process of undertaking quantitative data. Therefore, the gathered quantitative information in this study was converted into charts and tables to present it for academic analysis and conclusions.

3.4.7.3 Considerations for secondary data analysis

According to Johnston (2017), there are a few considerations that the researcher should consider before the actual secondary data analysis is conducted, and those are described below.

An analytical plan that outlines the specific variables to be considered and the various types of studies to be conducted is necessary. Because the research question-driven technique was used in this study, the plan was created before the researcher even looked at the dataset.

When using the research question-driven approach, a researcher is fully aware of the advantages and disadvantages of the available dataset. The study's population, sampling strategy, time frame, assessment instruments, response rates, and quality control measures should all be fully described to the researcher. These tools allowed the researcher to analyse the data's internal and external validity and to determine whether the datasets were sufficient for the generation of precise estimates regarding the subject of interest (Largan & Morris, 2019).

The researcher had to establish operational definitions for the covariates, confounding variables, exposure variables, and outcome variables that were considered in the secondary data analysis before conducting this study, such as the location and type of a municipality as they might have an impact on results analysis. Therefore, the researcher included the type of municipality as an additional variable to determine whether there is a difference in results for municipalities based on their type.

3.4.7.4 Basic steps in secondary data analysis

The researcher followed the following basic steps whether using either the research question-driven method or the data-driven approach to the analysis of secondary data (Cheng & Phillips, 2014).

- For each variable used in the primary analysis, frequency tables and cross-tabulations were created during the first analysis phase. This provided information on each variable's missing data profile as well as the coding pattern usage.

- In order to ensure that the distribution of the variables complied with the assumptions of the statistical model that would be used to conduct the desired analysis, the researcher converted the distribution of the variables.
- The researcher recorded the original variables to properly handle missing values. A new dataset containing the recorded variables was created, and the SPSS V.28 Syntax used to record each variable was described.
- For the sake of maintaining data integrity, the original datasets were not changed in any manner.
- The researcher incorporated design variables from the original study and used them appropriately in his own analyses to provide less biased results because secondary data analysis was done.

Therefore, the data were analysed by strictly following the above basic steps, as supported by Cheng and Phillips (2014), using the principles relating to the question-driven approach of the present study.

3.4.7.5 Advantages of analysing secondary data

There are various advantages to secondary analysis of existing data, the most notable of which is its low cost. Access to some datasets may occasionally be subject to a fee, however this is nearly always a small percentage of the cost of doing an original study (Johnston, 2017). In the present study, there were no costs as the data from Stats SA and the AGSA are freely available to the public. Another advantage is that Stats SA and the AGSA always give thorough documentation on the data collecting and data cleaning processes. Professional staff members (statisticians and auditors, respectively) often clean the data before it is published. Teams conducting large-scale population-based surveys that are made available to other teams often use statisticians to do so because the majority of data users are unable to develop ready-to-use survey weights and design variables. Therefore, this helps researchers who are using secondary data to make necessary adjustments to suit the variables under study and their estimates. Secondary data analysis is of great benefit to researchers and other stakeholders who have many good ideas to research about but have no money to conduct studies that could test their ideas using original primary data.

The ability to obtain data published by reputable state agencies makes secondary data analysis a wonderful option for academics who would rather spend their time trying out

new research methods and testing hypotheses than collecting primary data. Increased accessibility of such published data encourages creative cross-linking and the use of data from multiple data sources (Johnston, 2017).

3.4.7.6 Disadvantages of analysing secondary data

With the knowledge of the advantages outlined in Subsection 3.4.7.6, one should also be aware of the following drawbacks inherent in secondary data analysis. Consequently, locating and gaining access to the relevant dataset is the initial stage in any secondary data analysis. There are a variety of readily accessible databases for some subjects, like crime, but not for others (Andrews et al., 2012).

Using data for purposes other than those for which they were initially acquired is known as secondary data analysis. There is a very slim chance that the dataset will contain all the variables the researcher wants to examine. Sometimes only aggregated or scaled versions of the data are accessible. For instance, a social class variable might exist, but the raw data that was used to create it might not be accessible (Johnston, 2017). As a result, it might not be possible to determine other social class income and other variable classifications. Furthermore, it's possible that specific questions weren't asked of specific subgroups. Fortunately, none of the aforementioned disadvantages apply to the current study.

3.4.8 Research structure

Figure 8 outlines the high-level research structure and processes that are followed in this study to arrive at some study recommendations and conclusions.

Figure 8. Research process



Source: Researcher's own

A schematic diagram of the research process that will be used in this study is shown in Figure 8. Because the study is conducted to describe, explain and determine the phenomena in detail from descriptive scientific procedures, the quantitative research approach was the most suitable one (Johnson & Christensen, 2010: 33). The research approach was briefly described in the preceding section, and subsequently in this study, more methodologies are elaborated. Furthermore, the researcher uses the language of quantitative research designs; the writing style was mainly in active voice and sometimes passive voice for the expression of technical concepts. Moreover, to further clarify interpretations in this study, the research applied mind maps, organograms, diagrams, and illustrations (Johnson & Onwuegbuzie, 2004: 24).

The main goal of the quantitative research question in this study is to establish whether improved clean audits relate to improved service delivery as measured in annual electricity connections to the grid for the five years from 2014 to 2018. The research hypothesis aims to determine two aspects: whether the existing practices of celebrating clean audits can actually result in improved service delivery and whether better-quality service delivery can be directly linked to clean audits. As such, achieving clean audits should lead to accelerated service delivery; for the purposes of the current study, service delivery is measured using the number of new electricity connections made to the grid during the five years.

3.5 Ethical Considerations

Due to the fact that the study used secondary data and was readily available to the public through the AGSA and Stats SA, there is a low risk that the study would not receive ethical clearance. Furthermore, given that no respondents were expected to take part in the study or reveal their identity, no harm was expected to any studied municipality and its residents.

Because of the nature of the study and the rigorous, honest analysis of the data, the researcher in this study took care to ensure that the data collected were compiled as is however, data manipulation and sorting were performed as expected in any data to be used in any academic research.

3.6 Validity, Reliability and Dependability

The researcher maintained the dependability and reliability of the data as measures of data quality to guarantee the validity of the study findings (Johnson & Onwuegbuzie, 2004). Because Stats SA and the AGSA are reputable government statistical agencies, the researcher believes that the data they collect is trustworthy. The data are expected to produce almost the same results when tested again in comparable circumstances, indicating dependability.

The researcher used a sound-boarding method to confirm the accuracy of the data by seeking advice from industry experts, including his peers, mentors and supervisors who are well knowledgeable about the research problem.

3.7 Limitations, Feasibility and Positionality of the Study

The main limitation of the study is the delay between reporting and the impact of audit findings; for example, the 2014 audit impact might be observed in 2015 or 2016. Although the researcher is aware that the impact might be observed after longer than a year, the delays were assumed to be one year; for example, the assumption is that the impact of 2014 audit findings was observed in 2015. Another limitation of this study is the geographical spread of the chosen municipalities, which are rural, semi-urban, and urban municipalities. The study's regressions only had three variables, which was another limitation of this study. The study excluded the district municipalities because electricity provision is the responsibility of local municipalities. Only the secondary data from Stats SA and the AGSA relating to metropolitan and local municipalities were formatted, sorted, and analysed without compromising the data integrity to ensure that data fits well in all study aspects. As the study is about clean audit opinions and service delivery improvements within the selected municipalities, findings cannot necessarily be broadly generalised to district municipalities, especially in relation to electricity connections to the national grid.

3.8 Chapter Summary

This chapter describes the processes for the current study's research methodology. The overview provides a description of the research methods and design of the study. The chapter on the research methodology gives background information on the research problem and the structure used in the study. Furthermore, research design choices are described, comprising the research philosophy, type, and strategy. This

chapter also unpacks the study's golden thread, which includes research aims, objectives, and questions. The time horizon, sampling strategy, data collection method, and some critical questions relating to the choice of secondary data are also described in detail.

Furthermore, this chapter unpacks the data analysis method with its general approaches to data analysis, two types of secondary data analysis, considerations to take into account while conducting secondary data analysis, basic steps involved, as well as advantages and disadvantages of doing so. This chapter also gives a high-level research structure, ethical considerations, validity, reliability and dependability, limitations, feasibility, and positionality of the study. The chapter then concludes with key takeaways from its contents.

Chapter Four applies the methods chosen to analyse the data, test the hypotheses, present the study results, interpret the results, and provide a critical review of the study's overall findings before recommendations are made, and conclusions are stated in Chapter Five.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The main objective of this research was to critically analyse how clean audits and improved delivery of services relate in local and metropolitan municipalities, where new grid connections for electricity measured service delivery. Following the discussion in Chapter Three, where the study explored research methodologies and designs for the research; therefore, this chapter has two main sections, namely the data analysis and results and the discussion of the study's main findings.

The first part of this chapter outlines data analysis and results, which comprise demographic data of the study, followed by the type of statistical tests used in the data analysis, which resulted in hypothesis testing. Furthermore, there is a concise summary of results from regression analysis for five years (2014–2018), followed by tables and figures of the results. The second part of this chapter covers the description of the results, which entails the summary of key findings, the interpretation of results, and the implications of the results. The chapter then concludes with key takeaways from its contents.

4.2 Data Analysis and Results

The researcher is expected to begin with a presentation of the current study results, then a discussion of the results follows, which happens after the data collection and data analysis were complete. The results section is where the study's main results are fully presented. All relevant results are presented concisely and objectively in a logical scholarly manner. In this study, tables and graphs are used to summarise details of statistical tests used to analyse the data.

4.2.1 Municipal demographic data

During the studied period South Africa had 278 municipalities in total, including eight metropolitans, 44 districts, and 226 local ones. Municipalities focus on local citizens' needs as they relate to infrastructure and services while growing their local economies. Data were obtained from 183 local and metropolitan municipalities from 2014 to 2018, and some municipalities were merged within the studied period. The studied municipalities are geographically spread throughout the country and include rural, semi-urban, urban, and metropolitan municipalities. Because of the competency of electricity provision vested in local and metropolitan municipalities, the study excluded district municipalities.

Whether a municipality should be classified as a category-A municipality (metropolitan municipality) and whether it should be classified as a category-B (local municipality) or category-C (district municipality), in accordance with the laws of the country, all that is outlined in the Local Government: Municipal Structures Act (Act No.117 of 1998). The Act also stipulates that only metropolitan areas are allowed to establish category-A municipalities. As seen in Table 4 below, district councils and local councils make up

non-metropolitan areas and are generally in charge of a wide range of roles and responsibilities.

Table 4. The distribution of the districts' and local municipalities' key roles and duties during the planning stages.

Planning Phase	Local municipality	District municipality
Analysis	<ul style="list-style-type: none"> • Identification of local challenges, opportunities, and priorities. 	<ul style="list-style-type: none"> • Identification of district-level challenges, opportunities, and priorities • Combining the findings of the district and local municipalities' analyses and identifying shared priority themes
Strategies	<ul style="list-style-type: none"> • Taking part in district-level strategy workshops; • Establishing a local vision and set of goals; 	<ul style="list-style-type: none"> • The establishment of a joint strategy workshop with national and provincial stakeholders, local municipalities, and other stakeholders, and the subsequent development of an organisational framework for aligning strategies. • The definition of a district vision and set of objectives.
Projects	<ul style="list-style-type: none"> • Creating local government projects in accordance with strategies, such as providing electricity. 	<ul style="list-style-type: none"> • Planning district council initiatives in accordance with strategies, such as providing bulk water.
Integration	<ul style="list-style-type: none"> • Forming a set of locally coordinated programs to manage implementation. 	<ul style="list-style-type: none"> • Coordinating and assessing local and district municipalities' capital investment and implementation plans. • Putting together a set of district-wide integrated programs to manage implementation.
Approval	<ul style="list-style-type: none"> • Facilitating the local council's adoption of the IDP. 	<ul style="list-style-type: none"> • Facilitating the district council's adoption of the IDP. • Aligning the IDPs of the local authorities with those of other spheres of government and those under the district council's jurisdiction.

Source: Adapted from Van der Westhuizen and Dollery (2009)

4.2.2 Data collection, methodology and fieldwork

The General Household Survey (GHS) is an annual household survey conducted by Stats SA (the country's statistical authority) since 2002, for the purposes of this study only data from the years 2014 to 2018 was extracted. The survey is an omnibus household-based instrument aimed at determining the progress of development and governance in South Africa. It measures, on a regular basis, the performance of critical programmes as well as the quality of service delivery in a number of key service sectors in the country. The target population of the survey consists of all private households in all nine provinces of South Africa and residents in workers' hostels. The survey does not cover other collective living quarters such as students' hostels, old-age homes, hospitals, prisons and military barracks, and is therefore only representative of non-institutionalised and non-military persons or households in South Africa (Stats SA, 2014, 2015, 2016, 2017 & 2018).

The Master Sample is designed to be representative at the provincial level and within provinces at metro/non-metro levels. Within the metros, the sample is further distributed by geographical or region type. The three geography types are Urban, Tribal and Farms. This implies, for example, that within a metropolitan area, the sample is representative of the different geography types that may exist within that metro. A multi-stage design is used in these surveys which is based on a stratified design with probability proportional to the size selection of Primary Sampling Units (PSUs) at the first stage and sampling of Dwelling Units (DUs) with systematic sampling at the second stage. After allocating the sample to the provinces, the sample was further stratified by geography (primary stratification), and by population attributes using Census data from the previous census. Survey officers employed and trained by Stats SA visited all the sampled dwelling units in each of the nine provinces. During the first phase of the survey, sampled dwelling units are visited and informed about the coming survey as part of the publicity campaign, with the actual interviews taking place four weeks later (Stats SA, 2014, 2015, 2016, 2017 & 2018).

Table 5. Summary of GHS key statistics

Year	Households successfully interviewed	Response rate (%)
2014	25 363	93,7

2015	21 601	90,5
2016	21 228	89,4
2017	21 225	89,1
2018	21 908	88,6
TOTAL	111 325	90,26

Source: Stats SA (2014, 2015, 2016, 2017 & 2018)

According to Table 5 above, in the year 2014, a total of 25 363 households (including multiple households) were successfully interviewed during face-to-face interviews. There was also the response rate in every report, the 2014 national response rate for the survey was 93,7%. In the year 2015, a total of 21 601 households (including multiple households) were successfully interviewed during face-to-face interviews. There was also the response rate in every report, the 2015 national response rate for the survey was 90,5%.

In the year 2016, a total of 21 228 households (including multiple households) were successfully interviewed during face-to-face interviews. There was also the response rate in every report, the 2016 national response rate for the survey was 89,4%. In the year 2017, a total of 21 225 households (including multiple households) were successfully interviewed during face-to-face interviews. There was also the response rate in every report, the 2017 national response rate for the survey was 89,1%. In the year 2018, a total of 21 908 households (including multiple households) were successfully interviewed during face-to-face interviews. There was also the response rate in every report, the 2018 national response rate for the survey was 88,6%.

For the studied period between the years 2014 to 2018, a total number of 111 325 population were successfully interviewed with a national average research response rate of 90,26%.

4.2.3 Descriptive statistics

Table 6. Summary of the variables used in this study

Variable	Description	Level of measurement
Municipality	Name of municipality	Nominal
Province	Name of province	Nominal
Electricity service provision	Number of meters connected per year	Continuous
Audit	1 Clean Audit / 0 Not a clean audit	Nominal
Governed by ANC	1 Run by the ANC / 0 Not run by the ANC	Nominal
Population	Population numbers	Continuous
Electr / Pop	The ratio of electricity connections per member of the population	Continuous

Source: Researcher's own

The above Table 6 is a summary of the variables used in the study. As indicated in the same table municipality refers to a specific name of the municipality, the province refers to a specific name of the province, electricity service provision refers to a specific number of meters connected per year, audit refers to 1 equal to clean audit or 0 equal to not a clean audit, governed by ANC refers to a specific municipality 1 equals to run by the ANC or 0 equals to not run by the ANC, population refers to specific population numbers, Electr / Pop refers to a specific ratio of electricity connections per member of the population.

Table 7. Summary of the frequency distribution of the municipalities

The frequency distribution of the municipalities through the various provinces is summarised below in Table 7.

Provinces		
Province	Frequency	Percentage
Western Cape	25	13.2
Eastern Cape	28	14.8
Northern Cape	22	11.6
Free State	18	9.5

KwaZulu-Natal	38	20.1
North West	15	7.9
Gauteng	8	4.2
Mpumalanga	16	8.5
Limpopo	19	10.1
TOTAL	189	100

Source: Researcher's own

Table 7 indicates that the majority of municipalities are located in KwaZulu-Natal, followed by Eastern Cape and Western Cape respectively over the studied period of the year 2014 to 2015.

Table 8. Summary of descriptive statistics

Descriptive statistics

2014				
Indicator	Minimum	Maximum	Mean	Std. Deviation
Electricity_ServiceProvision	172	119170	9139.709	15893.851
Pop	8327.878	4455627.731	247911.848	573379.792
Electr/Pop	1.014	44.13345301	4.695	4.332
2015				
Electricity_ServiceProvision	150	421560	10462.043	34888.009
Pop	8372.878	4455749.731	248406.749	574154.073
Electr/Pop	1.009	34.250	4.320	4.204
2016				
Electricity_ServiceProvision	175	346210	9292.742	30260.733
Pop	8459.878	4455977.731	251192.398	587262.905
Electr/Pop	1.019	10.005	3.781	2.445
2017				
Electricity_ServiceProvision	157	360401	10216.909	31365.990
Pop	8693.878	4456004.731	250832.328	585625.496
Electr/Pop	1.011	11.781	4.049	2.412
2018				

Electricity_ServiceProvision	256	179100	10108.749	23196.034
Pop	9059.878	5485986.000	270455.047	690726.386
Electr/Pop	0.411	68.970	5.148	7.268

Source: Researcher's own

The descriptive statistics for the continuous variables in the study are summarised above in Table 8. As such, Table 8 above indicates varying and fluctuating variances from 2014 to 2015 in terms of an average number of new electricity connections ranging from 4,5 (5) electricity connections in 2014 to 5.1 (5) new electricity connections in 2018 showing a slight movement up.

Table 9. Summary of whether the municipality is run by the ANC or not

The results in terms of whether municipalities were governed by the ANC are summarised below in Table 9.

Run by ANC		
2014		
Item	Frequency	Percent
Not run by ANC	32	16.9
Run by ANC	157	83.1
Total	189	100
2015		
Item	Frequency	Percent
Not run by ANC	33	17.5
Run by ANC	156	82.5
Total	189	100.0
2016		
Not run by ANC	36	19.3
Run by ANC	151	80.7
Total	187	100.0

2017		
Not run by ANC	37	19.7
Run by ANC	151	80.3
Total	188	100.0
2018		
Not run by ANC	37	19.7
Run by ANC	151	80.3
Total	188	100.0

Source: Researcher's own

Table 9 above indicates that the majority of municipalities were run by the ANC over the studied period of the year 2014 to 2015.

Table 10. Summary of audit results

Audit results		
Audit - 2013		
	Frequency	Percent
Not clean audit	158	83.6
Clean audit	31	16.4
Total	189	100
Audit - 2014		
	Frequency	Percent
Not clean audit	157	83.1
Clean audit	32	16.9
Total	189	100.0
Audit - 2015		
Not clean audit	163	87.2
Clean audit	24	12.8
Total	187	100.0

Audit - 2016		
Not clean audit	176	93.6
Clean audit	12	6.4
Total	188	100.0
Audit - 2017		
Not clean audit	173	92.0
Clean audit	15	8.0
Total	188	100.0

Source: Researcher's own

The results in terms of whether municipalities received a clean audit or not are summarised above in Table 10. As such, Table 10 indicates that the majority of municipalities did not receive clean audits with a notable increase in non-clean audit outcomes and they were run by the ANC over the studied period of the year 2014 to 2018 being counted a year before the audit results. It is important to note that the delayed audit reports were catered through a principle of a year before audit outcomes which is the actual factual count, for example, the year 2013 audit is reported in 2014 and so on, all the way up to 2017 being the base for 2018

4.2.4 Inferential statistics

Inferential statistics uses sample data to make inferences about the larger population from which the sample was derived (Marshall & Jonker, 2011). Drawing inferences from a sample is the aim of inferential statistics and generalising them to a population (all South African municipalities). Therefore, the sample has to be considered to be representative of the population by the researcher. However, because all South African local and metropolitan municipalities were studied, therefore, the sample was all municipalities per observation year for the five studied years. Thus, the researcher's definition of the population included all local and metropolitan municipalities in South Africa.

Multiple regressions were performed on the yearly data collected to determine the determinants of electricity service delivery improvements, using audit outcomes from the previous year. Using multiple regression analysis, you can determine how a set of independent variables namely audit outcomes (main predictor) in this study, governance by the ANC and the population size of each municipality as control variables, and electricity provision as the dependent variable relate. To test statistically whether a significant correlation between independent variables and dependent variables exists and whether this can be established from the datasets collected, this analysis uses hypothesis testing (as described below).

4.2.5 Hypotheses testing

As provided in Chapter Three, the following hypotheses were statistically tested for the collected data to provide grounds for their significance to determine whether they should be accepted or rejected. The implications of the outcomes of the test are expanded upon in the discussion section. A statistically significant determination of the dependent variable would provide grounds for rejecting the null hypothesis, implying a relationship between improved electricity provision and clean audits and/or the other independent variables.

Null Hypothesis (H₀):

There is no relationship between the achievement of clean audits and the improvement of municipal electricity provision.

Positive Alternative Hypothesis (H₁):

Achievement of clean audits is more likely to lead to improved municipal electricity provision.

Negative Alternative Hypothesis (H₂):

Achievement of clean audits is less likely to lead to improved municipal electricity provision.

4.2.6 A concise summary of results from regression analysis for five years

The below section will provide a concise summary of the study results

Table 11. Summary of statistical test results for five years (2014–2018)

Year	Percentage explained variance (R-squared)	Significance of the model	Significance of audit results as a predictor, controlling for population size and ANC governance
2014	2.40%	F(3.180) = 1.489, p = 0.219	b = 0.270, p > 0.05
2015	2.50%	F(3.179) = 1.561, p = 0.200	b = 0.854, p > 0.05
2016	0.03%	F(3.183) = 0.159, p = 0.924	b = 0.364, p > 0.05
2017	1.00%	F(3.183) = 0.609, p = 0.610	b = -0.402, p > 0.05
2018	2.90%	F(3.176) = 1.736, p = 0.161	b = -0.812, p > 0.05

Source: Researcher's own

Table 11 presents a high-level summary of the results for the studied period. Assumptions of normality of residuals were tested (attached as Appendix A) using the standardised residuals multivariate outliers were removed. In all cases, the assumption of no multicollinearity was met, as the collinearity diagnostics were within an acceptable range (tolerance > 0.2 and VIF < 5). The assumption of homoscedasticity, however, was not supported by the scatterplots of the standardised residuals versus the standardised projected value captured in all the tables labelled accordingly found in Appendix A. Outliers were removed to address the normality of residuals. Violations of homoscedasticity were such that they could not be rectified.

This is at least in part due to the binary predictor variables included in the model, since linearity is automatically satisfied for a two-level (binary) variable. Since there is no non-parametric alternative available to multiple regression, which would have needed advanced expertise which was not part of this study the analysis was performed. While the results provide meaningful insight into the nature of the data, these should be seen as provisional and interpreted with some caution.

4.2.7 Tables of regression results from 2014 to 2018

The following are the supporting tables from the regression results of the analysis for each of the five years studied (2014–2018), as summarised in Table 11 above.

Table 12. Regression results 2014.

Regression results 2014		
Variable	B	SE
(Constant)	3.628**	0,568
2013 Audit	0,27	0,585
Governance by the ANC	0,838	0,578
Population size/ 100 000	-0,054	<0.001
	<i>R sq.</i>	0,024

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B - Regression coefficient

SE - standard error

Table 13. Regression results 2015

Regression results 2015		
Variable	B	SE
(Constant)	2.779**	0,514
2014 Audit	0,854	0,516
Governance by the ANC	0,929	0,523
Population size/ 100 000	0,014	<0.001
	<i>R sq.</i>	0,025

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B - Regression coefficient

SE - standard error

Table 14. Regression results 2016

Regression results 2016		
Variable	B	SE
(Constant)	3.736**	0,514
2015 Audit	0,364	0,603
Governance by the ANC	0,011	0,516
Population size/ 100 000	-0,004	<0.001
	<i>R sq.</i>	0,003

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B - Regression coefficient

SE - standard error

Table 15. Regression results 2017

Regression results 2017		
Variable	B	SE
(Constant)	3,635**	0,437
2016 Audit	-0.042	0,733
Governance by the ANC	0,471	0,455
Population size/ 100 000	0,008	<0.001
	<i>R sq.</i>	0,01

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B - Regression coefficient

SE - standard error

Table 16. Regression results 2018

Regression results 2018		
Variable	B	SE
(Constant)	4,8**	0,459
2017 Audit	-.812	0,693
Governance by the ANC	-.836	0,478
Population size/ 100 000	-0,043	<0.001
	<i>R sq.</i>	0,029

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B - Regression coefficient

SE - standard error

According to the above Table 12 to Table 16 is a summary of the results because all the studied years revealed similar results, therefore, it would not be academically prudent to repeat similar narratives for all the studied years. As such, the results indicate that clean audit results, controlling for the population size and a municipality's governance by the ANC, were not a significant predictor of electricity service delivery in any of the municipalities over the studied period. The percentage variance explained by the combination of the independent variables were 2.40% (2014), 2.50% (2015), 0.03% (2016), 1.00% (2017) and 2.9% (2018) respectively indicating the variables in this study did not significantly determine electricity provision in these municipalities.

4.3 Discussion of Results

The researcher delves into the significance, relevance, and importance of the earlier presented results in the results discussion section; that is, the explanation and evaluation of the findings and how they relate to the literature reviewed in Chapter Two. This section also presents arguments in support of the overall conclusion that is detailed in Chapter Five.

The section covers critical elements such as a summary of the findings, an interpretation of the results (which explains what the results mean), and implications of the results (which explain why the results are important). As with all academic studies, the results provide meaningful insight into the nature of the data available and used, these should be seen and interpreted with some caution due to some limitations listed in the last chapter of this reach report.

4.3.1 Summary of key findings

The purpose of the study, as previously stated, was to ascertain whether there was any connection between clean audits and improved delivery of services in local and metropolitan municipalities. In this instance, service delivery was measured in new electricity connections to the grid. The percentage variance explained by the combination of independent variables for five years indicates that electricity provision by these municipalities was predominantly explained by some other variables not part of the current study.

The study's findings demonstrated that there was no correlation between clean audits and improved delivery of services by local and metropolitan governments, as depicted by their grid connections for electricity. The study refutes the theory that there should be a statistically significant and positive correlation between clean audits and electricity provision for residents in each of the studied municipalities.

4.3.2 Interpretation of results

Contrary to expectations, there was no statistically significant correlation between achieving clean audits and the number of residents in each municipality connected to the electricity grid. According to the data, there was no correlation between clean audits and an increase in electricity grid connections.

The results contradict claims by Mokgopo (2016) that legislative compliance is the main focus of most municipalities, resulting in their neglect of accountability and, thus, speed and quality of service delivery. There is also a notion that lack of innovation and under-expenditure is due to officials trying to obtain clean audits, which is said to hinder service delivery on a larger scale (Mazibuko & Fourie, 2013). Therefore, it is vital for municipalities and their municipal entities to ensure accountability and take a firm position to recognise clean audits only after predetermined municipal deliverables have been achieved as detailed in an approved municipality's IDP. Clean audits would be

meaningless if they did not translate into improved service delivery, which indicates accountability. Thus, an in-depth investigation of the correlation between audit outcomes and improved service delivery was urgently needed. Such investigation revealed that there is no correlation between clean audits and improved connection to the electricity grid.

The results suggested that electricity provisions in these municipalities are predominantly explained by other variables that were not part of the current study. Overall, based on the analysis conducted in the current study, the researcher cannot rule out the possibility that clean audits have no effect on electricity provision.

4.3.3 Implications of results

The result contradicts the assumption that the main objective of public auditing is to ensure that public funds are used for the intended purposes by adhering to public procurement rules, as the attainment of clean audits with no service delivery is of no use. Instead, they suggest that there is no connection between the audit outcomes and improved service delivery, as measured by residents' connecting to the national electricity grid.

The study provides a new insight into the existence and/or non-existence of a relationship between audit outcomes and improvement in service delivery, in that the researcher cannot rule out the possibility that clean audits have no effect on electricity provision.

These results should be considered when researchers study the improvement of service delivery by municipalities and to determine further factors that contribute to improved service delivery, especially electricity connections to the grid, in local or metropolitan municipalities.

4.4 Chapter Summary

This chapter comprises part one, which is data analysis with demographic data of the study being outlined and the study results being presented, and part two, which is the description of the study results. The statistical test used in the analysis resulted in hypothesis testing, which was unable to reject the Null Hypothesis that there is no substantial correlation between the achievement of clean audits and improved municipal electricity provision.

A concise summary of results from regression analysis for five years from 2014 to 2018 is followed by tables and figures of results for that period (which support the rejection of the other two alternative hypotheses. The description of the results provides the summary of the main findings and the interpretation of the results, which indicate a contradiction from the theory or assumptions found in the literature. Finally, this chapter also describes the implications of the results, concluding with key takeaways from its contents.

Chapter Five revisits the golden thread, i.e., aims, objectives, questions, and hypotheses of the present study to check whether they were achieved. It also provides the study's summary, further research recommendations, and critical conclusions.

CHAPTER FIVE CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Continuing the discussion from the previous Chapter Four, in which part one provided a presentation of the results of a study and part two provided an analysis of those results. As a result, this chapter begins with a summary of the findings, which includes the conclusions of the study's "golden thread," the testing of the hypotheses, the key findings, the interpretation of the findings, and the implications of the findings. This chapter also provides recommendations for future research as well as the study's limitations. The chapter ends with a discussion of how the study contributed to the body of knowledge.

5.2 Summary of Findings

This section outlines the golden thread that connects the study's research problem, questions, aims, objectives, and hypotheses with regard to the factors that are important to the provision of electricity service. The significance of the findings in light of the research problem, research questions, aims, objectives, and hypotheses is also discussed in this section.

5.2.1 Conclusions from the study's golden thread

The so-called golden thread, that is, research problems, aims, objectives, questions, and hypotheses, that connects the gaps in the body of knowledge is now described in an attempt to determine whether the study provided answers to the various golden thread elements and covered themes that were identified.

The main research question for this study was outlined in Chapter One: Is there a relationship between clean audits and improved service delivery, specifically new electricity connections, in local municipalities?

The study findings showed that there is no correlation between the increasing number of clean audits and the citizens connected to the electricity grid by each municipality, contrary to the hypothesis provided in Chapter One. The findings of this study do not support a correlation between clean audit outcomes and an increase in electrical grid connections.

As mentioned previously, the lack of a relationship between improved clean audits and improved service delivery increases the likelihood that electricity service delivery may be increased by variables other than improved clean audit outcomes. According to the key findings, clean audits do not positively determine improved service delivery in any way. Furthermore, according to the key findings, clean audits do not negatively determine improved service delivery in any way.

5.2.2 Conclusions from the hypotheses testing

As tabled in Chapter One, the following hypotheses were statistically tested using the collected data, thereby providing grounds for data significance to determine whether to

reject the null hypothesis. The key findings of the statistical tests are expanded upon in the discussion section of chapter four. A statistically significant correlation between the variables concerned would have provided evidence against the null hypothesis, which would have suggested a connection between improved electricity provision and clean audits and/or the other independent variables.

Null Hypothesis (H₀):

There is no relationship between the achievement of clean audits and an improvement in the provision of municipal electricity.

In chapter four, a statistical technique called multiple regression analysis is performed to see if there is any meaningful association between the dependent and independent variables. The scatterplots of the standardised residuals against the standardised predicted values indicated that assumptions of homoscedasticity and linearity were, however, not met. The percentage variance explained by the combination of independent variables for each of the five years suggests that electricity provision in these municipalities is predominantly explained by other variables and not by audit outcomes. Therefore, the Null Hypothesis (H₀), which states that *there is no relationship between the achievement of clean audits and an improvement in the provision of municipal electricity*, cannot be rejected.

Positive Alternative Hypothesis (H₁):

Achievement of clean audits is more likely to lead to an improvement in the provision of municipal electricity.

As indicated earlier, the percentage variance explained by the combination of independent variables for each of the five years suggests that electricity provision in these municipalities could be explained by other variables and not by the audit outcomes. Therefore, the Positive Alternative Hypothesis (H₁), which states that the achievement of clean audits is more likely to lead to an improvement in the provision of municipal electricity, may be rejected.

Negative Alternative Hypothesis (H₂):

Achievement of clean audits is less likely to lead to an improvement in the provision of municipal electricity.

Furthermore, as stated earlier, the percentage variance in the combined relationship among the five-year independent variables suggests that electricity provision in these municipalities could only be explained by other variables and not by audit outcomes. Therefore, the Negative Alternative Hypothesis (H₂), which states that achievement of clean audits is less likely to lead to an improvement in the provision of municipal electricity, may be accepted.

5.2.3 Conclusions from the summary of key findings

Multiple regressions were performed on the data collected for each year to evaluate determinants of electricity service delivery improvements using audit outcomes from the previous year. The purpose of the multiple-regression analysis was to explain how a set of variables related to one another: audit outcomes (main predictor), municipalities' governance by the ANC, and population size of each municipality as control variables and electricity provision as the dependent variable. In order to determine statistically whether there is a significant link between the independent and dependent variables and whether it can be determined from the gathered data, the hypothesis testing procedure was used in this study.

Results indicated that clean audit results, after controlling for the population size and governance by the ANC, were not a significant predictor of the electricity service delivery in any of the studied municipalities over the study period. The percentage variances in the relationships between the dependent and independent variables were 2.40 % in 2014, 2.5 % in 2015, 0.03% in 2016, 1.00% in 2017, and 2.9% in 2018. This clearly indicates that other variables that were not measured in this study are mainly responsible for the explanation of electricity provision in these municipalities as such a recommendation for additional research is made in the recommendations section.

The purpose of this study, as previously stated, was to determine whether there was a relationship between clean audits and improved delivery of services in local and metropolitan municipalities. In this instance, service delivery was measured in new electricity connections to the grid. The percentage variance explained by the

combination of independent variables for five years suggests that electricity provision by these municipalities might be explained by other variables rather than audit outcomes.

The study findings show that there was no link between clean audits and improved service provision by local and metropolitan municipalities, such as grid-connected electricity. The analysis does not support the theory that states that there ought to be a positive and significant relationship between clean audits and electricity connections for residents of each studied municipality.

5.2.4 Conclusions from the findings' interpretation

The findings of this study reveal that contrary to the hypothesis, there was no correlation between the number of residents connected to the electricity grid by each municipality and the achievement of clean audits.

The results contradict claims by Mokgopo (2016) that legislative compliance is the main focus of most municipalities and that this compliance results in municipalities' neglect of accountability and thus speed and quality of service delivery. There is also a notion that lack of innovation and under-expenditure are due to officials trying to obtain clean audits, which are said to hinder service delivery on a larger scale (Mazibuko & Fourie, 2013). Therefore, it is more important to ensure accountability and take a firm position to recognise clean audits only after predetermined municipal deliverables have been achieved as detailed in an approved municipality's IDP. Clean audits would be meaningless if they did not translate into improved service delivery, which indicates accountability. Thus, there was an urgent need for in-depth research on the link between audit outcomes and improved service delivery; the investigation revealed that there was no correlation between clean audits and the increased number of connections to the electricity grid, thus disproving the aforementioned theory or assumption.

The results suggested that electricity provisions in these municipalities are predominantly explained by other variables that were not part of this study. Overall, according to the analysis conducted in the current study, the researcher cannot rule out the possibility that clean audits have no effect on electricity provision.

5.2.5 Conclusions from the findings' implications

As achieving clean audits without service delivery is meaningless, the results do not support the theory that argues that ensuring the appropriate use of public resources is the main goal of public auditing after following proper public procurement legislation. Instead, the findings indicate that there is no connection between the audit outcomes and an improvement in service delivery, as measured by residents' grid electricity connections.

These results should be considered to improve service delivery and to find methods, processes, and operations for improving service delivery, especially electricity connections to the grid, in a local or metropolitan municipality.

Against the backdrop, it is the researcher's view that the South African government should begin by declaring the constitution to be the supreme law of the country in order to properly punish anyone who violates procurement regulations. In addition, it is the researcher's view that urgent action should be taken to rebuild public confidence in service delivery initiatives. Furthermore, it is the researcher's view that the process of public procurement planning needs to be reviewed in order for the government to perform better.

5.3 Study Limitations

The following are some of this study limitations:

- Delays between the reporting and the impact of the audit findings were one of the study limitations; for example, the impact of the 2014 audit might be observed in 2015 or 2016. Although the researcher is aware that the delays might be longer than a year, the assumption is that they are exactly one year; for example, it is assumed that the impact of the 2014 audit was observed in 2015.
- The generalisability of the results is limited by the fact that the regression results were not significant. Therefore, there is nothing to generalise as the statistical analysis of data proved that no correlation existed between the audit findings and improved municipal service delivery as it relates to an improvement in residents' electricity connections to the grid.
- The reliability of these data was affected by inconsistency in the number of municipalities studied; some municipalities were re-demarcated almost every year and some were merged over the studied period. This impacted the population of each municipality, which was the study's second control variable.

- Only three variables were used in the study's regressions; more variables might have produced a positive or negative relationship between the audit outcomes and an improvement in the provision of electrical services.
- Separate regressions for each year were used, and this turned out to be not an ideal approach for this study and its gathered data.
- The researcher incorrectly chose only the cross-sectional data analysis instead of the time-series data analysis because the researcher misunderstood the nature of the data sourced from Stats SA. The researcher acknowledges a limitation of the approach chosen to only use cross-sectional analysis and recommends that future research considers the temporal dimension.
- Another limitation of this research was the wide geographical spread of the chosen municipalities, given that South Africa has nine provinces because the different municipal dynamics and levels of development are not the same in rural versus urban municipalities, as one example.
- Because the competency of electricity connection is vested in local municipalities, the study excluded the district municipalities. Therefore, the secondary data from Stats SA and the AGSA relating to local municipalities were formatted, sorted, and analysed without compromising the data integrity to ensure that the data fit well in all study aspects.
- Only multiple regressions for the years separately were done, this limitation of the study will be part of future studies to explore as outlined in chapter five.
- The researcher acknowledges a limitation of the approach chosen to only use multiple regressions and recommends that future research consider other approaches.
- Since the study is about the relationship between qualified and unqualified audit opinions and service delivery within the selected local municipalities, findings cannot necessarily be broadly generalised to district municipalities.

5.4 Recommendations for Future Research

This study makes the following recommendations for further examination:

- Further research is required to establish what practices can significantly increase grid connections for electricity to better deliver services in local and metropolitan municipalities.

- Future studies should consider the fact that the chosen predictors and control variables might have to be modified or changed to get different results from those of this study.
- Avenues for future research should include the addition of more control variables, which might determine either a negative or positive link between audit findings and improvement in service delivery through electricity connections to the grid.

5.5 Contribution of the Study to the Body of Knowledge

The theory claimed that there should be a positive and significant relationship between clean audits and electrical connections to the grid in each studied municipality; however, this investigation contradicted and did not confirm that assumption.

Since the researcher cannot completely rule out the idea that clean audits have no influence on electricity provision, this study provides new insight into the relationship between audit outcomes and improvements in service delivery. The findings refute the hypothesis that each studied municipality should have a strong and positive correlation between clean audits and grid connections.

It was necessary to re-evaluate Mokgopo's (2016) assertion that the majority of municipalities prioritise compliance with legislation over accountability and speedy, high-quality service delivery. The analysis of findings from the study data suggested that this theory was somehow inaccurate. There is also a notion that lack of innovation and under-expenditure is due to officials trying to obtain clean audits, which are said to hinder service delivery on a larger scale (Mazibuko & Fourie, 2013). Therefore, it is more important to ensure accountability and take a firm position to recognise clean audits only after predetermined municipal deliverables have been achieved as detailed in an approved municipality's IDP. Clean audits would be meaningless if they did not translate into improved service delivery, which indicates accountability. Thus, an in-depth investigation of the correlation between audit outcomes and improved service delivery was urgently needed; this investigation revealed that there was no correlation between clean audits and the increased number of connections to the electricity grid, proving the aforementioned theory or assumptions wrong.

The results suggest that electricity provisions in these municipalities are most likely to be explained by other variables that were not part of the current study. Overall, according

to the analysis conducted in the current study, the researcher cannot rule out the possibility that clean audits have no effect on electricity provision.

The key findings also do not support the theory that says the appropriate use of public resources is the main goal of public auditing after following proper public procurement legislation as long as public resources are used in accordance with their intended uses. This is due to the fact that it is meaningless to achieve clean audits without service delivery; as such, striking a balance between the two is key. Instead, the findings suggest that there is no connection between the audit outcomes and an improvement in service delivery, as measured by residents' electricity grid connections.

These findings should be taken into account by local or metropolitan municipalities in order to improve service delivery and to identify further factors that enable improved service delivery, particularly electricity connections to the grid.

5.6 Chapter Summary

This study set out to critically examine the connection between clean audits and improved service delivery in local and metropolitan municipalities, where the number of new electricity connections to the grid measured service delivery. This was done because service delivery is so important in South Africa amid the violent service delivery protests. This chapter began with a summary of the findings, where discussions were held regarding the conclusions drawn from the study main research problem, the testing of hypotheses, the summary of key findings, the interpretations of the findings, and the implications of the findings. Following a discussion of the study limitations, suggestions were provided for future research. The key findings with regard to the research aim, objectives, and questions were also discussed in this chapter. Notably, the analysis of the findings refuted the theory that clean audits and electrical connections to the national grid ought to be positively and significantly correlated in each of the studied municipalities. The chapter then concludes with its contribution to the body of knowledge.

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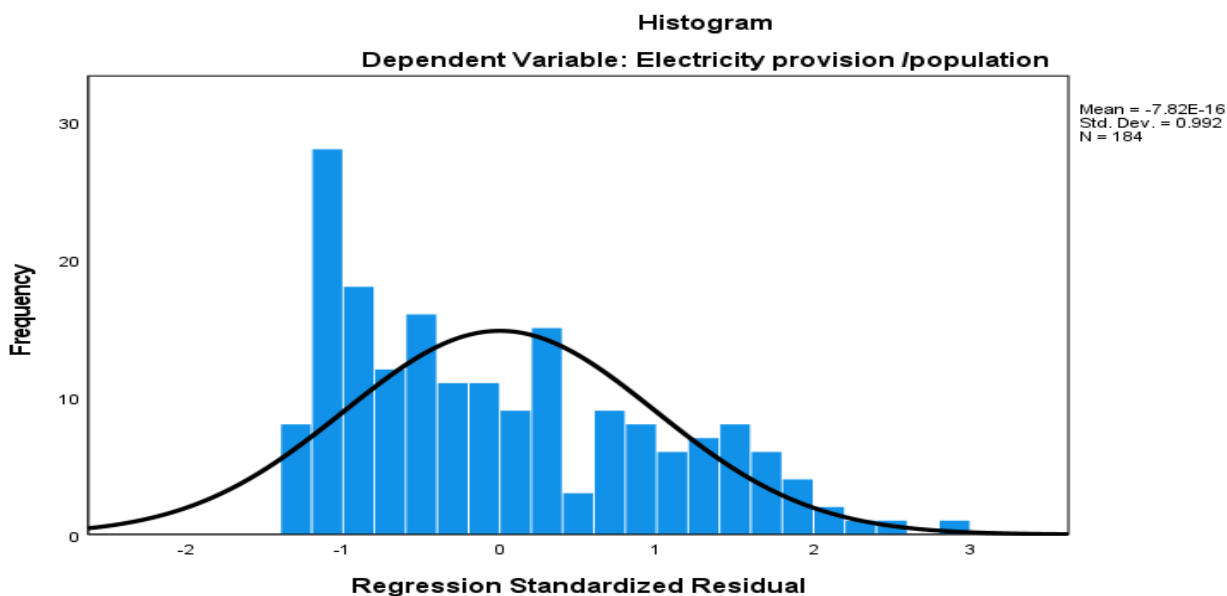
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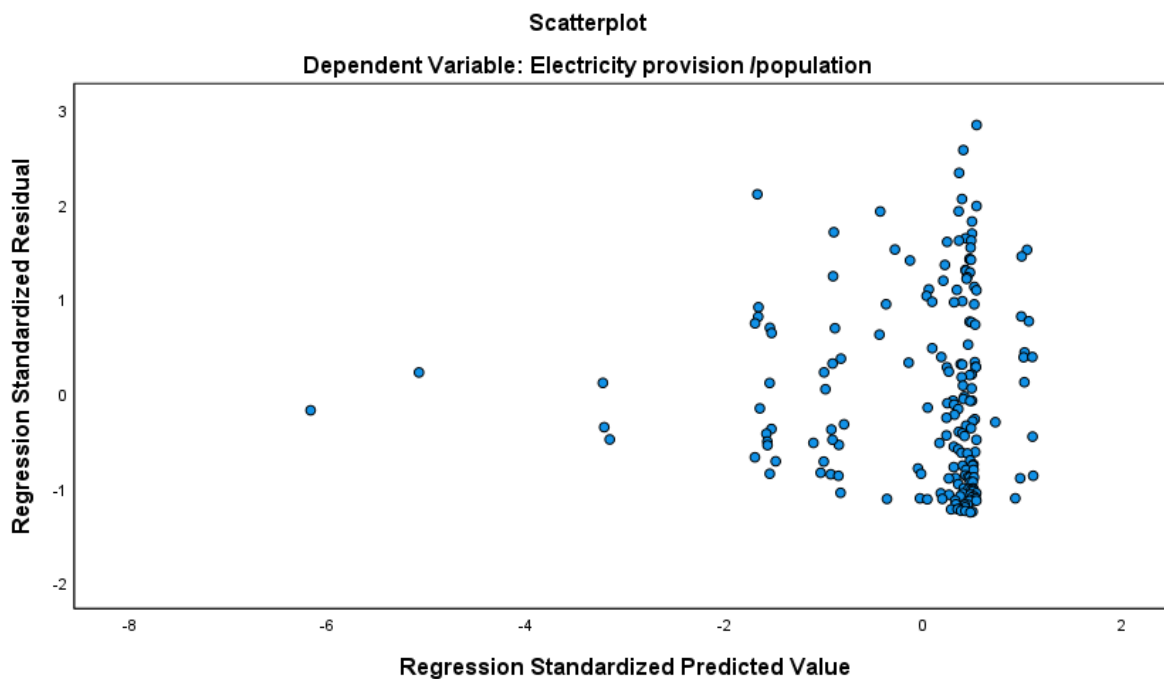
APPENDIX A: ASSUMPTION TESTING

Assumption testing 2014

2014 Normality of residuals



2014 Homoscedasticity



2014 Residual statistics

Residuals Statistics				
Minimum	Maximum	Mean	Std. Deviation	N

Predicted Value	1.58995	4.77845	4.39271	.474613	187
Residual	-3.630540	10.616794	.000000	2.951531	187
Std. Predicted Value	-5.905	.813	.000	1.000	187
Std. Residual	-1.220	3.568	.000	.992	187

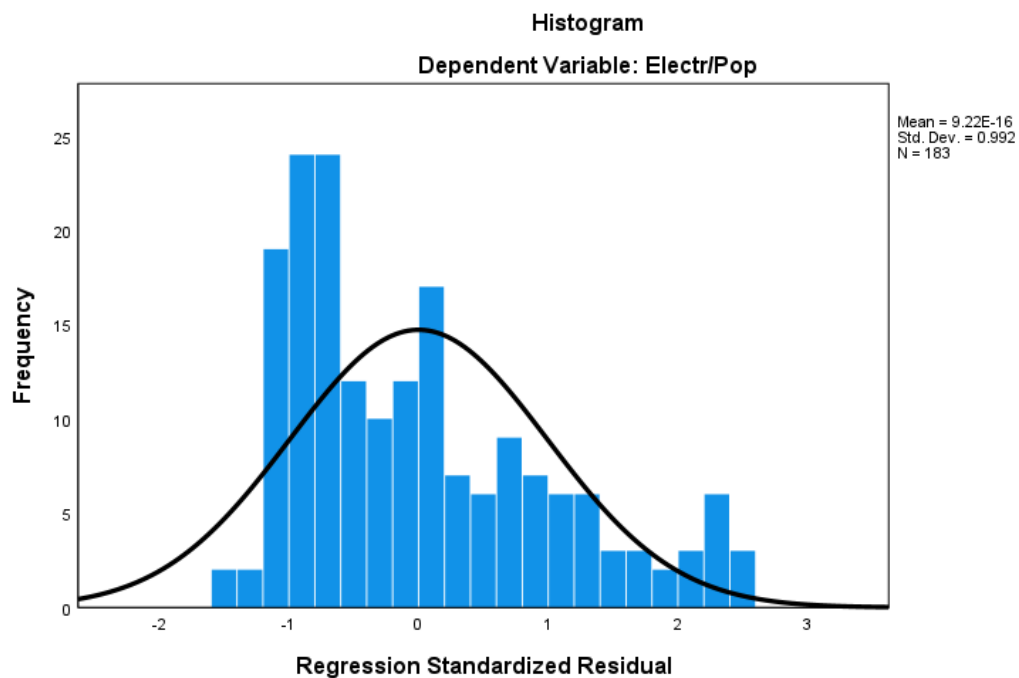
a. Dependent Variable: Electr/Pop

2014 Multicollinearity

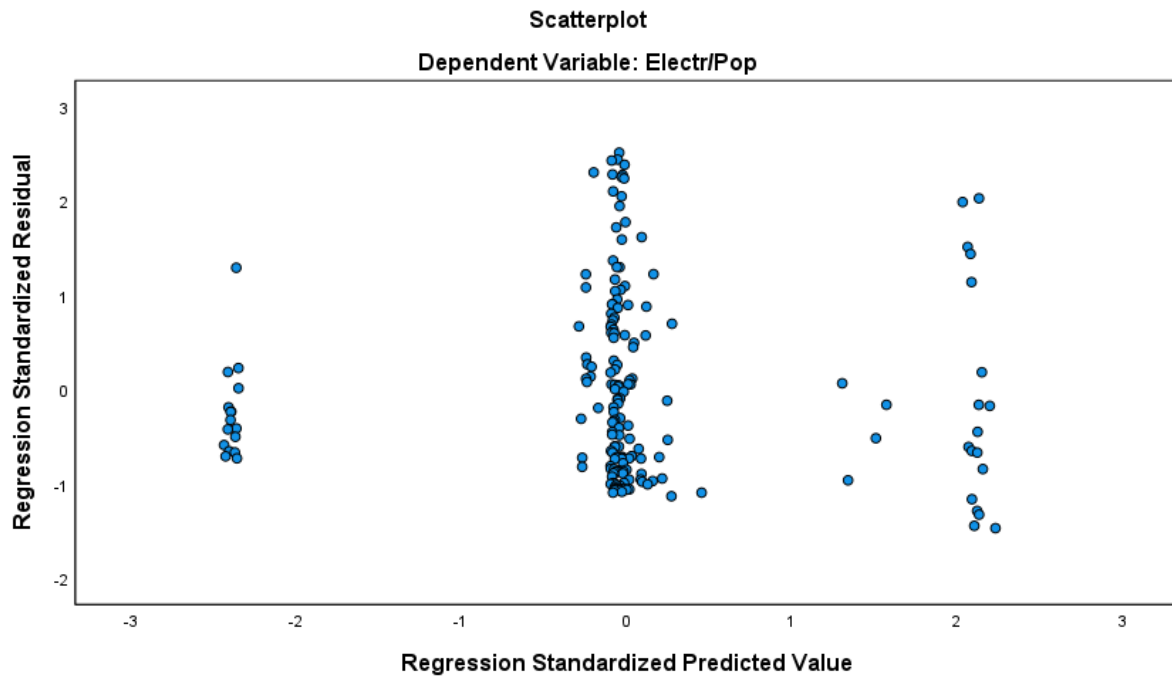
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Audit -2013	.833	1.200
	Governed by ANC	.833	1.200
	Population size	1.000	1.000

Assumption testing 2015

2015 Normality of residuals



2015 Homoscedasticity



2015 Residual statistics

Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.78528	4.63166	3.74829	.395728	183
Residual	-3.622319	6.201079	.000000	2.446420	183
Std. Predicted Value	-2.434	2.232	.000	1.000	183
Std. Residual	-1.468	2.514	.000	.992	183

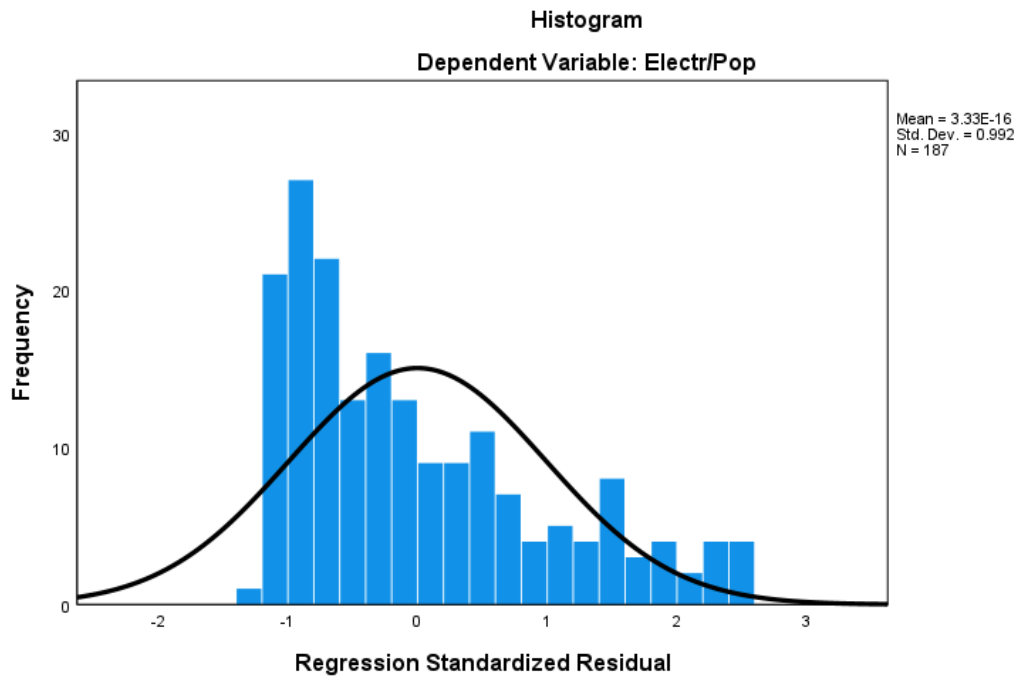
a. Dependent Variable: Electr/Pop

2015 Multicollinearity

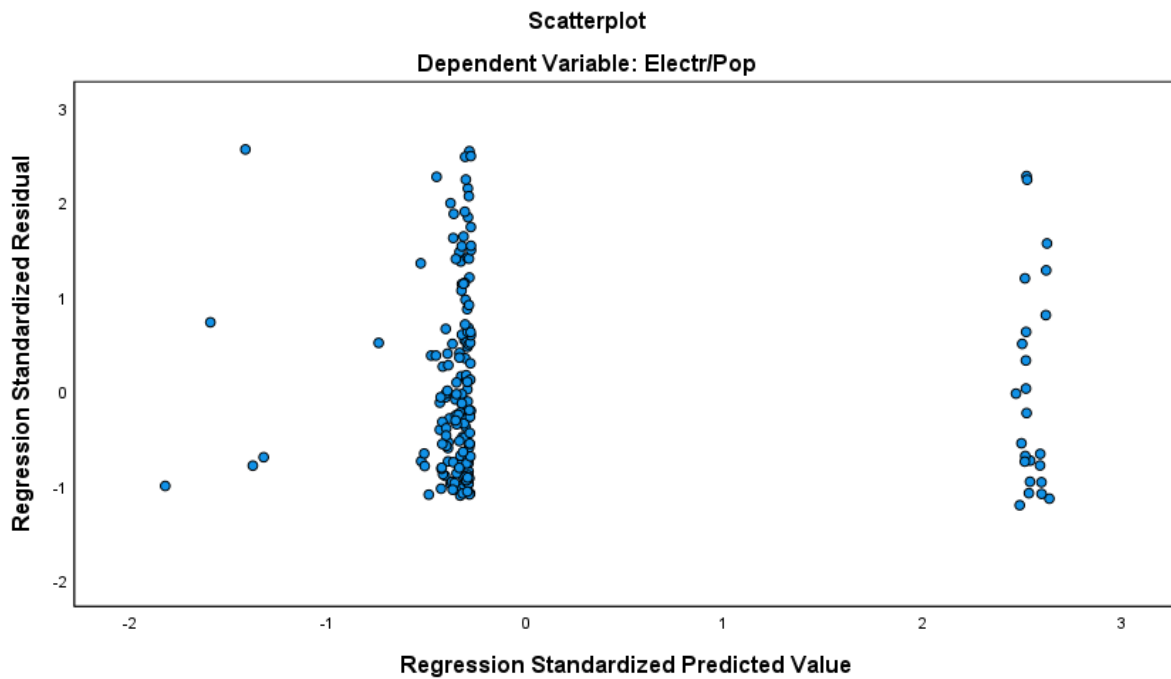
Model	<u>Collinearity Statistics</u>	
	Tolerance	VIF
1 (Constant)		
Audit - 2014	.865	1.156
Governed by ANC	.865	1.156
Pop	1.000	1.000

Assumption testing 2016

2016 Normality of residuals



2016 Homoscedacity



2016 Residual statistics

Residuals Statistics				
Minimum	Maximum	Mean	Std. Deviation	N

Predicted Value	3.55457	4.11012	3.78139	.124667	187
Residual	-2.970972	6.305070	.000000	2.442178	187
Std. Predicted Value	-1.819	2.637	.000	1.000	187
Std. Residual	-1.207	2.561	.000	.992	187

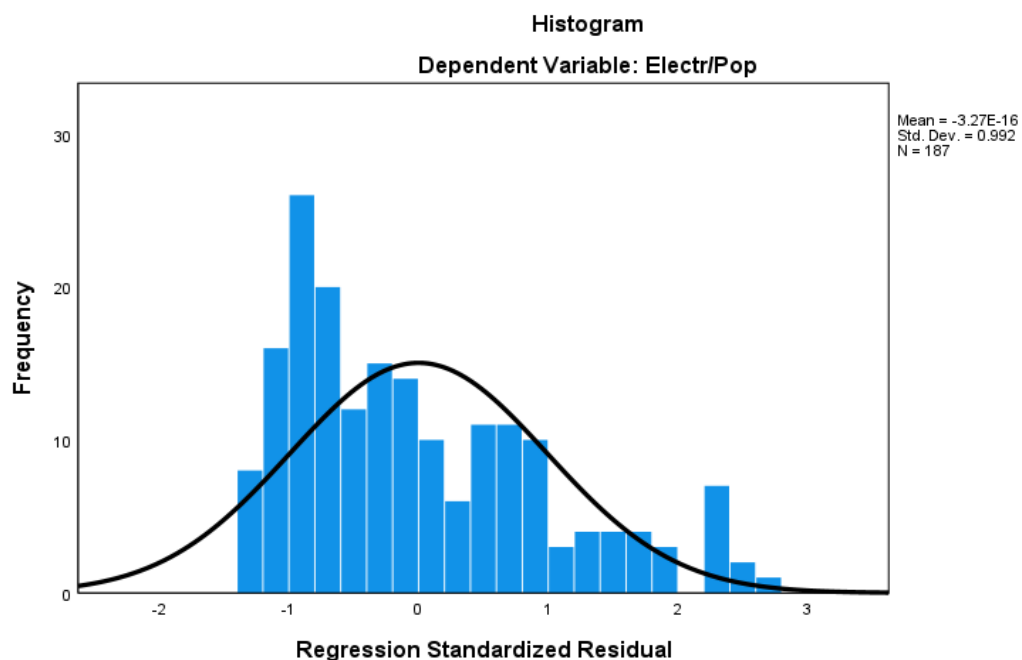
a. Dependent Variable: Electr/Pop

2016 Multicollinearity

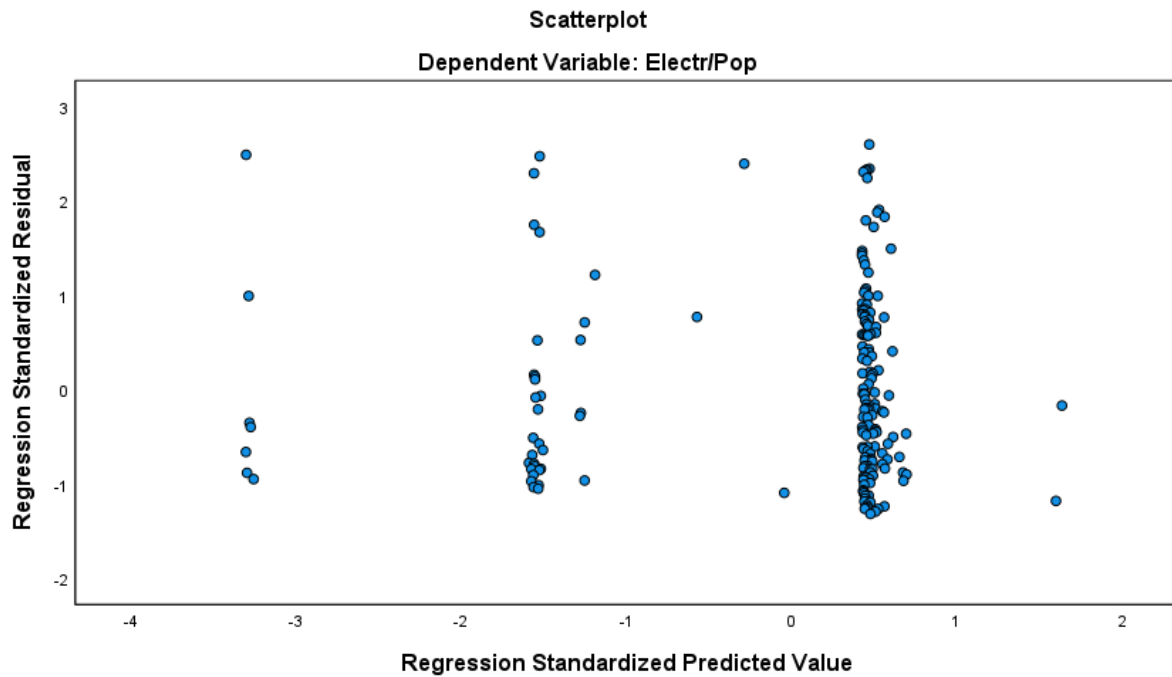
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Audit - 2015	.798	1.253
	Governed by ANC	.782	1.278
	Pop	.944	1.060

Assumption testing 2017

2017 Normality of residuals



2017 Homoscedasticity



2017 Residual statistics

Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.23606	4.38946	4.00751	.233682	187
Residual	-3.105766	6.130732	.000000	2.338570	187
Std. Predicted Value	-3.301	1.634	.000	1.000	187
Std. Residual	-1.317	2.600	.000	.992	187

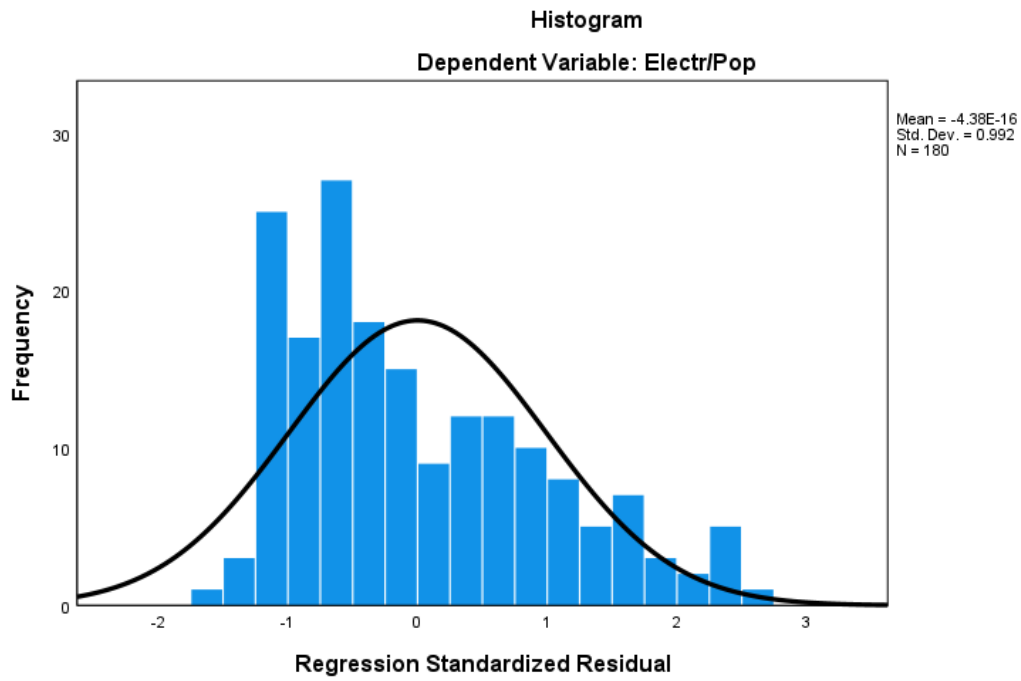
a. Dependent Variable: Electr/Pop

2017 Multicollinearity

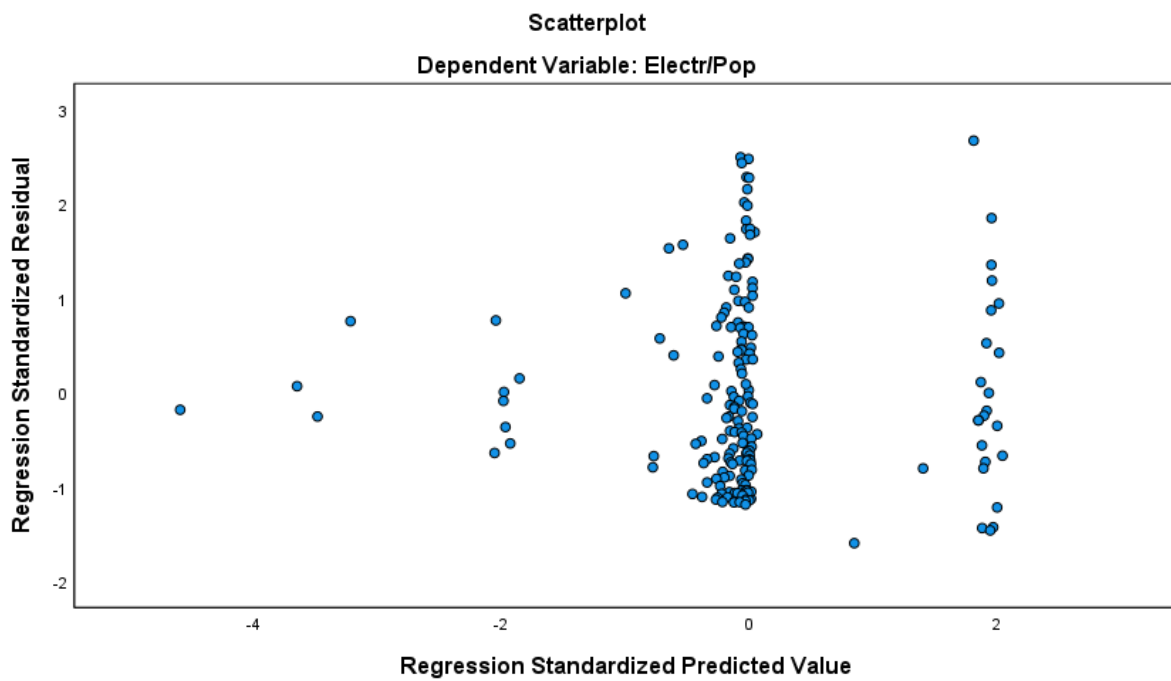
		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	Audit - 2016	.922	1.084
	Governed by ANC	.904	1.107
	Pop	.960	1.041

Assumption testing 2018

2018 Normality of residuals



2018 Homoscedasticity



2018 Residual statistics

Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.03979	4.79604	3.94770	.415619	180
Residual	-3.888138	6.512115	.000000	2.415815	180
Std. Predicted Value	-4.591	2.041	.000	1.000	180
Std. Residual	-1.596	2.673	.000	.992	180

a. Dependent Variable: Electr/Pop

2018 Multicollinearity

Model	Collinearity Statistics	
	Tolerance	VIF
1		
(Constant)		
Audit - 2017	.900	1.111
Governed by ANC	.884	1.131
Pop	.963	1.038