THE IMPACT OF SOCIOECONOMIC FACTORS ON MUNICIPAL FISCAL HEALTH IN SOUTH AFRICA

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Declaration

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Abstract

Municipal fiscal health and the measurement thereof has become a concern for governments and public administrators across the world. Significant episodes of fiscal stress experienced by the City of New York and Detroit in the 1970s and 1980s, as well as the global financial crisis in 2008, inspired a plethora of research into the topic. Since then, several approaches and methodologies have been developed by public finance experts, academics and practitioners on how local government fiscal health can be better measured and even predicted to avert potential fiscal crises. Despite there being no uniform definition of local government fiscal health after four decades of research into the topic, there is consensus that local government fiscal health is a multidimensional concept related to the fields of economics, public administration, public finance, accounting, planning, political science and sociology. There are thus different ways in which local government fiscal health can be measured and understood. Relying dogmatically on any one measurement system limits the ability to understand some of the other causes that may underlie the poor fiscal health of a local government institution.

In South Africa, many municipalities are in crisis and despite the urgency of the situation and the myriad of reports capturing symptoms of fiscal distress, comparatively little is known about the underlying root causes from a structural and systemic perspective. In this research study, the researcher uses factor analysis to better understand how structural factors observed through a selection of practical and theoretically relevant socioeconomic variables impact the fiscal health of municipalities. This is particularly important within the context of South African local government given the country's history of oppressive policies that have impacted the spatial, social, economic and financial landscape. To what extent are these structural issues still impeding the progress of municipalities in South Africa?

Opsomming

Munisipale fiskale gesondheid en die meting daarvan het 'n bekommernis vir regerings en openbare administrateurs regoor die wêreld geword. Beduidende voorvalle van fiskale stres wat die stede New York en Detroit in die 1970's en 1980's ervaar het, sowel as die wêreldwye finansiële krisis in 2008, het 'n oorvloed navorsing oor die onderwerp meegebring. Sedertdien is verskeie benaderings en metodologieë ontwikkel deur kenners van openbare finansies, akademici en praktisyns oor hoe plaaslike regerings fiskale gesondheid beter kan meet en selfs voorspel om potensiële fiskale krisisse te voorkom. Ten spyte daarvan dat daar geen eenvormige definisie van plaaslike regering fiskale gesondheid ná vier dekades se navorsing oor die onderwerp is nie, is daar konsensus dat plaaslike regering fiskale gesondheid 'n multidimensionele konsep is wat met die vakgebiede van ekonomie, publieke administrasie, publieke finansies, rekeningkunde, beplanning, politieke wetenskap en sosiologie verband hou. Daar is dus verskillende maniere waarop plaaslike regering fiskale gesondheid gemeet en verstaan kan word. Om dogmaties op enige meetstelsel te vertrou, beperk die vermoë om sommige van die ander oorsake te verstaan wat onderliggend aan die swak fiskale gesondheid van 'n plaaslike regeringsinstelling kan wees.

Baie munisipaliteite in Suid-Afrika is in 'n krisis en ten spyte van die dringendheid van die situasie en die magdom verslae wat simptome van fiskale nood vasvang, is daar vanuit 'n strukturele en sistemiese perspektief relatief min oor die onderliggende grondoorsake bekend. In hierdie navorsingstudie gebruik die navorser faktoranalise om beter te verstaan hoe strukturele faktore waargeneem deur 'n seleksie van praktiese en teoreties relevante sosio-ekonomiese veranderlikes die fiskale gesondheid van munisipaliteite beïnvloed. Dit is veral belangrik binne die konteks van Suid-Afrika se plaaslike regering gegewe die land se geskiedenis van onderdrukkende beleid wat die ruimtelike, maatskaplike, ekonomiese en finansiële landskap beïnvloed het. In watter mate belemmer hierdie strukturele kwessies steeds die vooruitgang van munisipaliteite in Suid-Afrika?

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Chapter 1:   Introduction

1.1   Background

Municipal fiscal health, commonly defined as the "ability of local government to meet its financial and service delivery obligations" (Hendrick, 2004) and the measurement thereof, has become a concern for governments and public administrators across the world. Significant episodes of fiscal stress experienced by the City of New York and Detroit in the 1970s and 1980s, as well as the global financial crisis in 2008, inspired a plethora of research into the topic. Since then, several approaches and methodologies have been developed by public finance experts, academics and practitioners on how local government fiscal health can be better measured and even predicted to avert potential fiscal crises.

In most countries, local government is synonymous with service delivery. Local government units or municipalities are often responsible for ensuring that essential and basic services are delivered to residents within a locally defined jurisdiction. These include the provision of water, electricity, sanitation, refuse removal, public health, public safety, housing and even basic education in some countries, amongst other services. The sufficiency of revenues is key to the ability of local government to provide these services. Waning financial resources place a severe limitation on the ability of local government to provide or expand services and programmes for which they are responsible. It also has an impact on the quantity and quality of service delivery to residents. The health, safety and quality of life for people within a local jurisdiction subsequently rests on how well local government can "plan, manage and pay for critical services and investments" (Lincoln Institute, online).

However, the scope of local government functions in contemporary society has evolved further than the provision of fundamental basic services to residents. Local governments worldwide have become key role players in facilitating development. Central governments often consider them to be "important partners in dealing with a range of public policy issues and functions, including building more efficient and equitable social service systems and providing significant portions of key infrastructure to support economic development" (United Cities and Local Government, 2010).

The vulnerability of local government concerning emerging global trends, including rapid urbanisation, shrinking cities, economic recessions, health and environmental disasters, demographic changes, increased poverty, climate change, migration and digitisation (Public

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Services International, 2016) places additional burdens on the financial resources of local government. Rapid urbanisation, which is an issue faced by many developing countries, creates an ever-increasing demand for public services, new public infrastructure and its maintenance, resulting in a widening gap between the availability of municipal financial resources and spending needs (UN-Habitat; 2015).

Globalisation has also ensured the integration of economies around the world. Local governments operate in an open system and while this may have numerous benefits, it also exposes local governments to increased risk resulting from global crisis-driven events. In just over a decade, there have been two major global crises, the 2008 global financial crisis and the 2019 COVID-19 pandemic which have impacted negatively on the finances of local authorities around the world.

While local government may traditionally have been viewed by authors such as Clarke as "part of the government of a nation which deals mainly with such matters as concern the inhabitants of a particular district or place" (Sikander, 2015), or by Stones (1968) as "the kind of government that does the so-called 'housework' so that living in these areas can be affordable for its residents … by keeping the roads clean, children's education, residential housing construction, etc." (Thapa, 2020), it is evident that the role of modern-day local government has evolved significantly.

Local government today faces significant challenges. To meet these challenges, it is crucial to ensure that local governments are in good financial health, that local government spending needs and revenue requirements are balanced, that internal or non-structural factors negatively affecting fiscal health are dealt with through appropriate interventions and that policy responses can be developed to address structural impediments to fiscal health.

The aim of this dissertation is therefore to explore the concept, measurement and prediction of local government fiscal health. In this regard, the following questions are relevant: What is meant by the different concepts, such as financial condition, fiscal distress, fiscal strain, fiscal crises, fiscal sustainability, etc. dominating the fiscal health literature and how do these concepts relate to each other? What are the key factors causing fiscal problems in local government and to what extent are these factors included in different approaches to fiscal health monitoring and measurement? How does South Africa's model of measuring local government fiscal health compare against international models and approaches? Are there any lessons to be learnt that can enhance the South African model to widen the perspective given that South Africa is a developing country facing a host of socioeconomic and political challenges?

Local government in South Africa is in crisis as evidenced by the growth in the number of municipalities in financial distress recorded by the National Treasury in its annual report on the *State of Local Government Finances and Financial Management Report* . Despite the urgency of the situation and the plethora of reports capturing symptoms of fiscal distress, comparatively little is known about the underlying root causes from a structural and systemic perspective. Instead, there are sets of individual case studies that have proliferated. The researcher is therefore of the opinion that a comprehensive, multi-dimensional fiscal health monitoring system will be beneficial to local government in South Africa. Not only will such a system highlight where problems exist in financial terms, but it will provide critical background information of changes in the municipal environment and where fiscal problems are rooted. This is particularly important given South Africa's legacy of apartheid and the spatial and economic distortions that required redress.

However, a multi-dimensional fiscal health monitoring system can also assist in determining a municipality's propensity for future fiscal challenges and guide administrators and policymakers on how to better manage the risk of poor fiscal health or the inability of local government to meet its financial and service delivery obligations by linking problems with specific solutions. Such a system will therefore guide current interventions and assist in the aversion of future fiscal problems within municipalities.

Due to the scope of the subject and limitations on the length of this dissertation, the focus will be on investigating only theoretically relevant socioeconomic factors that impact the fiscal health of local government, based on both an international literature review and a review of socioeconomic challenges inherent in the South African municipal environment. The study will also be limited to the monitoring of municipal fiscal health in South Africa and will further focus on secondary cities also referred to as intermediate cities as the population for this study. Most of these cities play a catalytic role in relieving pressure from primate cities (metropolitan areas in South Africa) to provide markets for agricultural produce, administrative and service centres and provide critical links to primate cities (SA Cities Network, 2012).

Municipal own revenues and municipal expenditure based on audited actual performance rather than budgeted performance will be used as proxies for fiscal health. The ability of a municipality to meet its financial and service delivery obligations depends on the adequacy of revenues at its disposal and its ability to effectively and efficiently manage its expenditure within the set expenditure ceilings. This dissertation will not propose any new methodology to measure and predict the fiscal health of local government in South Africa but will build on the existing body of literature to explore whether the existing fiscal health monitoring system

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already in use can be enhanced with the addition of theoretically relevant socioeconomic variables.

1.2   Rationale for this study

The state of local government finance in South Africa has been on a decline for some time. These have been recorded in the annual S*tate of Local Government Finances and Financial Management Report* published by the National Treasury. Despite the present system of local government being established more than two decades ago and several adjustments and updates to the intergovernmental fiscal framework, the most recent *State of Local Government Finances and Financial Management Report* states that 163 out of 257 municipalities were found to be in varying stages of "financial distress" based on an assessment of the 2018/19 annual financial statements (National Treasury, 2020). The National Treasury defines financial distress as the "*sustained inability* of a municipality to fund the delivery of basic public goods and other requirements as per their constitutional mandate" (National Treasury, 2020). This represents an increase from 125 municipalities reported to be in this position at the end of the 2017/18 financial year and an increase of 147% from the 66 municipalities reported to be in this position in the 2009/10 financial year (National Treasury, 2011). The definition of financial distress used in the report indicates that these municipalities are not experiencing a temporary imbalance in financial resources and spending needs, but rather a "*sustained inability*" to provide basic public goods. Statistically, this means that 63% of municipalities in South Africa exhibit a continuous and ongoing inability to fulfil their financial obligations and assigned constitutional responsibilities.

Similar trends have also been reported by the Auditor-General. Based on the audit of the 2018/19 annual financial statements of municipalities, the Auditor General of South Africa (AGSA) reported that the financial health of 79% of municipalities in South Africa was either concerning or requiring urgent intervention, with just under a third of these municipalities in a particularly vulnerable position (Auditor-General of South Africa, 2020). In the 2017/18 financial year, AGSA also reported that 34% of municipalities closed the financial year with a cumulative deficit of R5.8 billion (Auditor General of South Africa, 2019). Although no definition of "vulnerable position" is provided in the report by the AGSA, the use of the word "vulnerable" is often used to denote the possibility of being exposed to some harm.

A rapid assessment undertaken by the Department of Cooperative Governance in 2014, as part of the Back-to-Basics Programme, corroborates the poor performance of municipalities in South Africa. According to the findings of this report, 31% of South Africa's municipalities

were found to be dysfunctional with no basic systems in place (Department of Cooperative Governance and Traditional Affairs, 2014). The report also stated that a further 32% of municipalities were *almost* dysfunctional and required assistance in getting the basics right (Department of Cooperative Governance and Traditional Affairs, 2014). Dysfunctional is deemed to refer to an absence of basic systems and processes.

Collectively, the above reports point to a very bleak state of fiscal health amongst South African municipalities. Of concern is that the *State of Local Government Finances Report* identifies two metropolitan municipalities, several secondary cities and other large municipalities as being in poor fiscal health at the end of the 2018/19 financial year (National Treasury, 2020). This has significant implications for social and economic development given that these municipalities are fundamental to national prosperity and well-being contributing significantly to the Gross Domestic Product of South Africa and to the overall standards of living for South African citizens.

Furthermore, the incidence of fiscal distress amongst municipalities has increased. The statistics quoted above reflect a notable increase in the number of municipalities experiencing financial problems between the financial years 2017/18 and 2018/19 and since the 2009/10 financial year. This performance trend contradicts the investments made in support and capacity building programmes. According to the National Treasury, an amount of R7.1 billion was invested from 2016/17 to 2019/20 and a further investment of R6.6 billion is planned for the 2020/21 to 2022/23 financial years to improve financial management in local government (National Treasury, 2020).

In addition to the above, all three reports suggest that the root causes of poor fiscal health are related to factors within the control of the municipality. National Treasury acknowledges that fiscal health problems can stem from structural, organisational and/or hybrid factors (National Treasury, 2020), but attributes the current municipal fiscal challenges to weak leadership, political instability, poor administrative governance and weak financial management (National Treasury, 2020). The Auditor General supports this view and states "while the poor economic climate does play a role in the deterioration of municipalities' financial health, many are just not managing their finances as well as they should be" (Auditor General of South Africa, 2019). Lastly, the *Back-to-Basics Report* attributes failure in the 31% of dysfunctional municipalities to "endemic corruption, dysfunctional councils, no structured community engagement and participation systems and poor financial management leading to poor audit outcomes" (Department of Cooperative Governance and Traditional Affairs, 2014).

The application of statutory remedies that are in place to correct poor financial health in local government reflects no correlation with the number of municipalities in financial distress. Section 139(5) of the Constitution of South Africa, Act No 108 of 1996 provides for the provincial executive to impose a financial recovery plan in a municipality if a municipality is in serious or persistent material breach of its obligations to provide basic services or meet its financial commitments (RSA, 1996). According to the National Treasury, there are currently only 33 financial recovery plans in place with a further 16 municipalities, in 2020, requesting assistance with the financial recovery process (National Treasury, 2020).

Furthermore, a study investigating the theory and practice of S139 Constitutional interventions indicated that since 1998, 140 interventions were invoked in terms of S139 of the Constitution (Ledger & Rampedi, 2018). However, only five of these interventions were invoked in terms of S139(5) of the Constitution (Ledger & Rampedi, 2018).

Poor financial and administrative governance, or the "organisational factors" referred to by the National Treasury, is a significant cause of municipal fiscal health challenges in South Africa. This is also evident in the media where municipal service delivery protests, incidents of fraud and corruption, shoddy service delivery, fruitless and wasteful expenditure and the awarding of dubious contracts are reported regularly.

But what are the other factors affecting the fiscal health of local government in South Africa? Could it be that capacity building and support programmes yield poorer outcomes because these programmes as a remedy to correct fiscal health problems may only be targeting a part of the problem? Are there assumptions as to the nature of the problem and therefore multiple interventions predicated on the same wrong assumptions taking place with disappointing short-term rather than long-term outcomes? Are the lenses through which we capture and measure municipal fiscal health in South Africa too narrow to provide a fuller picture of municipal challenges? Given that South Africa is a developing country with high rates of unemployment, poverty and inequality, how do these other factors affect the fiscal health and financial performance of local government?

The researcher believes that while the effects of the structural and economic climate on municipal fiscal health are acknowledged by both the National Treasury and the Auditor General, the effect of these factors on municipal fiscal health has not been sufficiently tested by either of these institutions, partly because their focus is on immediate corrective action and accountability rather than on the creation of a body of academic knowledge on the subject. While there is some academic research on this topic, it has not influenced a change in the way

in which municipal financial health is officially assessed. By adding to the body of literature, the researcher believes that recommendations can be made to influence the development of a comprehensive fiscal health monitoring system for local government in South Africa—a system that will not only measure where financial distress exists, but one that will be able to point to the causes of distress, predict future fiscal problems and provide the necessary background information to develop effective responses across the different spheres of government.

The interest in secondary or intermediate cities as the unit of analysis for this research stems from the fact that cities are often cited as the catalysts for economic growth in developing countries. According to Bahl and Linn, "big cities are linked to the global economy and are more likely to propel poorer countries to become competitive and prosperous" (Bahl & Linn, 2014). However, according to Yusuf, many cities fail to exploit the urban advantage and are finding it difficult to cope with the financial and infrastructure pressures associated with growing populations, increasing poverty and inequality, the development of slums and environmental degradations (Bahl & Linn, 2013). Yusuf further states that "where economic performance falters or where revenue effort is weak, urban services suffer, which affects business activity and the quality of life, especially for the poor" (Bahl, Linn & Wetzel, 2013).

1.3   Research question

The question underlying this research study is: "What are the relevant theoretical and practical socioeconomic indicators of municipal fiscal health and how do these factors impact a selected sample of secondary cities?"

The study, therefore, aims to determine whether a causal relationship exists between socioeconomic indicators identified through theory and practice and municipal fiscal health in South Africa.

Based on the above findings, the researcher will then make recommendations on how the measurement of municipal fiscal health and the resolution of municipal fiscal problems in South Africa can be improved.

1.4   Research objectives

The key objectives underlying this research are:

a) To explore the definition of local government fiscal health and clarify key concepts related to the fiscal health of local government;

b) To identify the theoretically relevant and practical socioeconomic variables that impact local government fiscal health through a review of existing literature;

c) To test the relationship between the identified socioeconomic variables and actual municipal revenues and expenditure (as a proxy of municipal fiscal health) collected from all secondary cities; and

d) To conclude and make recommendations on how to strengthen the fiscal health monitoring system and fiscal responses in South Africa.

1.5   Research design

In undertaking this research study, the researcher has adopted a post-positive research paradigm. The theory underpinning post-positive research paradigms states that "post-positivists hold a deterministic philosophy in which causes (probably) determine effects or outcomes. Thus, the problems studied by post-positivists reflect the need to identify and assess the causes that influence outcomes" (Creswell & Creswell, 2017). This aligns closely with the objective of this research project which is to determine if changes in relevant socioeconomic factors result in changes to the fiscal health of municipalities. The research will follow a deductive approach which is associated with a post-positivist paradigm.

Critical to the design of this research study is the distinction between a construct and a variable. Municipal fiscal health is a construct and cannot on its own be directly measured. Constructs are defined as broad concepts that can be conceptually defined and have meaning in theoretical terms. They can be abstract and do not need to be directly observable (Statistics Solutions; online). By contrast, variables are created by developing the construct into measurable form and by definition, correspond to any characteristic that varies meaning that they must have at least two possible values (Statistics Solutions, online). At the core of municipal fiscal health is the ability of local government to meet its financial and service delivery obligations (Hendrick, 2004). Therefore, municipal revenues are critical in enabling a municipality to finance its expenditure. For this reason, actual audited own revenues generated by the municipality and municipal expenditure will be used as proxies for fiscal health as South Africa's local government fiscal framework is founded on the assumption that municipalities, except for rural municipalities, would be largely self-financing.

This study will adopt a quantitative methodology using secondary data sources already in the public domain.

Secondary or intermediate cities referred to as part of the category B local municipalities in South Africa constitute the unit of analysis for this study. The categorisation of municipalities is discussed in Chapter 3. A total of 39 municipalities have been included in the sample for this study.

1.6 Research methodology

A quantitative approach has been followed in this research study. The researcher intends to use factor analysis as the statistical method to be employed in this study.

The data relating to the annual audited own revenues and expenditure of the sample will be sourced directly from the audited information provided by municipalities to the National Treasury via a local government portal. Socioeconomic data relating to population, age, unemployment, poverty and other relevant variables identified through the literature review will be sourced from a combination of the Integrated Development Plans (IDPs) of the sample municipalities and information available from Statistics South Africa, the National Treasury, the South African Cities Network and the Municipal Money Website.

1.7 Limitations of this study

The study makes use of actual audited own revenues billed as per the municipality's annual Statement of Financial Performance. It is not reflective of the actual own revenues collected as per the annual Cash Flow Statement. The use of accrual accounting makes it difficult to separate revenues collected for services rendered in the current year and revenues received for outstanding accounts in previous years.

Data for this study will also be sourced directly from the websites of municipalities and government departments. No private data providers will be engaged. Therefore, there are risks that the data might not be current since most municipalities use either the 2011 Census data and/or the 2016 Community Survey data in planning documents. However, various sources of data will be used to cross-reference data elements to eliminate any data discrepancies. There is a further limitation that municipal documentation may not have been uploaded onto the municipal websites and that the choice of socioeconomic variables reported on may differ amongst municipalities.

This study has been conducted within the context of secondary cities, however, the findings can be useful to inform fiscal health strategies applicable to any large municipality and it will be

more beneficial for municipalities that generate most of their operating revenues from their sources, particularly property rates and service charges.

1.8 Outline of the chapters

This chapter, which is Chapter 1 of this research study, is intended to provide a broad overview of the role and importance of local government both internationally and in South Africa. It seeks to highlight the changing role of local government in contemporary society. It emphasises the relevance of comprehensive systems to measure and monitor local government fiscal health to support the complex functions performed by local government. It also provides a snapshot of the current state of fiscal health amongst municipalities in South Africa. It sets out the aim and objectives of this research study and specifies the research design and methodology to be followed.

In Chapter 2, a conceptual framework for local government fiscal health and related concepts will be explored through a literature review. Reference will be made to the experiences of selected countries to contextualise the causes of poor fiscal health. The impact of the global environment on municipal finances will be briefly described to indicate the vulnerability of local government finances to worldwide global crises. The chapter will conclude with a summary of selected local government fiscal health monitoring systems and methodologies used internationally from which lessons could be drawn to enhance the South African model.

The focus in Chapter 3 turns to local government in South Africa. The transformation of local government from a subservient tier of government under apartheid to a decentralised, autonomous sphere in a democratic dispensation is discussed. The assumptions made in the institutional design of the system will be described and analysed to determine the extent to which possible fault lines exist in the institutional design that potentially impacts the lacklustre performance of many municipalities today. An overview of constitutionally mandated local government functions will be provided to better understand the scope of expenditure responsibilities conferred on this sphere in a decentralised system. The chapter will conclude with a brief highlight of the legislative and regulatory framework to illustrate that whilst local government is constitutionally an autonomous sphere, it is still subject to a plethora of legislation and regulations.

The local government fiscal framework is discussed in Chapter 4. The theory underpinning the design of a sound intergovernmental fiscal framework is explained. The basic assumptions underlying the design of the intergovernmental fiscal system in South Africa and the revenue-

raising powers assigned to local government in terms of the Constitution will be discussed. Some of the formative assumptions will be critiqued to determine their empirical basis and their present-day relevance.

In Chapter 5, the fiscal health monitoring system for South Africa is discussed in greater detail. The assessment methodology used by the National Treasury is contrasted with the annual audit opinions awarded by the Auditor General. The indicators used to assess municipal fiscal health are described and constitutional remedies for poor municipal performance are outlined. The chapter concludes with an overview of some of the specific challenges of poverty, inequality and unemployment faced by municipalities in South Africa.

Research design and methodological issues form the basis of Chapter 6 of this research study. The study is posited against a post-positivist research paradigm following a quantitative approach using secondary data sources. The rationale for the selection of secondary/intermediate cities as the population for this study will be explained in greater detail as well as the use of factor analysis as the preferred statistical method. The chapter will conclude with a high-level description of the factors and variables used in this study which have been identified through the international and local literature review.

In Chapter 7, the findings emanating from this research study will be presented. These findings will be based on the 39 intermediate cities and will form the basis for conclusions and recommendations.

These findings will be discussed in Chapter 8 followed by conclusions and recommendations in Chapter 9 to improve the monitoring of local government fiscal health in South Africa.

Chapter 2: Literature review

The subject of local government fiscal health is neither new nor unique to any country. There is probably no level of government (central/national, state/provincial or local) who over the last decade can claim to have been insulated from fiscal pressure. Nearly all countries, developed and developing alike, have had experiences with managing local fiscal problems with some of the most noteworthy episodes of poor fiscal health originating in cities within the United States.

Despite the vast literature on this subject, there is currently no ironclad definition of fiscal health. The literature reflects no less than a dozen definitions of the concept based on different perspectives of the subject. Consequently, there are several approaches to measuring fiscal health and relying on any one approach dogmatically may limit the ability to capture the different dimensions and make useful inferences on the state of a local government's fiscal health.

2.1 Fiscal health: an overview of the concept

Since the 1970s, local government fiscal health has been widely studied and defined under an assortment of terms, including fiscal stress, fiscal strain, fiscal distress, fiscal crises, fiscal condition, fiscal emergencies and fiscal sustainability. There is a high degree of fluidity in the use of these terms. Most researchers and academics tend to use the terms fiscal health and fiscal condition interchangeably, some regard fiscal stress and fiscal strain as being synonymous, and others ascribe similar yet different meanings to each of these terms. The variations in fiscal health terminology could be viewed as coinciding with different periods of study. During the 1970s, 1980s and 1990s, much of the focus was on understanding fiscal stress and its effects on public organisations (Kriz & Funderburg, 2019). During the 1990s, the focus began to gradually shift towards the concept of fiscal health and in the 2000s there was a further shift in focus towards the fiscal sustainability of local government (Kriz & Funderburg, 2019). According to Rodriguez Bolivar, fiscal sustainability, as a new concept in the evolution of fiscal health monitoring, uses operational concepts, features capacities and focuses on future projections whereas previous methods were based on historical information and were reflective of past events (Rodriguez Bolivar, 2017).

A review of the literature also reveals that definitions of fiscal health are multidimensional and are related to the fields of economics, public administration and finance, accounting, planning and political science and sociology (Honadle, Cigler & Costa, 2004; Hendrick, 2004). Although

fiscal health studies span more than four decades, to date, there is still no one "uniquely correct concept of the financial condition of local governments, and, hence, no one way to measure fiscal health" (Bird, 2013). To build a conceptual understanding of local government fiscal health, a review of some of the more commonly used definitions found in the academic literature is presented.

Amongst the most widely held definitions of local government fiscal health is "the ability of local government to meet current and future financial and service delivery obligations" (Hendrick, 2004). This definition reflects a combination of that proposed by Berne and Schramm in 1986 as "the probability that a government will meet its financial obligations to creditors, consumers, employees, taxpayers, suppliers, constituents, and others as these become due" (Ritonga, Clark & Wickremasinghe, 2012) and Honadle, Cigler and Costa who described fiscal health as "an indication of the ability of local governments to provide adequate, uninterrupted services to their constituents" (Honadle, Cigler & Costa, 2004).

Maher and Nollenberger provide a similar definition. They describe fiscal health as "the ability of a government to balance its financial obligations with its available revenue streams" (McDonald, 2018). This definition presupposes two conditions required for maintaining good fiscal health. Firstly, that fiscal health is underpinned by a state of financial equilibrium (spending and revenues must be in balance). Secondly, that the availability of an adequate revenue stream is crucial to local fiscal health. Local government revenue sources vary per country but generally include property taxes, user fees and intergovernmental transfers (Andersson et al., 2014). Adequacy of revenue sources would mean that fiscal capacity, fiscal effort and the design of the intergovernmental fiscal system are all important factors in assessing the fiscal health of local government.

Therefore, it can be concluded that fiscal health is dependent on several variables that exist in both the internal and external operating environment of local government.

Text box: Defining fiscal capacity and fiscal effort

Fiscal or tax capacity refers to the potential ability of governmental units or jurisdictions to raise tax revenues from their own-sources (Akin, 1973) in order to pay for a standardised basket of public goods and services (Martinez-Vasquez & Jameson Boex, 1997). The potential ability to raise revenues is influenced by the economic, social, institutional and demographic structure of the jurisdiction and by full use of authorised taxes (Martinez-Vasquez & Jameson Boex, 1997; Valles-Gimenez & Zarate-Marco, 2017). The smaller the tax base, the more limited the fiscal capacity of the region.

Fiscal or tax effort refers to the degree to which a jurisdiction effectively uses its tax capacity (Valles-Gimenez & Zarate-Marco, 2017). Fiscal effort which determines the gap between actual collections in a jurisdiction and the jurisdiction's fiscal capacity is affected by the level of tax rates applied, by the level of exemptions granted and by the tax enforcement effort exerted by the tax administration authorities (Martinez-Vasquez & Jameson Boex, 1997).

Text box 1.1: Fiscal capacity and fiscal effort (Source: Akin, 1973; Martinez-Vasquez & Jameson Boex, 1997; Valles-Gimenez & Zarate-Marco, 2017)

Greenberg and Hiller's definition (1995) relates the concept of financial condition to three abilities: "… sustainability which is the ability to preserve the social welfare of citizens with the available resources; flexibility which is described as the ability to adapt to economic and financial changes; and vulnerability which refers to the ability to be independent of external financing resources" (Rodriguez Bolivar & Subires, 2018).

In this definition, a further important characteristic of local government fiscal health is highlighted – that of flexibility or adaptation. Changes in the financial and economic environment, over which local government has no control, can have a significant impact on local finances. Maintaining good local government fiscal health would imply an ability to anticipate changes in the environment, adapt local responses by either leveraging potential opportunities or mitigating against possible risks or threats presented by this change.

In addition to financial and economic changes, demographic changes also impact local fiscal health. Padovani and Scorsone define local fiscal health as "a local unit's overall ability to maintain services and respond to an emergent situation while emphasizing indicators such as economic and population change, revenues and expenditures per person and debt per person" (Padovani & Scorsone, 2011). This definition also encompasses the ability of a municipality to respond to emergencies denoting the relevance of environmental factors, such as natural or global disasters on local fiscal health.

However, the most ubiquitous definition of fiscal health or financial condition, as it is referred to in the definition, has been put forward by Groves, Valente and Nollenberger (2003). According to their definition, the financial condition can be understood in terms of four types of solvencies: long-run, service-level, budgetary and cash solvency (Levine, Scorsone & Justice, 2013).

- Long-run solvency refers to the long-run balance between government revenues and spending needs and implies that government can adapt to uncertain future fiscal conditions, some of which may be severe shocks.
- Service-level solvency refers to the ability of government to provide adequate services to meet the health, safety and welfare needs of its citizens given its revenue resources.
- Budgetary solvency is defined as the ability to balance the budget or generate enough resources to cover expenditures in the current fiscal year.
- Cash solvency is government's ability to generate enough cash over 30 to 60 days to pay its bills.

The definition of long-run solvency reflects a correlation with the definition of flexibility proposed by Greenberg and Hiller (1995) as it relates to the ability of a local government to adapt to uncertain fiscal conditions. Service-level solvency also reflects a correlation with Greenberg and Hiller's definition of sustainability which requires preserving social welfare within the available resource envelope of local government.

In summary, while there may be no single agreed-upon definition of local government fiscal health in the literature, several common elements can be identified in the various definitions. These can be synthesised into a conceptual framework, which is depicted below:

Sustainability
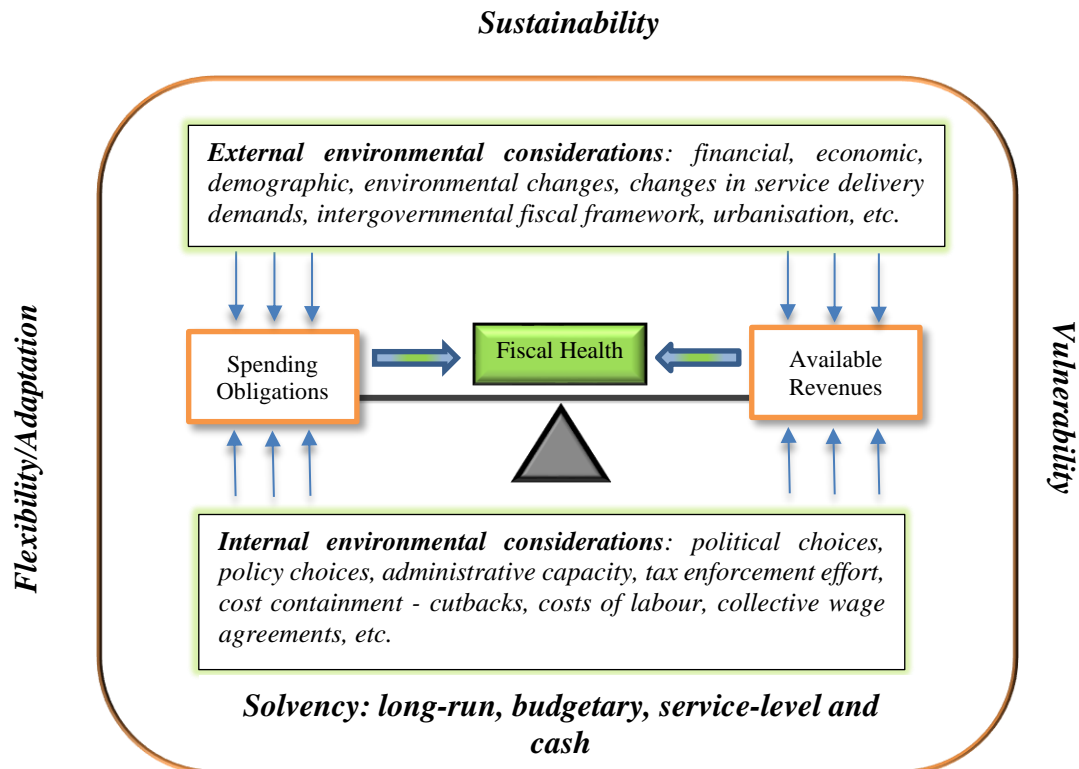
Figure 2.1: Conceptual framework for local government fiscal health (Source: own)

In terms of this framework, various factors in the internal and external environment exert pressure on the spending obligations and revenue capacity of a local authority. These are denoted by the upward and downward blue arrows in the diagram. A positive state of fiscal health implies that after considering these pressures, a local authority must be able to, at a minimum, achieve a balance between its spending obligations and available revenue sources. However, local government fiscal health is not a static concept and can change over time. Therefore, local authorities need to apply complementary strategies to ensure that future fiscal health remains positive as well. These strategies are reflected in the outer block. By adapting to changing fiscal and economic environments, local authorities are more likely to experience positive fiscal health. Municipalities also need to make decisions that preserve the social welfare of their citizens as part of securing their revenue base, reduce their vulnerability to external sources of funding which may be subject to reductions in times of economic downturns and ensure that they maintain both long-run and short-run financial solvency.

For this study, municipal fiscal health is thus defined as the availability of adequate revenue capacity and requisite fiscal effort to meet current municipal spending obligations, ensure the sustainability of service delivery, community welfare and reduce grant dependence through awareness of and adaptation to changes in the internal and external operating environment.

2.2 Fiscal health terminology

As mentioned previously, the terminology used in the fiscal health literature varies amongst authors. Much of the terminology is concentrated towards negative states of fiscal health such as fiscal distress, fiscal crisis, fiscal strain, etc. Honadle (2003) stated that there may be many different names for a financial crisis, but a crisis by any other name is still a crisis (Zafra-Gomez, Lopez-Hernandez & Hernandez-Bastida, 2009). Zafra-Gomez, Lopez-Hernandez and Hernandez-Bastida maintain this argument and state that "while the State of Rhode Island uses the term 'crisis' and Ohio's most severe designation is 'fiscal emergency', Michigan's law has 14 indices of 'fiscal distress' and Pennsylvania has 11 criteria for 'fiscal distress', all of these terms refer to crisis situations" (Zafra-Gomez, Lopez-Hernandez & Hernandez-Bastida, 2009). According to this view, the terminology is not as important as there is little difference in the indicators used to measure the different states of fiscal distress and fiscal crisis.

Padovani and Scorsone, on the other hand, argue that how fiscal distress vis a vis fiscal health is viewed, is very likely to impact the approach used to assess the situation in local government (Padovani & Scorsone, 2011). They further state that the range of definitions results in there being a diverse number of operational measures that can be employed to predict the fiscal health of local governments (Padovani & Scorsone, 2011).

However, the use of various terms to describe the concept of fiscal health can create greater conceptual confusion. For example, is fiscal stress the same as fiscal distress or is fiscal distress a more severe form of fiscal stress? Is fiscal strain the same as fiscal stress? And is a fiscal emergency synonymous with a fiscal crisis? Or are all these terms quasi-synonyms? While the literature is not explicit on these issues as it depends on the views of the authors, there does appear to be some commonalities and some variations in how these terms are defined. What is also apparent is that fiscal health appears to be more of an overarching concept and the different terms tend to represent gradations of fiscal health. In essence, fiscal health can be understood to then represent a spectrum with fiscal strain, fiscal stress, fiscal distress, fiscal crisis and fiscal emergencies as points on this spectrum of fiscal health. For this research, the terms fiscal health and fiscal condition are used interchangeably. The terms fiscal and financial are also used interchangeably. It is beyond the scope of this research to provide a comprehensive list of all possible definitions; however, the most ubiquitous definitions are highlighted below:

Table 2.1: Municipal fiscal health terminology

Term	Definition	Reference
Financial sustainability	The long-run capability of a government to consistently meet its financial responsibilities. It reflects the adequacy of available revenues to ensure the continued provision of the service and capital levels that the public demands.	Chapman, 2008
Fiscal strain	Incomplete adaptation to changing resources and problems confronting a municipality.	Clark, 1977
Fiscal stress	A negative change in fiscal capacity. Fiscal stress is dynamic and does not refer to a steady state in any particular period.	Hendrick, 2004: 10
	The inability of government to balance its budget.	Pagano & Moore, 1985
Fiscal distress	Reflects short-term considerations such as a local government's ability to meet its payroll and generally make payments promptly and long-term considerations, encompassing trends in a local government's tax base relative to its expenditures and commitments.	Ziolo, 2015
	The sustained inability of a municipality to fund the delivery of basic public goods and other requirements as per its constitutional mandate and also meet its financial obligations.	Financial and Fiscal Commission of South Africa, 2013
Fiscal crisis	A situation when a city's potential to raise revenues is insufficient to cover the city's legally required expenditures. A fiscal crisis is usually characterised by the refusal of lenders to give any additional credit (Inman 1995)	Wolff, 2004

Term	Definition	Reference
Fiscal emergencies	Occur when there is a lack of cash to pay ongoing commitments, such as vendor, pension, payroll or bond payments. A government may face a drop in revenue due to a national, regional or local economic downturn, or through poor management or corruption.	Scorsone, undated

Table 2.1: Municipal fiscal health terminology (Source: Various – as per table)

Based on the above definitions, fiscal sustainability reflects the desired state of fiscal health for any local authority. Fiscal strain and fiscal stress are similar constructs with both indicating a temporary imbalance between revenue and expenditure due to changes in the fiscal and economic environment. However, Justice and Scorsone state that the construct of fiscal strain (Clark & Ferguson, 1983) "focuses on the ways in which persistent maladaptation of an organisations' financial structure and choices to the availability of private-sector resources in its fiscal environment contributes to fiscal stress" (Levine, Scorsone & Justice, 2013). Hence, continuous fiscal strain leads to fiscal stress. Fiscal distress appears to denote a change in both short- and long-term considerations which affect the ability of the municipality to finance its obligations. It, therefore, represents a poorer state of fiscal health than fiscal stress or strain. According to Perlman, fiscal stress occurs when revenues do not keep up with projections or inflation and fiscal distress occurs when revenues fall (Perlman, 2009).

Fiscal crisis and fiscal distress are also similar, however, the difference lies in that with fiscal distress, a changing tax base is becoming more evident as local authorities find it harder to meet expenditure obligations. A fiscal crisis is evident at the point when the full extent of a changed tax base is realised. Similar to fiscal strain and fiscal stress, sustained fiscal distress leads to a fiscal crisis. Furthermore, under a fiscal crisis, lending institutions do not extend credit to local authorities. A fiscal emergency occurs when a local authority is unable to meet any of its commitments as a result of having no cash or when there are economic downturns that adversely affect local, regional or national economies.
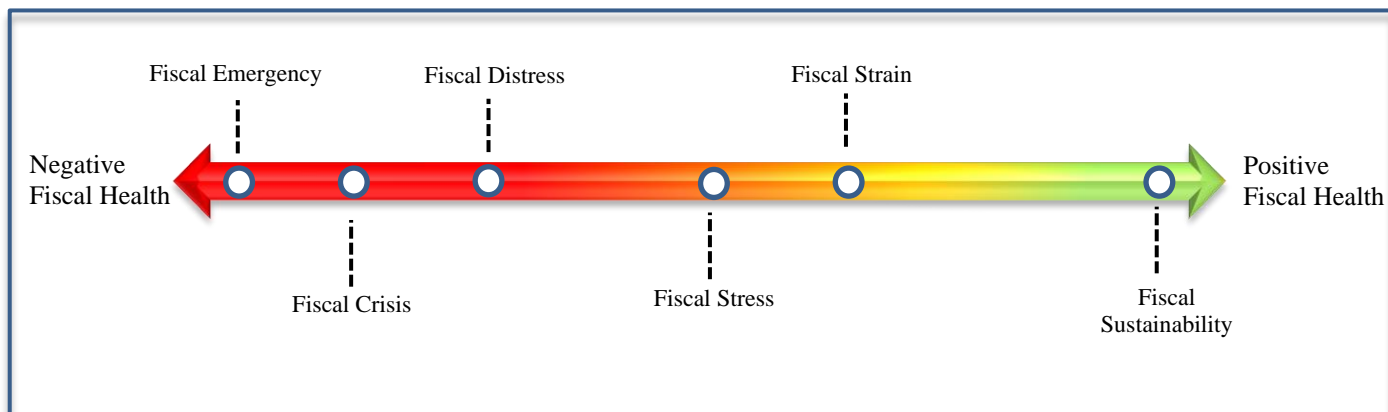
Figure 2.2 Spectrum of municipal fiscal health (Source: Own)

2.3 Contextual factors and events affecting local government fiscal health

In the previous section, it was observed that local government fiscal health is affected by both the internal and external environments in which local governments function. Most of the international fiscal health literature focuses predominantly on the experiences of local government in the United States primarily because of the severe fiscal crises experienced by some of the major cities such as New York City in 1975, Cleveland in 1979, Philadelphia in 1990, Bridgeport in 1991, Orange County in 1994, Washington DC in 1995, Miami in 1996, Camden in 1999 and Pittsburgh in 2004 (Kimhi, 2008) amongst several less publicised fiscal challenges in smaller municipalities. The 2008 global financial crisis spawned another wave of research into the measurement and prediction of local government fiscal health.

In the 2000s, there were also several official enquiries by the Australian government and oversight structures into the financial sustainability of local councils in Australia that generated some embryonic literature on the subject (Dollery & Crase, 2006), whilst in Canada, although poor fiscal health is relatively uncommon amongst cities, there have been several studies on urban fiscal health produced in recent years (Bird, 2013). Notwithstanding these contributions, the United States are the pioneers in this field and the literature offers valuable insights relating to public finance management that are useful for understanding the context within which local fiscal problems emerge. The context for poor fiscal health appears to have applicability to local governments beyond the United States.

Local government fiscal problems are caused by a variety of factors. However, fiscal problems rarely emerge as a result of a single factor only. Often several factors combine to cause a decline in the fiscal well-being of a municipality (Kimhi, 2008). Fiscal problems, especially fiscal distress, fiscal crises and fiscal emergencies evolve over some time. The circumstances of some local governments also make them more vulnerable to fiscal problems than others.

The literature reveals that amongst researchers and academics, there is general agreement on the main causes of poor fiscal health. These can be broadly grouped as economic and social or environmental factors; organisational, administrative or managerial factors; financial factors; political factors and a category specified as hybrid factors (Hendrick, 2004; Cahill et al., 1994; Congressional Budget Office, 2010; ACIR, 1987; Trussel & Patrick, 2012; Bolivar & Subires, 2017; Kimhi, 2008). Recessions and global events such as the current COVID-19 pandemic also impact local governments worldwide. However, the relative importance of these factors varies amongst authors and theoretically depends on the issues prevalent in individual local governments.

According to Kimhi, there are two major approaches in the literature to understanding the causes of fiscal decline in local government. These are the socioeconomic decline approach, where socioeconomic processes over which local officials have no control are the root causes of fiscal decline and the local management and political environment approach (Kimhi, 2008). The Advisory Commission on Intergovernmental Relations also maintains that municipal fiscal distress is the "result of a complex array of economic, social and political factors that are difficult to separate" (Advisory Commission on Intergovernmental Relations, 1987).

The above approaches provide a good overarching framework within which factors affecting local government fiscal health generally, as cited by other researchers and academics, can be categorised. For example, Trussel, Patrick, Cahill and others describe the causes of poor fiscal health as "reductions in tax revenue collections brought on by the recession, the abolition of general revenue sharing and other changes in the intergovernmental grant system, demographic shifts and structural changes in the economic base, and increased demands for service delivery (Cahill et al.,1994) changes in socioeconomic conditions such as per capita income, poverty and education; changes in the physical condition of infrastructure assets; and changes in financial factors such as external or grant revenue dependency, debt financing and tax revenues (Trussel & Patrick, 2012). It is noted that these causes can be regarded as factors within the two broad approaches suggested above.

2.3.1   *Socioeconomic decline approach*

According to this approach, the primary causes of municipal fiscal distress are changes to the external economic and social environment brought about by demographic and structural changes beyond the control of local officials, rather than poor management and political decisions (Kimhi, 2008). This approach emphasises that there are three groups of causes that

act in combination which explain poor fiscal health: national business cycles; suburbanisation and decline in local business activity; and state and federal policies towards local government (Kimhi, 2008).

2.3.1.1   *National business cycles*

These refer to the economic cycles of the national economy, specifically to periods where the national economy experiences growth and prosperity and periods characterised by recessions and unemployment or transitory economic shocks. Due to the link between local economies and national economies, during periods of weak economic conditions or economic contractions, local governments can experience fiscal stress because of reduced intergovernmental fiscal transfers or state aid and an increase in the demand for some services, such as public health, public transportation, police protection, etc. (Congressional Budget Office, 2010; Kimhi, 2008). The ACIR refers to these as cyclical forces that are short-term in nature and can last anywhere from two to five years (ACIR, 1987).

For the first time in 17 years, South Africa was plunged into a national economic recession as a result of the 2008 global financial crisis. In 2009, South Africa's export of manufactured goods and primary commodities such as gold, platinum and chrome were drastically reduced due to diminished consumer demand (Steytler & Powell, 2010). There were also reductions in financial flows affecting the availability of commercial credit and financial inflows turned to outflows while share prices experienced a sharp decline (Steytler & Powell, 2010). Public expenditure exceeded revenue, the budget deficit was funded through increased borrowing, the declines in revenue led to expenditure re-prioritisation and social assistance increased rapidly because of increasing unemployment and higher consumer inflation (Steytler & Powell, 2010).

Although national government buffered the effect of the recession on local government by not reducing funding to local government in this period, municipal revenues were not spared as a result of higher unemployment and increased inflation. The decline in household income led to higher levels of non-payment within municipalities (Steytler & Powell, 2010) consequently affecting municipal fiscal health.

2.3.1.2   *Suburbanisation and the decline in local business activity*

This refers to long-term changes in the structure of a local economy. These can result in long-term imbalances in local budgets (Congressional Budget Office, 2010) making it difficult for the local authority to collect enough revenue to cover spending demands irrespective of what is happening in the national economy (Hendrick, 2011).

Suburbanisation refers to the mass movement of households, usually the middle and upper-class households and businesses (firms) out of the city and into the suburbs leaving the city with a predominantly poorer population (Kimhi, 2008). The out-migration of affluent taxpayers affects the city's tax base and the subsequent in-migration of a more economically deprived or poor population, places pressure on the city's expenditure (Kimhi, 2008). According to Hendrick, even though these governments may be well run politically and administratively, their local economies do not provide sufficient wealth from which to draw enough revenues to provide adequate services, severely compromising their financial condition (Hendrick, 2011). "In effect these governments are not fiscally sustainable in the long-run" (Hendrick, 2011). Examples of where these have occurred in the United States include Cleveland, Philadelphia, Buffalo, Pittsburgh and Detroit.

2.3.1.3   *The impact of intergovernmental policies on local government fiscal health*

In many countries, local government functions have been decentralised. Decentralisation involves the transfer of financial, administrative and political powers to subnational units of government. There are three types of decentralisation, namely, deconcentration, which refers to the dispersion of responsibilities from central government to regional branch offices or local administrative units; delegation, where local governments act as agents for central government and execute certain functions on its behalf, and devolution, which is the most comprehensive type of decentralisation involving the transfer of authority to local government to both implement and decide what is done (Bird & Vaillancourt, 1998). While decentralisation is intended to increase the effectiveness and efficiency of service delivery, if improperly structured, it can create several fiscal problems for local government. Firstly, if local governments are assigned too many service delivery obligations without being assigned adequate taxing powers or intergovernmental grants from which to finance these obligations, fiscal imbalances will result which over time will create a fiscal crisis.

Secondly, when governments choose to reduce intergovernmental aid to local governments without a corresponding reduction in service delivery obligations, fiscal problems of varying magnitudes are likely to be induced, as was the case in the United States during the 1980s (Kimhi, 2008). Thirdly, linked to the previous point, Hendrick also states that when local governments are too reliant on intergovernmental aid to fund critical services, fiscal problems are also likely to occur (Hendrick, 2011).

2.3.2   *The local management approach*

According to this approach, political dynamics, the distribution of power within a community, financial management competence and skills as well as the choices that the city makes concerning resource management are what ultimately determine its fiscal fate. While proponents of this approach do not discount the effect of socioeconomic processes and external factors on a city's financial status, they assert that the political system is the ultimate determinant of whether a city will deteriorate into a crisis or will remain in relatively good fiscal health (Kimhi, 2008).

Hendrick has also stated a similar set of causes being the primary reason behind several fiscal problems in the United States. According to Hendrick, political fragmentation combined with a lack of fiscal discipline and controls, general incompetence, illegal activities and bad financial decisions underscore the decline in the fiscal health of many local governments (Hendrick, 2011).

Within the local management approach, there are two slightly opposing views: one that regards the skills and competence of the local officials as the determining factor in the fiscal health of the city and the other which is more a commonly held view that focuses not on the local officials themselves but rather on the political system in which they operate (Kimhi, 2008).

2.3.2.1   *Municipal officials*

Advocates of this approach view the abilities, skills and competence of municipal officials as key in determining a city's fiscal health. Incompetent local officials will often implement unsound financial practices and these, in turn, may result in financial crises (Kimhi, 2008). Important to this argument are financial disclosure practices, the failure to cut expenditure when revenues start to decline, the inability to correctly estimate revenues, and financial management skills and practices. Hendrick also asserts that administrative capacity, which is broadly defined as the "official's ability to identify opportunities and threats and successfully implement strategies to manage fiscal stress and improve or maintain financial condition" (Hendrick, 2011) is fundamental. According to Hendrick, financial knowledge and experience are fundamental to capacity (Hendrick, 2011).

Quoting from a study undertaken by Martin into the financial distress of Boston and Detroit, it is argued that in both cases, the primary reason behind the deterioration of these cities was poor financial management where officials constantly overestimated revenues and underestimated

the city's fund reserves problem and justified large spending that reflected no connection with the actual economic bases of these cities (Kimhi, 2008). Martin's study concluded that accumulating municipal deficits resulted from accounting manipulations that local management perpetuated (Kimhi, 2008).

In the case of San Diego and Orange County, Hendrick attributes fiscal challenges to risky investments and in the case of Jefferson County to risky borrowing but simultaneously acknowledges that the actual incentives and opportunities to engage in risky borrowing and investments were borne from institutions that weakened governance by not promoting good financial management and practices (Hendrick, 2011).

According to the findings of a skills research study conducted by the Local Government Sector Education and Training Authority of South Africa (LGSETA) in 2020, municipalities in South Africa face a prevalence of unqualified and unskilled staff and almost one-third of local government workers in the country are mismatched by their field of study (Local Government Bulletin, 2020). The study also found that the skills set required for local government is constantly changing with critical skills identified as research and policy, financial planning and management, strategic leadership, project and contract management and ICT skills (Local Government Bulletin, 2020). In addition, spatial variations in the country affected the ability of municipalities to recruit skilled workers and subsequently, several municipalities have vacancies at professional and technical levels, with a severe shortage of engineers, planning (spatial and strategic) and financial management skills.

2.3.2.2   *Political environment*

Advocates of this approach, attribute financial deficits and fiscal challenges to the political environment and processes governing local authorities. According to Fuchs, differences in local political processes can explain why some economically declining cities experience fiscal problems while others remain fiscally stable (Fuchs, 1992). Political fragmentation, which is defined as "the degree to which individual policymakers internalise the cost of one dollar of aggregate expenditure" (Perotti & Kontopoulos, 2002) is cited as the key driver of excessive public spending and poor fiscal outcomes.

Political fragmentation distinguishes between fragmentation based on size—a reference to the number of decision-makers in the budgetary process (size fragmentation) or fragmentation based on procedure, i.e. the structure of the process in which they interact (procedural fragmentation) (Perotti & Kontopoulos, 2002).

2.3.2.2.1 Size fragmentation

As the number of decision-makers in the budgetary process increases, the total budgeted expenditure may increase as well. This derives from the common-pool problem—a concept developed by Weingast and others in 1981 (Perotti & Kontopoulos, 2002). According to this approach when there are several fragments of the community participating in the budget process, each fragment can make its budgetary demands, the cost of which will be spread across the entire tax base (common pool). There is thus an incentive for the different fragments to increase their budgetary demands and therefore the total budgeted expenditure increases. Perotti and Kontopoulos found that there is a positive correlation between size fragmentation and growth of deficits and expenditure and that size is particularly important in times of economic difficulty and fiscal stress (Perotti & Kontopoulos, 2002).

Interest groups also play a dominant role in a politically fragmented environment. The re-election of public officials is often dependent on interest group support, thus giving these groups considerable influence over the financial policies of government (Kimhi, 2008).

2.3.2.2.2 Procedural fragmentation

How the number of decision-makers interact with one another can also affect the fiscal health of local government. Where the budgetary process is decentralised with no single entity controlling the process and each decision-maker having the same voting power, spending power tends to increase (Kimhi, 2008). On the contrary, if one entity is given the authority to veto the budget's approval, it can reduce the government's deficit and improve the fiscal health of a locality, even if size fragmentation is large (Kimhi, 2008).

According to Fuchs, the nature of political interaction was one of the key reasons why Chicago was able to remain fiscally stable in 1975 while New York City, during the same period, experienced a fiscal crisis (Fuchs, 1992). In New York, there was no central authority over the budget process, there was no strong party organisation, mayors relied on the support of interest groups to create winning coalitions, the support of interest groups came with a fiscal price tag and all key players in the city's budget process acted independently and supported demands that were not endorsed by the Mayor (Fuchs, 1992). In contrast, Chicago had centralised control over the budget through the Chicago Democratic Party Organisation and the party guaranteed Chicago mayors a loyal vote on election day and the City followed the mayor's lead on the budget (Fuchs, 1992). However, in the case of New York, an analysis conducted by Shalala

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and Bellamy determined that the crisis was also due to the changing population and economic characteristics, national economic difficulties, state and federal government action in addition to the inaction and weaknesses in the political system itself (Shalala & Bellamy, 1977).

In South Africa, there have been numerous cases where political instability and infighting amongst elected municipal councillors have led to failures in municipal finances and service delivery. In the City of Tshwane, the 2016 local government elections led to the formation of a coalition government between the Economic Freedom Fighters (EFF) and the Democratic Alliance (DA), thus giving the coalition the majority of seats in the municipal council. However, when the DA refused to support the radical land policies of the EFF, the EFF decided to oust the DA mayor who secured this position through the coalition (Maserumule, 2020). The other majority party at the time, the African National Congress (ANC) exploited this fallout and together with the EFF walked out of council meetings or stayed away from council meetings, making it impossible to obtain a quorum, leading to a collapse of the Tshwane Municipal Council and an inability thereof to take decisions on the running of the City's affairs (Maserumule, 2020).

Similarly, in the Nelson Mandela Bay Metropolitan Municipality, political coalition parties have undermined the stability of the municipality. In the period 2011 to 2016, the Municipal Council was characterised by unprecedented levels of instability, gross financial mismanagement, maladministration, institutionalised corruption, increased levels of irregular and wasteful expenditure, a cash flow crisis and double-digit hikes in rates and tariffs whilst churning out three mayors and five municipal managers in this period (Whitfield, 2020). In the 2016 local government elections, a new coalition government was formed, and a new Mayor was appointed. The Mayor prioritised cleaning up corruption in the administration, terminated more than R650 million in corrupt contracts, suspended officials, opened up Mayoral Committee meetings and tender adjudication processes to the public, focused on improving the City's finances, increased capital spending and imposed single-digit increases for rate-payers (Whitfield, 2020). However, the clean-up efforts were not supported by the entire coalition and in 2018, the Deputy Mayor was removed, setting in motion a chain of events that would smear good governance as racist, thereby opening up the door to remove the Mayor in office and establish a new coalition that would once again undermine the financial stability of the municipality.

2.4 Fiscal stress in other countries

As indicated in the previous section, the literature on local government fiscal health is concentrated mainly around the historical experiences of local government in the United States. There is, however, limited literature on the causes of fiscal stress and the state of fiscal health in other countries. Some of the available literature is presented below to provide a contextual view of what drives fiscal health challenges in countries other than the United States.

2.4.1 *Australia*

In Australia, interest in the "financial sustainability" of local government emerged as an area of concern in the 2000s. Much research was commissioned to firstly define financial sustainability as a concept and then develop a set of measures against which councils could be measured against this definition. According to Dollery, "a fundamental problem faced by all these attempts at tackling financial sustainability in local government resides in providing a precise definition for the concept and determining how to measure financial sustainability from the available data" (Dollery, 2006). However, there was unanimous agreement amongst researchers that many local authorities were in acute and worsening financial distress (Dollery, 2006).

However, Australia's first experience with local government's fiscal failure was only experienced in 2013 when Central Darling Shire in New South Wales was suspended as the first local government to suffer a severe liquidity crisis (Drew & Ryan, 2016). Since then, there have been numerous reports indicating that local governments all over Australia are facing a financial sustainability crisis (Drew & Ryan, 2016) as a result of expenditure rising at a faster rate than revenues, imposition of taxation limits, the allocation of financial assistance grants in a manner that lacks empirical grounding and where councils are allowed to take on debt without first calculating their capacity to do so (Drew & Ryan, 2016).

2.4.2 *Canada*

According to Bird, concern has been expressed about the fiscal health of Toronto and other large Canadian cities even though evidence suggests that Canadian cities are generally fiscally healthy (Bird, 2013). Bird further states that in Ontario, for example, no cities have run operating deficits (they are not allowed to), no city has made use of excessive levels of borrowing to finance capital expenditure, no city has implemented significant property tax increases and no city has incurred large tax arrears (Bird, 2013). In addition, he states that all cities have become less reliant on provincial grants (Bird, 2013).

Interestingly, according to Bird, the fiscal health of a city has less to do with balancing its budget than with the quantity and quality of services provided and the state of the municipalities' infrastructure (Bird, 2013). Aligned to this perspective, he states: "In the Greater Toronto Area (GTA), there is evidence of continuing and perhaps even increased problems of poverty and homelessness as well as increasing awareness that investment in the infrastructure needed to support continued economic growth – transit, roads, water and sewers for example … falls short of what seems to be required" (Bird, 2013).

It can be concluded that while municipalities in Canada can project a healthy financial position on paper, the risk of underinvestment in key infrastructure sectors is likely to have negative consequences on the security of future revenue streams.

2.4.3 *India*

According to Bandyopadhyay, there is a lack of proper decentralisation of functions in urban local bodies in India coupled with inadequate revenue generation and expenditure shortfalls leading to poor service delivery (Bandyopadhyay, 2014). Calculating own revenue sources is constrained by methodological challenges as well as data availability (Bandyopadhyay, 2014). Furthermore, the composition of expenditure is not uniform across Indian cities making the determination of fiscal gaps difficult. Therefore, the main problem experienced in assessing the fiscal health of Indian cities is that there is no rigorous methodology to estimate expenditure needs and revenue capacity (Bandyopadhyay, 2014). However, the fact that functions are still not properly decentralised also complicates the determination of fiscal health in Indian cities.

2.4.4 *China*

The 1994 Budget Law in China restricted local government borrowing. According to Article 28 of the 1994 Budget Law, local budgets must be in balance and local governments must not borrow from banks or issue bonds unless otherwise prescribed by law or authorised by the State Council (Asian Development Bank, 2014).

To overcome this problem, local governments developed a range of financing instruments and most financing was provided indirectly by the banks. Popular amongst these instruments were the Local Government Investment Vehicles (LGIVs). These were autonomous investment corporations, construction investment corporations, and utility investment corporations established to borrow from various sources to finance local government investment projects (Asian Development Bank, 2014). By mid-2013, LGVIs made up 39% of local government debt (Asian Development Bank, 2014).

LGVIs are wholly owned by the local government, which is under the authority of the central government implying that LGVIs are government-guaranteed and that central government will carry the risk of default that contributed to a low cost of debt (Asian Development Bank, 2014). However, according to the ADB, LGVIs vary in their quality and structure, their operations and financing are opaque, their formal accountability is often weak and their management capacity is generally low (Asian Development Bank, 2014).

This type of financing instrument poses several risks to the already strained funding position and the fiscal health of Chinese local governments. In particular, the Asian Development Bank highlights the following risks that financing through LGVIs can pose: "(i) a lack of transparency in budget financing, (ii) fragmentation of local budgets, because the LGVIs allow substantial off-budget activities, (iii) dependence on unstable sources of local financing and the financial sector, and (iv) macroeconomic risks from the accumulation of low quality and hidden debt" (Asian Development Bank, 2014).

2.5 Effects of recessions and other global events on local government fiscal health

In just more than a decade, two major global events have had a catastrophic event on many local governments worldwide. The 2008 global financial crisis was felt by countries large and small, rich and poor, creating one of the deepest financial and economic crises since the 1930s. The crisis exposed just how integrated world economies now are and as a result, how vulnerable these economies can be to the effects of crises created outside their borders. However, the effects of the crisis varied between countries with some reporting lower levels of exposure than others.

The United Cities and Local Governments (UCLG) conducted a survey-based assessment of 67 countries in six regions to assess the impact of the global financial crisis on local governments. The six regions include Africa, North America, Latin America, Asia-Pacific, Eurasia and Europe. A high-level summary of the impact of the global financial crisis on local government in each of these regions is provided below:

2.5.1 *Africa*

(Benin, Burkina Faso, Burundi, Ghana, Mali, Niger, Senegal, Tanzania, Uganda and Zimbabwe)

According to the results of the survey by the UCLG, the effects of the 2008 global financial crisis (GFC) on Africa were largely experienced in the reduced access to external credit which negatively impacted those local governments with legislated authority to borrow externally. However, most countries had limited borrowing power. Small and medium businesses within local communities could not secure loans, which consequently affected production and unemployment. Many local authorities are decentralised but lack financial autonomy and are grant dependent. State financial transfers degenerated within the context of the crisis. The delay or suspension of transfers and the inability to access funds for urban development led to a delay in projects. The reductions in income created liquidity challenges and some local governments could not meet financial commitments, leading to mistrust and breakdown of systems. Some countries reported a cutback in service provision and/or higher service fees when the citizen need for financial support was higher due to unemployment (United Cities and Local Governments, 2009).

2.5.2 *Asia-Pacific*

(Australia, New Zealand, Cambodia, Vietnam, Pakistan, Philippines, Nepal, Korea, Indonesia, Japan, Taipei City)

The results of the UCLG survey in Asia-Pacific countries showed that access to capital became acute due to rationing by financial institutions. In Korea, local government was impacted by the reduction in issuing municipal bonds. There were losses in municipal revenues— specifically property tax, non-payment of rates and fees and a fall in liquidity due to reduction in municipal bonds. Constricting export markets resulted in reductions in business tax as well as losses in realty tax as foreign investments declined. In Cambodia, the decrease in international aid affected local government while in general there was a reduction in transfers from central government to local government. Increasing unemployment led to a need for job training programmes, an increase in social support programmes and a demand for welfare services (United Cities and Local Governments, 2009).

2.5.3 *Eurasia*

(Russia, Belarus, Kyrgyzstan, Ukraine)

In Eurasia, the UCLG survey revealed that credit for local government was scarce. Ukrainian local governments that could borrow internationally experienced a 50% depreciation in their

currency which impacted their international debts. Credit was hard to access for local businesses which harmed local commerce and employment. The main source of resources for local government in Eurasia are shared taxes and budgetary transfers, the amounts of which are determined by central government and are not based on clear and predictable rules—declines in transfers (United Cities and Local Governments, 2009).

2.5.4　*Europe*

(Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Rep, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Latvia, Lithuania, Luxembourg, FYR Macedonia, Netherlands, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom)

In Europe, local governments found it difficult to access investment resources from loans that could lead to a long-term slowdown in local development. Local governments faced decreased budget income and increased demand for expenditure with the actual impact varying per country. In most countries, transfers and grants decreased, as well as local fees and shared taxes. A notable proportion of municipalities could not cope with the budget squeeze and implemented significant expenditure cuts. There was also a significant increase in demand for social services and welfare allowances, housing support, support for the unemployed and the homeless, etc. (United Cities and Local Governments, 2009).

2.5.5　*Latin America*

(Bolivia, Brazil, Chile, Colombia, Ecuador, Honduras, Mexico, Nicaragua, Paraguay, Peru)

The impact of the crisis did not directly affect Latin American local governments as most of them had limited access to credit and financial markets. Most of the Latin American countries were expecting a fall in local fiscal collections due to the combined effect of the reduction in economic activity and unemployment. Local government taxation is low and local authorities are dependent on central government transfers. The fall in incomes from exports and/or fiscal collections directly affected local governments. In various countries, local governments reduced their recurrent expenses to respond to declining revenues (United Cities and Local Governments, 2009).

2.5.6 *North America*

(USA and Canada from the National League of Cities (NLC) in the United States and the Federation of Canadian Municipalities (FCM))

Tightening credit markets made it difficult for US cities to maintain debt-funded projects. There was a collapse of bond insurers in the US which guaranteed nearly half of the $2 700 billion bond market. Canadian municipalities did not report any significant change in their ability to access credit in 2009. In both Canada and the US, the impact on LG budgets was felt through reductions in the payment of rates and fees. In the US, municipalities are reliant on sales and income tax which react strongly to changes in economic activity. In Canada, municipalities rely on property rates and fees for more than 50% of their revenues. State aid to cities in the US decreased but cities are less reliant on state aid than they were previously. Most cities in the US were less able to meet fiscal needs—revenues were raised for services and taxes were increased. Sixty-seven per cent of cities in the US cut their staff budgets, 62% delayed or cancelled capital projects and 32% cut services (except public safety). Both countries experienced rising unemployment (United Cities and Local Governments, 2009).

The international comparison provided above serves to illustrate that deteriorations in the fiscal health of local government are caused by a wide array of factors. However, benchmarking the actual fiscal health of municipalities across countries and even within countries is a complex task requiring consistency in definitions, measurement scales and reporting. Due to the multi-causal nature of poor fiscal health, the different dimensions must be evaluated simultaneously. Measurement systems that focus primarily on one dimension of fiscal health can be severely limiting. In terms of the solvency framework, fiscal health is also linked to different timeframes. An assessment of fiscal health should express the current, short, medium and long-term condition of the municipality. A municipality may be in good health in the short term, but indicators that measure long-term solvency may highlight a substantially different outcome.

2.6 The measurement of local government fiscal health

According to Justice and Scorsone, "fiscal health is to some extent in the eyes of the beholder, that it is shaped by a complex web of interdependent factors over time so that measurement is difficult and prediction even more so, and that different stakeholders may have different definitions of fiscal health as well as different analytical resources and access to information" (Levine, Scorsone & Justice, 2013).

There have been numerous attempts since the 1970s to assess and predict the fiscal health of local government. However, similar to the challenges encountered in defining local government fiscal health, there is yet no single measure, model or methodology that has emerged as the "gold standard" in assessing local government fiscal health. Notwithstanding, the literature reveals that some measurement methodologies are more prominent. The current measurement systems depended largely on the preferences of the researcher, their unit of analysis and the data available to them (McDonald, 2017), hence there is often disagreement amongst researchers on the best method for measuring local government fiscal health.

Designing a fiscal health system for local government requires several considerations, such as deciding on the appropriate indicators (Padovani & Scorsone, 2011), striking a balance between simplicity and comprehensiveness (Honadle, 2011), the intended audience as these would influence the choice of indicators (Honadle, 2011), the availability of resources and data, the multidimensional nature of fiscal health as a concept, and the evolving environment in which local governments operate. In this regard, Hendrick asserts that since the initial body of research was done from the 1970s onwards on fiscal health challenges and measurement methodologies, much has changed that is now relevant to the assessment of local government financial conditions (Hendrick, 2011). For example, local governments have new sources of fiscal stress in the form of tax and expenditure limits and unfunded mandates, and their fiscal structure is now more complex and diversified (Hendrick, 2011). Furthermore, the earlier systems were designed for use by larger central cities rather than smaller suburban municipalities (Hendrick, 2004).

In light of this, Hendrick advocates that "the combination of these changes, the limited applicability of many existing measures, and the wide range of emphases across measures from different fields demonstrate the need for more current and comprehensive assessments of municipal fiscal health" (Hendrick, 2011). However, considering the complexity of constructing one, comprehensive indicator of fiscal health, Hendrick proposed that measures of the different dimensions should be constructed separately and assessed concerning one another to produce a complete and more accurate picture of fiscal health (Hendrick, 2011).

Generally, approaches to fiscal health measurement can be categorised as either economic, fiscal and financial, or comprehensive (Gordon, 2018). The earliest approaches tended to favour economic metrics largely because they provided a better basis than fiscal metrics for distributing federal aid and could not be manipulated (Gordon, 2018). More recent approaches have been borrowed from the private sector using financial ratios obtained from financial statements (Gordon, 2018).

Several fiscal health measurement systems have been developed since the 1970s in response to the fiscal crises experienced by cities in the United States and even more empirical research into the subject since the global financial crisis in 2008. Measurement systems can provide relative assessments, absolute scores, measure financial conditions or predict financial conditions. However, while no single measure of the financial condition has emerged, several have become more prominent in use (McDonald, 2017). These include:

- Brown's Ten-point Test of Financial condition;
- Kloha, Weissert and Kleine's Ten-point Scale;
- Wang, Dennis and Tu Solvency Test; and
- Groves, Nollenberger and Valente Fiscal Trend Monitoring System.

2.6.1 *Brown's Ten-point Test*

Brown's test was developed in 1983 and is an example of a purely financial approach to measuring fiscal health. The test is designed using ten ratios aligned to five different dimensions of financial health: revenue, expenditure, operating position, debt structure and unfunded liabilities (McDonald, 2017). Brown's test provides a relative assessment of the fiscal health of a municipality. Ratios are calculated for the municipality of interest and a group of similarly sized municipalities using information from the Government Finance Officers Association (GFOA) Financial Indicators database (McDonald, 2017; Hendrick, 2011). It works on the basis that each ratio is quartiled and the municipality being assessed compares its performance to see which quartile it falls into relative to its peers. Each quartile is given a score ranging from -1 for the first quartile to +2 for the fourth quartile. The result is a fiscal health score of between -10 and +20. Scores of 10 points or more place the municipality amongst the best performing while scores of -5 and less implies that the municipality is amongst the worst performing (McDonald, 2017; Honadle, 2004).

Table 2.2: Brown's Ten-point Test of Financial Condition

Indicator	Type	Measurement
Total revenues per capita	Revenue	Total revenues for all governmental funds (excluding capital project funds) divided by population
Intergovernmental revenues/Total revenues percentage	Revenue	Intergovernmental revenues for the general fund divided by total general fund revenues
Property tax or own source tax Revenues/Total revenues percentage	Revenue	Total tax revenues levied locally for the general fund divided by total general fund revenues
Total expenditures per capita	Expenditure	Total expenditures for all governmental funds (excluding capital project funds) divided by population
Operating surplus or deficit/operating revenues percentage	Operating position	General fund operating surplus or deficit divided by total general fund revenues
General fund balance/General fund revenues percentage	Operating position	General fund unreserved fund balance divided by total general fund revenues
Enterprise funds working capital coverage percentage	Operating position	Current assets of enterprise funds divided by current liabilities of enterprise funds
Long-term debt/Assess value percentage	Debt	Long term general obligation debt divided by total general fund revenues
Debt service/Operating revenues percentage	Debt	General obligation debt service divided by total general fund revenues
Postemployment benefit assets/Liabilities percentage	Unfunded liability	Funded ration (i.e. the actuarial value of plan assets/actuarial accrued liability)

Table 2.2: Brown's Ten-point Test of Financial Condition (McDonald, 2017 p.5; Maher & Nollenberger, 2009, p.62)

Brown's Ten-point Test is recognised for its simplicity and that it requires minimal data which can easily be found in financial statements (McDonald, 2017; Honadle, 2004) but is still comprehensive enough to assess fiscal health. However, ratios utilised by Brown were deemed to be most common at the time, but there has been no research to support if they are the correct ratios (McDonald, 2017). Furthermore, McDonald also states that the test does not provide a

true understanding of fiscal health but only an indication of how well a municipality is doing relative to its peers (McDonald, 2017). One of the significant drawbacks of this model is that the test results can also be manipulated or "gamed" by choosing comparison municipalities that are having financial difficulties (McDonald, 2017).

2.6.2 *Kloha, Weissert and Kleine: The ten-point scale*

According to Kloha, Weissert and Kleine, most states adopted a very reactive approach to fiscal distress. States did not have an early warning system for detecting and preventing fiscal distress before it occurs (Kloha, Weissert & Kleine, 2005). The ten-point scale provides an early warning for serious financial difficulties. Initially developed for use by the state to oversee the fiscal status of municipalities in Michigan, the tool can also be used by local governments to assess their financial condition (Kloha, Weissert & Kleine, 2005).

The ten-point test also seeks to remedy several shortcomings in previous methodologies, for example, the inclusion of too many variables in the Fiscal Trend Monitoring System, the exclusion of key variables such as tax base trends and population in Brown's test and the absence of balance-sheet data in the indicators used by the Congressional Budget Office (Kloha, Weissert & Kleine, 2005).

Kloha et al. also found that the use of relative assessments rather than absolute assessments can punish local governments whose performance is still positive (Kloha, Weissert & Kleine, 2005). For example, in Brown's test, if the total revenues of a government exceed total expenditures, local governments with the smallest surpluses are still penalised as they would fall in the bottom quartile.

Figure 2.3: How does the ten-point test work?
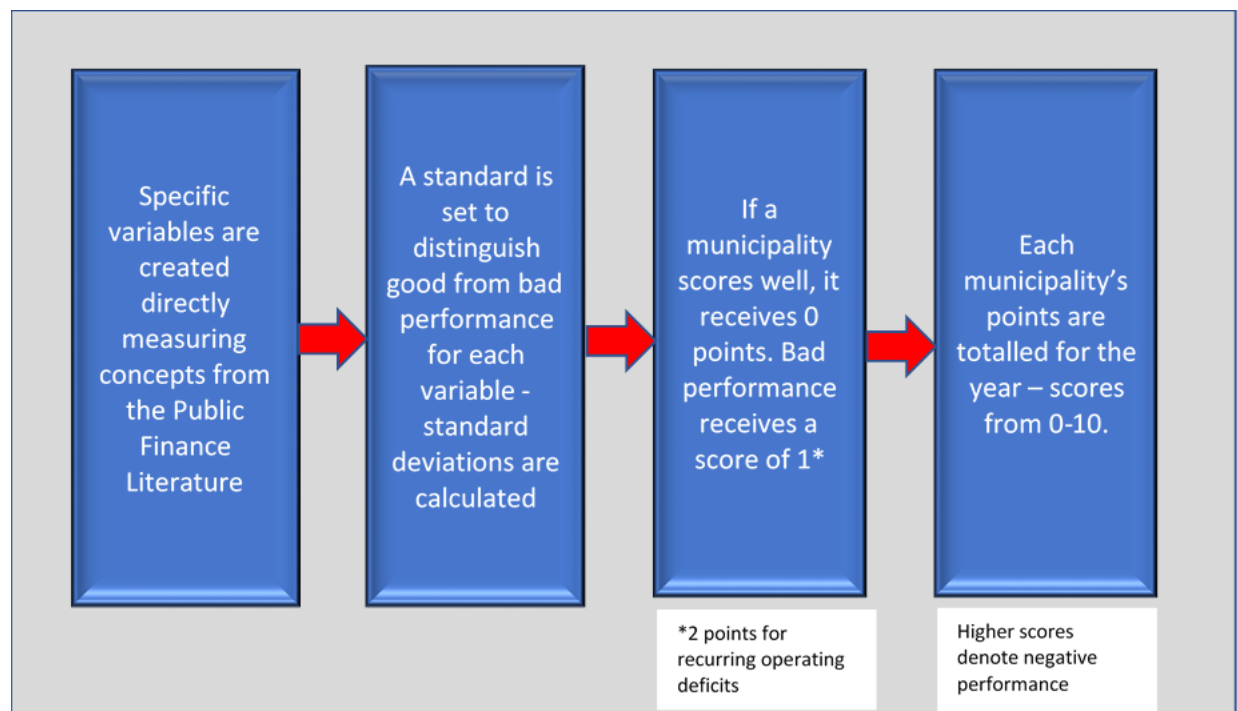
Figure 2.3: Ten-point test (Source: Kloha, Weissert & Kleine, 2005)

Table 2.3: Indicators of fiscal distress

Indicator		Description	Standard
Indicator 1	Population growth	Two-year growth	If < 0, then 1
Indicator 2	Real taxable value growth	Two-year growth	If < 0, then 1
Indicator 3	Large real taxable value	Looks for large drop over a	If < -.04, then 1
Indicator 4	General fund expenditures as a percentage of taxable value	Current general fund expenses divided by current taxable value	Townships: If > .01, then 1 Cities: If > .05, then 1
Indicator 5	General fund operating deficit	Current general expenditures subtracted from current general fund revenues divided by general fund revenues	If < -.01, then 1
Indicator 6	Prior general fund operating deficits	Checks indicator 5 for two previous years	A unit is assigned a point for each year that an operating Score may range from O to 2

Indicator		Description	Standard
Indicator 7	Size of general fund balance	General fund balance as a percentage of general fund	If < .13, then 1
Indicator 8	Fund deficits in current or previous year	Current or previous year deficit in major fund	If fund deficit is found, then unit scores a 1
Indicator 9	General long-term debt as a percentage of taxable value	Current general long-term debt divided by current taxable value	If > .06, then 1

Table 2.3: Indicators of fiscal distress (Kloha, Weissert & Kleine, 2005)

2.6.2.1   *Conversion of scores into an early warning system*

A key objective of the ten points was to predict fiscal distress before it occurs. Kloha, Weissert and Kleine suggested dividing the scale into categories that would distinguish between the different gradations of fiscal health. The categories are suggestive, but illustrate how a graded scheme could be used to allow for different types of interventions (Kloha, Weissert & Kleine, 2005).

Table 2.4: Development of an early warning system

Points from scale	Category	State action
0-4 points	Fiscally healthy	No action
5 points	Fiscal watch	Local government notified of relatively high score
6-7 points	Fiscal warning	Local government notified and placed on published list for current and following year
8-10 points	Fiscal emergency	Local government notified, placed on published list for current and following year, automatic consideration of review team

Table 2.4: Early warning system (Kloha, Weissert & Kleine, 2005)

While the ten-point scale can be viewed as an improvement on the methodology developed by Brown, similar to Brown's methodology, the ten-point scale does not include socioeconomic variables other than population growth.

2.6.3 *Wang, Dennis and Tu solvency test*

According to Wang, Dennis and Tu, the focus of a government's financial condition should be on the actual measurement of the concept and not on the factors that drive or determine it (McDonald, 2017). "Socioeconomic factors may affect the financial condition but they are not financial condition in itself" (Wang, Dennis & Tu, 2007).

Central to their approach was that financial condition is defined as the level of financial solvency which includes the dimensions of cash, budget, long-term and service-level solvency. For each level of solvency, they developed a set of indicators. The indicators selected for their study were those that are commonly used and considered valid by both researchers and financial statement users (Wang, Dennis & Tu, 2007). A total of 11 indicators were produced across the four areas of solvency.

Table 2.5: Indicators of financial solvency

Indicator	Definition	Dimension
Cash Ratio	(Cash + Cash equivalents + Investments) / Current Liabilities	Cash Solvency
Quick Ratio	Cash + Cash Equivalents + Investments + Receivables / Current Liabilities	Cash Solvency
Quick Ratio	Current Assets / Current Liabilities	Cash Solvency
Operating Ratio	Total Revenues / Total Expenses	Budget Solvency
Surplus (Deficit) per capita	Total Surpluses (deficits) / Population	Budget Solvency
Net Asset Ratio	Restricted + unrestricted net assets / Total Assets	Long-Run Solvency
Long-Term Liability Ratio	Long-term (non-current) liabilities / Total Assets	Long-Run Solvency
Long-Term Liability per capita	Long-term (non-current) liabilities / Population	Long-Run Solvency
Tax per capita	Total Taxes / Population	Service Solvency
Revenue per capita	Total Revenues / Population	Service Solvency
Expenses per capita	Total Expenses / Population	Service Solvency

Table 2.5: Indicators of financial solvency (Wang, Dennis & Tu, 2007: 8-9)

To convert the indicators into a measure of financial condition, they followed a similar method to that of Brown, utilising standardisation as opposed to peer comparison (McDonald, 2017). Certain indicators had to be reversed to ensure that the scores do not cancel each other out and the average was calculated for each dimension. The final result was a score per dimension that could be summed up to get a measure of fiscal health known as the Financial Condition Index.

The advantage of the solvency test is that it is easy to administer as the information is sourced from the annual financial reports of government. Using standardisation as opposed to peer comparison also eliminates the risk of gaming or manipulation that could occur in relative assessments.

2.7 Socioeconomic approaches

2.7.1 *Ladd and Yinger's need-capacity gap*

Ladd and Yinger (1989) developed a need-capacity gap approach to measuring the fiscal condition. The premise of this approach was that a city's financial condition is best measured by the gap between its expenditure need and its capacity to raise revenues, where variations in both need and capacity reflect only those factors outside the control of local officials (Ladd, Yinger & Rechovsky, 1991).

Expenditure need, which is not a reflection of actual spending by a city, indicates how much a city would have to spend if it provided public services of average quality to its residents and the only differentiating factor between the selected city and an average city were cost factors that fell outside the control of city officials (Ladd, Yinger & Rechovsky, 1991).

This approach recognises that both expenditure and revenue are essential to determining a city's fiscal condition. To measure revenue, a standardised tax rate or tax burden was applied to the city's tax base. Again, the focus was not on actual tax levels but on the potential tax levels that could be achieved if the city applied a standard tax rate. Furthermore, actual taxes are a reflection of both tax capacity and tax effort. By imposing a standardised tax rate, it is possible to measure the underlying capacity of a city to raise revenue, ignoring local controlled decisions relating to tax effort (Ladd, Yinger & Rechovsky, 1991).

Positive need capacity gaps were used as a basis for determining intergovernmental aid to cities. Cities with higher need and lower capacity were allocated greater amounts of intergovernmental aid.

A drawback of this approach is that municipalities are not homogenous. They operate in an environment where the cost of providing services can differ greatly amongst municipalities because of geographic differences, poverty levels, crime, scope and quality of services, etc. Arriving at a standard cost and a standardised tax rate to be applied to all cities is not only difficult in practice but may lead to an inaccurate assessment of fiscal condition and / or fiscal capacity. The assessment is also relative and not absolute.

2.7.2 *Nathan and Adam's City hardship index*

In the 1970s, Nathan and Adams developed an index that would allow for the assessment of relative hardship conditions across 55 cities in the United States. In developing the index, they used six factors that were equally weighted to compare city and suburban areas. The six factors are listed in the table below.

Table 2.6: Nathan and Adam's City hardship index

Factor	Definition
Unemployment	Percentage of Civilian Labour force unemployed
Dependency	Person less than 18 or above 64 years of age as a percentage of the population
Education	Percentage of persons 25 years of age or more with less than 12th grade education
Income Level	Per capita Income
Crowded Housing	Percent of occupied units with more than one person per room
Poverty	Percent of families below 125% of low-income level

Table 2.6: City hardship index (Nathan & Adams, 1989: 484)

Cities with values greater than 100 in the index compared unfavourably with their adjoining suburbs in hardship conditions (Nathan & Adams, 1989). Conversely, cities that scored less than 100 compared favourably with adjoining suburbs.

The index measures relative and not absolute hardship conditions. Nathan and Adams found that between 1970 and 1980, only seven cities moved up in the index while the remaining 45 declined (Nathan & Adams, 1989). When converted to quintiles from highest to lowest, the study found that there was a substantial improvement in the hardship conditions amongst the lower-scoring cities which suggested a widening of the gap between the best- and worse-off

cities (Nathan & Adams, 1989). This corresponded with the growing disparity in the social and economic conditions between the largest American cities during this time.

2.7.3 *Other socioeconomic empirical models*

2.7.3.1 *Zafra-Gomez, Hernandez and Bastida (2009)*

Zafra-Gomez, Hernandez and Bastida conducted research to create a methodology that would measure the financial condition of local government using the quality of services as an indicator of service-level solvency and to propose a new treatment for variables associated with the socioeconomic environment so that financial and socioeconomic indicators could be integrated into one model of financial condition albeit in different stages.

They applied this methodology to a sample of Spanish municipalities to ensure the effects of the socioeconomic environment could be minimised and the value of benchmarking could thus be maximised. The research was based on the assumption that socioeconomic environments affect the financial condition of local governments. They modelled their approach on the one developed by Groves, Valente and Nollenberger (2003) focusing on the four levels of solvency: cash, budgetary, service-delivery and long-run solvency. However, to measure service-level solvency, they used a series of indicators from other studies to determine the quality of services provided by municipalities. The services deemed to be fundamental were roads and highways, public parks, street lighting and waste collection.

In Phase 1 of their methodology, they focused on measuring the financial factor according to the solvency approach. In addition to using a set of indicators to measure the quality of services provided as a measure of service-level solvency, they defined long-run solvency as an evolution of these indicators over some time. In Phase 2, the focus was on detecting the effects of the socioeconomic environment on financial conditions. They selected factors of the socioeconomic environment based on previous theoretical models. In this regard, they also examined the correlation between the selected variables and indicators of financial condition and used variables that are utilised by some national and regional governments to allocate transfers to municipalities.

In the final phase of their approach, they sought to minimise the effect of the social and economic environment. To achieve this, they created a set of homogenous spaces or groups using a set of socioeconomic variables. The intention was "if the characteristics of the socioeconomic environment were homogenous and all the authorities to be compared were similarly affected by their surroundings, the selection of the appropriate partner for

benchmarking would be much more effective, maximising the value of benchmarking as each indicator to be evaluated would reflect the effectiveness of the management performed by each local authority within a similar context" (Zafra-Gomez, Hernandez & Bastida, 2009).

The socioeconomic factors used in the model are outlined in the table below:

Table 2.7: Socioeconomic variables of the Zafra-Gomez, Hernandez and Bastida model

Variable	Definition
Domestic income per capita	Level of domestic income per capita
Registered unemployment	Registered unemployed adults / (population aged 15 or more) X 100
Industry	Index based on the (local) tax on economic activity (IAE) concerning industrial activity in the municipality
Commerce	Index based on the (local) IAE concerning wholesale and retail activity in the municipality
Tourism	Index based on the (local) IAE concerning tourism-oriented activities
Population aged less than 14	Number of persons aged less than 14 years in the municipality
Population aged more than 65	Number of persons aged more than 65 years in the municipality
Net Migration rate	Calculated by subtracting internal migration from total migration (internal + external) and dividing by the total population of the municipality
Dwellings per capita	Number of dwellings in the municipality divided by the population

Table 2.7: Socioeconomic variables (Zafra-Gomez, Hernandez & Bastida, 2009)

According to the bivariate correlations, the study found that the environmental variables that most influence financial indicators are the economic level of the region, the available income and the rate of unemployment, followed by the index of tourist activity, the rate of migration and the number of dwellings per inhabitant (Zafra-Gomez, Hernandez & Bastida, 2009).

The study concludes that the provision of services of higher quality causes local authorities to worsen their position concerning cash solvency, flexibility and long-run solvency and therefore determining that the state of a municipality's finances must consider the quality of services provided (Zafra-Gomez, Hernandez & Bastida, 2009).

2.7.3.2 Rodriguez Bolivar et al. (2015)

The research undertaken by Rodriguez Bolivar et al. sought to identify socio-demographic and economic variables that are either drivers or risk factors of local government financial sustainability (Rodriguez Bolivar et al., 2015).

In selecting demographic variables, they identified the factors that are analysed in most empirical studies include: population size, population density, dependency ratio, levels of unemployment, immigration and education levels (Rodriguez Bolivar et al., 2015).

They identified 11 socioeconomic variables that may influence the level of financial sustainability in local government:

a) Population size;

b) Population density;

c) Population aged over 65 years of age;

d) Population aged under 16 years of age;

e) Unemployment rate;

f) Immigration population;

g) Education level among the population;

h) Budget results;

i) Gross Domestic Product (GDP);

j) Touristic activity; and

k) Firm concentration.

The results of their study show that there was a negative correlation between population size and financial sustainability while there was no influence of population density on financial sustainability (Rodriguez Bolivar et al., 2015). Furthermore, the population aged 16 years and under and rising unemployment had negative impacts on financial sustainability, while the population aged more than 65 years or more and the immigrant population had no effect on financial sustainability (Rodriguez Bolivar et al., 2015).

The impact of education levels on financial sustainability was found to benefit the municipality in that higher education levels lead to higher population demand for information which could encourage local government to adopt more sustainable behaviour (Rodriguez Bolivar et al., 2015).

Budgetary results were positively related to financial sustainability, but there was no evidence to show the impact of GDP or touristic activities on financial sustainability (Rodriguez Bolivar

et al, 2015). There was also no conclusive result regarding the concentration of firms and the impact on the financial sustainability of local government.

2.8 Comprehensive models of fiscal health/condition

The Financial Trend Monitoring System (FTMS), initially developed by Groves and Valente (Groves & Valente 1983, 1994; Nollenberger, Groves & Valente 2003) for the International City/County Managers Association (ICMA), is the most comprehensive framework for measuring local government fiscal condition. The FTMS distinguishes between three factors—financial, environmental and organisational—that can impact the financial condition of a local authority (Gorina & Maher, 2016).

Environmental factors are those over which the community and local government have little or no control; organisational factors refer to government practices and policies; and financial factors are the outcomes of the decisions that are made concerning available environmental resources and opportunities (Gorina & Maher, 2016).

The FTMS was developed as a management tool for local government. It consists of 48 indicators that could potentially measure the fiscal condition of local government across the four dimensions of solvency, namely, cash, budgetary, service-level and long-run solvency according to Groves, Valente and Nollenberger (2003) . As a management tool, the FTMS is not used for benchmarking. Furthermore, municipalities have discretion in deciding which of the indicators are relevant to measuring fiscal condition and therefore there is no uniformity in the selection of indicators to facilitate peer comparisons. This makes it unable to assess financial conditions across government. Municipalities select the relevant indicators and track them over time to indicate citizens, policymakers and others on how the local authority is performing. The following figure reflects the 48 indicators in the FTMS model:

Figure 2.4: Comprehensive Fiscal Health Monitoring System
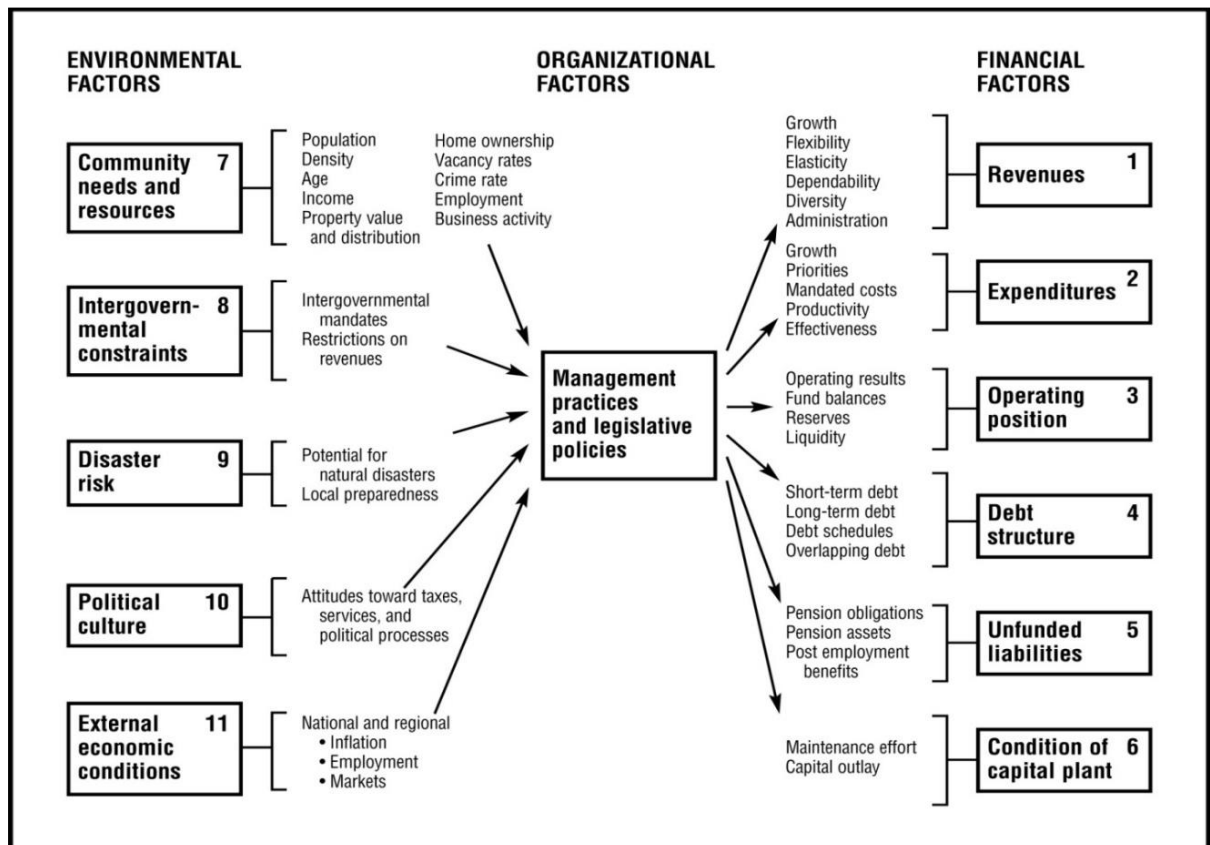
Figure 2.4: Comprehensive Fiscal Health Monitoring System (Source: ICMA, np)

2.9   Summary

Based on the international models discussed above, the following table provides a summary of the socioeconomic variables deemed to be theoretically relevant for this study:

Table 2.8: Summary of fiscal health indicators

Indicator	Nathan & Adams	Zafra-Gomez, Hernandez, Bastida	Bolivar, Moniz, Navarro-Galera and Subires	Financial Trend Monitoring System (ICMA)
Unemployment	X	X	X	X
Dependency (age)	X	X	X	X
Education	X		X	
Income Level (per capita)	X	X		X
Crowded Housing	X			
Poverty	X			

Indicator	Nathan & Adams	Zafra-Gomez, Hernandez, Bastida	Bolivar, Moniz, Navarro-Galera and Subires	Financial Trend Monitoring System (ICMA)
Dwellings Per Capita		X		
Net migration rate/immigration population		X	X	
Industrial Activity/Business activity		X		X
Commerce: wholesale and retail activity/Business activity		X		X
Tourism: tourism-oriented activities / Business activity		X	X	X
Firm concentration			X	
GDP			X	
Budget results			X	
Property value and distribution				X
Homeownership				X
Vacancy rates				X
Crime rates				X

Table 2.8: Summary of indicators based on fiscal health models (Source: Own)

In all models, the issues of unemployment, dependency, income level and tourism-related activities were deemed common as reflected by the highlights in Table 2.8. However, these variables will be supplemented by additional variables identified in the following chapter which will explore the socioeconomic context of South African municipalities.

2.10 Conclusion

Fiscal health or condition is a multi-dimensional concept and therefore there are various ways in which it can be measured. Despite more than four decades of research, there is still no consensus amongst researchers and academics on the best way to define and measure local government fiscal health. Current approaches are either financial, economic or comprehensive. However, each of the different approaches has its own shortcomings.

The approach developed by Groves and Valente in 1983 focusing on the four levels of solvency, namely cash, budgetary, service-level and long-run solvency, appears to form the basis of several other models and empirical studies. Most studies are also grounded in the analysis of ratios. Some include financial and socioeconomic ratios while others are purely financial.

While the importance of the environment in influencing the fiscal health of local government is widely acknowledged by academics and researchers in the field, there is no widespread agreement on whether fiscal health monitoring systems should include socioeconomic variables. According to Wang, Dennis and Tu (2007), they affect the financial condition of a government, but they are not a financial condition itself (Wang, Dennis & Tu, 2007). Other academics such as Hendrick believe that constructing one, comprehensive system of fiscal health is complex and that different dimensions should be constructed separately and assessed with one another to produce a more accurate picture of fiscal health (Hendrick, 2011).

Whether fiscal health should be measured using an absolute score or should be viewed as relative, is also debatable. Some view that an absolute score tends to hide the problems that may be prevalent within individual indicators which make up that score. Relative assessments can also be subject to manipulation or gaming. There is no correct way to measure fiscal health. The design of a local government fiscal health monitoring system will depend largely on what the objectives are that should be achieved by the system.

Chapter 3: A tier to a sphere: The institutional evolution of local government in South Africa

Once a tier of government subordinate to Provinces and subject to the rule of Provincial Ordinances, the Constitution of South Africa, 1996, significantly elevated the status of local government from a tier to a sphere of government with equal constitutional recognition as that of the national and provincial spheres. In addition to a significant change in its status, the role of local government was also radically transformed in post-apartheid South Africa. The "new" system of local government in South Africa is characterised by two distinct features: decentralisation, which involves the devolution of powers and functions to local government; and developmentalism, where municipalities are now supposed to be the epicentre of development and the sphere through which most of the post-apartheid prescriptions for redress in spatial, social and economic transformation are to be achieved.

However, after two and a half decades of evolved local government, the lacklustre performance of the sphere has raised some concerns, particularly relating to the underlying assumptions on which the "new" and evolved model is premised. At a virtual conference to commemorate 25 years of a democratic local sphere in South Africa (Government and Public Policy, online), some of the formative assumptions adopted to establish autonomous, interdependent, and to a large degree, self-financing municipalities were cast into the spotlight, with many involved in the original conceptualisation of the sphere questioning the relevance of these assumptions given the current circumstances. In the keynote address to this conference, it was stated that "… while we should not underestimate what has been achieved, it is probably fair to say that most of us feel that local government is not living up to the dreams we had 25 years ago … But what we are now seeing is a dangerous cycle of decline in local government, where poor performance is leading to decreased trust in local government, a loss of relative power and consequently an unwillingness amongst capable people to join local government as politicians or officials. This is leading to further deterioration in performance with significant adverse consequences for the country. And local government is critical. It is the sphere of government that most affects our everyday lives. It affects how our neighbourhoods function. It is absolutely critical to the management of the core areas of our economy" (Van Ryneveld, 2020; np).

While the decline in the overall performance of local government is visible and acknowledged by policymakers, the decline in the financial health of municipalities is of most concern given that a lack of adequate fiscal capacity, fiscal effort and financial resources will significantly impede the ability of a municipality to execute its constitutional and legislative functions. It is

critically important that in addressing the issues of poor local government performance, more attention is placed on understanding the root causes of such failure, particularly from the perspective of municipal fiscal health.

After two decades of experience, the initial confidence contained in the assumptions made in both the 1992 ANC Regional Policy Document and the 1998 White Paper on Local Government about the ability of local government to self-finance most of its operational expenditure is now questionable. The 1992 ANC regional policy document explicitly stated on the issue of finances and resources that "… the starting point should be an emphasis upon the need to strengthen local control over the use of public resources. This helps to ensure that usage is efficiently and appropriately tailored to local conditions. The link between paying taxes and receiving public services must be recognised as an important element in the strengthening of democratic accountability, and is most direct at the local level … However, there are substantial constraints on the extent to which the fiscal system can be decentralised" (Van Ryneveld, 2020; np).

Making an unambiguous determination on the ability of municipalities to finance most of their operating expenditure from their revenues is neither simple nor clear-cut. There are several incidents of poor governance and institutional ineptness in municipalities. These are often cited as perennial issues in the Annual Consolidated Reports of the Auditor-General and include poor budgeting practices, ineffective financial management, increasing non-payment for services by municipal debtors and increasing interest changes which result in fruitless and wasteful municipal expenditure. Similar findings related to municipal governance matters such as poor political leadership, high vacancy rates, poor appointments, weak human resource management systems, poor internal controls, the lack of consequence management and accountability have also been cited by the Department of Cooperative Governance in their Back to Basics Report (COGTA, 2014). These issues muddy the waters making it difficult to determine the extent to which municipal governance and institutional factors contribute to the erosion of fiscal health in municipalities. Some of the In the absence of further research on this topic and given that many municipalities appear to be reluctant to address governance and institutional failures partly evidenced by growing unauthorised irregular, fruitless and wasteful expenditure in the sector reported annually by the Auditor General, the issue of whether municipalities can self-finance their operations and to what extent, is debatable. Research to date has not made significant nor breakthrough contributions since it is observed that most of the available research has been conducted on a case-by-case basis with the implication that they do not, therefore, give a systemic view of the local government finance system as a whole—something that this study aims to contribute towards.

3.1 The institutional evolution of local government in South Africa

Notwithstanding the generally dismal performance of the local government sector in South Africa, significant progress has been made in reforming the sector to ensure that the objectives of spatial, racial and economic integration are, in principle, achieved. In practice, achieving such integration has proved more difficult for some municipalities than for others. The purpose of this section is to develop a contextual understanding of the current context and challenges through tracing the institutional evolution of the sphere from apartheid to democracy.

3.1.1 *Apartheid local government*

According to Atkinson, before 1994, municipalities were segregated and racially constituted into white local authorities, black local authorities, coloured or Indian management committees which did not align with the spatial, financial and political circumstances (Human Sciences Research Council, 2006). Atkinson states further that central business districts (CBDs) were located in white local areas thus leaving little or no source of funding for black, coloured and indian areas which was worsened by a poor culture of payment for services due to widespread poverty in these areas (Human Sciences Research Council, 2006).

The intended consequence of such oppressive policy is the entrenchment of severe deprivation, income poverty and income inequality between the white minority and the black majority. Black people were dispossessed of their land, restricted from employment and self-employment opportunities, provided with low-quality health care and education and were confined to living in the impoverished parts of the country and cities (Shapiro & Tebeau, 2011).

The adoption of apartheid instruments such as spatial segregation, influx control and a policy of "own management for own areas", limited the extent to which white municipalities would assume the burden for servicing black areas (RSA, 1997). The tax base for black areas was further limited by the fact that townships were prevented from attracting retail and industrial development, forcing residents to spend their money in white areas ensuring that white areas were always supported by a viable municipal revenue base (RSA, 1997).

In the early 1980s, Black Local Authorities (BLAs) were established and attempted to impose rent and service charges on townships residents to increase revenue. These BLAs were outwardly rejected by the politicised community in these areas. Through an uprising in 1984, communities and civic organisations began to systematically rally in protest against the poor social and economic conditions in townships and Bantustans (homelands) and the spatial and

economic distortion of human settlements (RSA, 1997). The popular slogan of "One City, One Tax Base" was developed during struggles in this period and sought to emphasise local redistribution (Human Sciences Research Council, 2006).

With the imposition of consumer boycotts on goods, rents and service charges in black areas, white municipalities began to feel the financial impact. This led to white municipalities negotiating with civic and organised representatives from townships through the creation of local forums.

3.1.1.1   *The beginning of transition*

The different local forums established to manage the negotiations between representatives of the white areas and representatives from the townships recognised that the legal constraints that separated black residents from the municipal tax base had to be addressed on a national level through the enactment of national legislation (RSA, 1997). Hence the local fora pushed for the establishment of a national forum, known as the Local Government Negotiating Forum (LGNF) (RSA, 1997). The African National Congress (ANC) and the National Party agreed and on 22 March 1993, the LGNF was officially launched representing statutory structures in existence at the time—national, provincial and local as well as non-statutory structures led by the ANC aligned South African National Civics Organisation (SANCO) (De Visser, 2005).

The establishment of the LGNF represented the first step towards democratising local government. The main purpose of the LGNF was to establish a process to combine racially fragmented areas into a single body bringing an end to racial division and increasing the availability of financial resources to improve the conditions in black townships (Human Sciences Research Council, 2006). Cameron eloquently described the role of the LGNF as the "midwife of local government democratisation" (Human Sciences Research Council, 2006). He adds that many of the recommendations made by the LGNF were fundamental in drafting the Interim Constitution of 1993 and the Local Government Transition Act, No 209 of 1993 (Human Sciences Research Council, 2006).

Agreements reached by the LGNF were effectively translated into three measures: an agreement on local government finances, a Local Government Transition Act (LGTA) and a chapter in the interim Constitution (De Visser, 2005).

The most important element to be included in an agreement on local government finances was the need to have a local government system that gave effect to the principle of redistribution

and equality as encapsulated in the slogan "One City, One Tax Base" (De Visser, 2005). Economic activity and employment opportunities were very concentrated in the cities, which were largely under white influx control. The migrant labour system ensured that black people were relegated to dormitory township locations on the periphery. Rural areas were characterised by high levels of poverty and unemployment, a situation that has largely remained the same today.

3.1.1.2   A phased approach to transition

The Local Government Transition Act of 1993 provided interim measures to guide the restructuring of local government in South Africa. A three-phased model for local government transformation was introduced considering the need to ensure local democracy, redistribution, efficiency and effectiveness within a developmental paradigm (Saito, 2008). The entire local government restructuring exercise took several years, commencing with the approval of the Local Government Transition Act in 1993 until the local government elections on 5 December 2000. The model was based on the following three phases:

3.1.1.2.1   The pre-interim phase

The pre-interim phase commenced with the approval of the Local Government Transition Act on 2 February 1994 and ended when the first democratic local government election was held on 5 November 1995 (De Visser, 2005). The objective of this phase was to appoint administrators who would be responsible for managing and controlling the transition process from the pre-interim phase to the interim phase (Binza, 2005). Provincial demarcation boards would also be established in each province to demarcate non-racial boundaries for the first democratic municipalities following the 1995 local government election (Binza, 2005). There were three categories of municipalities identified in the Interim Constitution on which the 1995 elections were based. These categories included metropolitan, urban and rural municipalities (Human Sciences Research Council, 2006).

3.1.1.2.2   The interim phase

The interim phase of the restructuring process commenced after the first local government elections in 1995 and ended with the local government elections in 2000 when the final constitutional model was implemented at local government. During this phase, transitional municipalities were established which began to align municipal financial and service delivery boundaries with constitutional boundaries.

The beginning of an autonomous local government sphere was recognised during this phase. However, the interim Constitution, Act 200 of 1993, which was valid during the interim phase, simultaneously provided for local government autonomy and also contradicted it at the same time (De Visser, 2005). Section 174(3) of the Interim Constitution read: "A local government shall be autonomous and, within the limits prescribed by or under law, shall be entitled to regulate its affairs" (RSA, 1993). However, this was contradicted by S175(1) of the Interim Constitution which stated: "The powers, functions and structures of local government shall be determined by law of a competent authority" (RSA, 1993). According to Cameron, local government remained a provincial function under the interim phase in terms of the Interim Constitution of 1993 (Human Sciences Research Council, 2006).

The Interim Constitution also assigned a very narrow mandate of the service provider to local government (De Visser, 2005). Lastly, several important pieces of legislation were developed during the interim phase of the local government restructuring process. The most notable of these was the 1998 White Paper on Local Government which provided the policy framework necessary for the establishment of a developmental, autonomous and democratic sphere of government (De Visser, 2005). The final Constitution of South Africa was also passed by the Constitutional Court in 1996. Other critical pieces of legislation were also passed in this phase to give effect to local government, as envisaged by Chapter 7 of the 1996 Constitution (De Visser, 2005). These included the 1998 White Paper on Local Government, the Municipal Demarcation Act, No 27 of 1998 and the Municipal Structures Act, No 117 of 1998.

3.1.1.2.3   *The final phase*

The final phase of the transformation process began with the local government elections on 5 December 2000. In preparation for the 2000 local government elections, the final phase identified the types of municipalities to be created (Human Sciences Research Council, 2006). The final Constitution of South Africa, 1996, provided for three different categories of municipalities. These are:

Category A: A municipality that is granted exclusive executive and legislative authority within its area;

Category B: Municipalities that share municipal executive and legislative authority in its area with a Category C municipality within whose area it falls; and

>***Category C***: A municipality that has municipal executive and legislative authority in an area that includes more than one municipality.

The final phase of the local government transition process brought clarity to several areas that were present in the interim phase and the Interim Constitution. In particular, local government autonomy was established in the final Constitution elevating the status of local government from that of a tier to a sphere of government in its own right. The relationship between the different spheres of government was no longer underscored by a system of hierarchy (De Visser, 2005).

According to Section 151(3) of the 1996 Constitution, "A municipality has the right to govern, on its initiative, the local government affairs of the community, subject to national and provincial legislation as provided for in the Constitution" (RSA, 1996).

Furthermore, the role of provinces in local government matters was significantly reduced. In Section 151(4) of the 1996 Constitution, the power of national and provincial government to compromise or impede a municipality's power to exercise its function and responsibilities, is restricted. The inclusion of these clauses signalled a fundamental shift away from a system of provincial control over local government which characterised South Africa's intergovernmental system since 1910 (Human Sciences Research Council, 2006).

The role of local government was also substantially redefined in the 1996 Constitution. The narrow role of the service provider in the Interim Constitution was expanded to include local government as a key agent of development in South Africa, effectively being the arm of government through which the objectives of racial, social and financial transformation was to be achieved.

3.2   Municipal demarcation: decisions on the size and shape of municipalities

In each phase of the local government transition, changes were introduced to the size and shape of municipal boundaries. The overarching intention in all three phases was presumably the attainment of greater functional, spatial, social and economic integration through dismantling apartheid spatial planning patterns and the creation of fewer, yet larger, municipalities to promote sustainability and cross-subsidisation. However, due to the spatial concentration of the economic and hence revenue base, this was very difficult to achieve in practice.

At the start of the process in 1993, South Africa consisted of 1 262 unequal and racially-based administrative regions (Jeeva & Cilliers, 2021). During the pre-interim phase and after the 1995 local government elections, these administrations were dismantled to create 843 new Transitional Local Councils (Jeeva & Cilliers, 2021; Pycroft, 1999). The four provinces were dismantled and the former independent black homelands, namely Transkei, Bophuthatswana, Venda and Ciskei, created under the Promotion of Black Self-Government Act in 1959, were reabsorbed into South Africa to create nine new racially integrated provinces. Section 151 of the 1996 Constitution of South Africa required that municipalities should be established for the whole territory of the Republic (RSA, 1996), hence the concept of wall-to-wall municipalities. After the December 2000 local government elections, there were 284 municipalities across the three municipal categories provided for in the Constitution. These were later reduced to 278 in 2011 and 257 after the 2016 local government elections.

The principles informing the adjustment of municipal boundaries also changed in the three phases of transition. In the pre-interim phase, socio-demographic integration was fundamental, however, in the interim phase, the focus shifted to integrated development where functional linkages between urban and rural areas dominated (Jeeva & Cilliers, 2021). In the post-interim phase, several reasons existed for the adjustment to municipal boundaries, including overcoming the challenges associated with cross-boundary municipalities, avoiding municipal conflict, allowing for economies of scale and more recently to facilitate the financial viability of municipalities (Jeeva & Cilliers, 2021).

3.2.1 *Municipal demarcation challenges*

The approach adopted to the demarcation of municipalities and the subsequent adjustments to municipal boundaries matter just as much from a municipal fiscal health perspective as it does from a spatial and social perspective. Given that the objectives of social, spatial, financial and economic integration to be achieved could be considered as complementary yet competing, are there any objectives that become more important than others in this process and to what extent was it possible to simultaneously achieve these objectives?

Pycroft notes two particular challenges impeding the financial transition and the creation of financially viable municipalities in South Africa. Firstly, the developmental needs of the poorest sections in amalgamated municipalities often exceed the total income-generating capacity of the council indicating that the new demands placed on amalgamated municipalities were not met by a proportionate increase in income (Pycroft, 1999). Secondly, the decline in the total income-generating capacity of amalgamated municipalities is compounded by a culture of non-payment for municipal services arising from the practice of rent-boycotts during

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the apartheid era (Pycroft, 1999). The culture of non-payment undermines the ability to create financially viable municipalities (Pycroft, 1999).

Shortcomings leading up to the 1995 elections were also identified by Cameron who is quoted extensively in this section as a previous member of the Municipal Demarcation Board. According to Cameron, the Local Government Transition Act of 1993 required the establishment of Local Government Demarcation Boards in each of the nine provinces that would play an advisory role to the administrator, namely the provincial minister for local government, regarding boundaries and wards of local government jurisdictions (Human Sciences Research Council, 2006). He further states that the provincial demarcation boards had to consider certain statutory criteria in the process of demarcating municipal boundaries with the major political objective being the combination of apartheid boundaries into single municipalities (Human Sciences Research Council, 2006).

Given that the demarcation process was addressed on a decentralised level, the dissolution of apartheid boundaries tended to be uneven, particularly in some of the smaller towns and rural areas (Human Sciences Research Council, 2006). The unevenness was also noted in the capacity and the quality of the reports produced by the demarcation boards (Human Sciences Research Council, 2006). Cameron states that reports produced by some of the boards were not of a high standard and therefore problems of non-viability of certain municipalities were due to poorly-designed boundaries (Human Sciences Research Council, 2006).

Cameron also notes the impact of attempted gerrymandering on local boundaries where some provincial ministers for local government attempted to influence the demarcation of local government boundaries in a manner that sought to advantage the electoral chances of their respective parties rather than support the proposals made by the provincial demarcation boards for more rational boundaries that would, at least from a theoretical point of view, facilitate service delivery and promote development (Human Sciences Research Council, 2006). A study of the demarcation process in the interim phase shows that in Johannesburg, Durban and Cape Town, provincial ministers of local government attempted to gerrymander metropolitan boundaries in each city (Human Sciences Research Council, 2006). Boundary disputes thus led to a delay of local government elections in Kwazulu-Natal and the Western Cape (Human Sciences Research Council, 2006).

3.2.2 *Establishing a national municipal demarcation board*

In the lead up to the 2000 local government elections, the 1996 Constitution required that all local government boundaries should be demarcated before the elections and that an independent board would be established to demarcate local government boundaries (Human Sciences Research Council, 2006). This implied a shift from the nine provincial boards used to determine municipal boundaries in the interim phase. To give effect to the Constitution, the Local Government Municipal Demarcation Act was promulgated in 1998 and a Municipal Demarcation Board was established on 1 February 1999. The board was empowered to be the final decision-making authority about municipal boundaries. This, according to Cameron, was primarily because the process adopted during the interim phase of establishing nine advisory boards making recommendations to the provincial ministers who would then consult with provincial committees and refer any deadlocks to a special electoral court proved extremely time-consuming and cumbersome resulting in the delay of local government elections in Kwazulu-Natal and the Western Cape (Human Sciences Research Council, 2006).

At the inaugural meeting of the board, the Chairperson noted some of the inconsistencies of demarcation in the interim phase, namely, that local governments were largely defined based on subjective needs and preferences rather than based on national norms and standards, there were major disparities in council sizes and approximately one-third of all transitional local councils and rural councils were small and had less than 2 000 voters (Human Sciences Research Council, 2006).

Sections 24 and 25 of the Municipal Demarcation Act specified the criteria that the Board was required to consider when demarcating municipal boundaries. Section 24 is strongly aligned to Section 152 of the Constitution ensuring that demarcation objectives emphasise the realisation of socioeconomic rights (Human Sciences Research Council, 2006). In summary, Section 24 provides that in the determination of a municipal boundary by the Municipal Demarcation Board, the objective should be to establish an area where the constitutional obligations of a municipality to provide effective local governance ensure integrated development and finance the provision of municipal services through an adequate tax base, could be fulfilled (Human Sciences Research Council, 2006). Section 24 effectively required that the Municipal Demarcation Board apply a mixture of functional, socioeconomic, financial and cohesive development measures to motivate the demarcation of municipal boundaries without indicating which measure should take preference (Jeeva and Cilliers, 2021).

Section 25 of the Municipal Demarcation Act outlines the factors that must be considered when determining municipal boundaries. These factors concern, inter alia, "the interdependence of people, communities and economics; the need for cohesive, integrated and unfragmented areas, including metropolitan areas; financial viability; and the administrative capacity of the municipality to perform municipal functions efficiently and effectively" (Human Sciences Research Council, 2006).

The outcome of the process led by the Municipal Demarcation Board resulted in the amalgamation of the 843 municipalities into 284 municipalities in December 2000. The types of municipalities were provided for in Section 155(1) of the 1996 Constitution (RSA, 1996). The Constitution provided for an A/B/C formulation for municipal categorisation to allow greater flexibility in the process of demarcating local government structures (Human Sciences Research Council, 2006).

Category A municipalities or metropolitan municipalities have exclusive municipal executive and legislative authority in their area, while Category B municipalities, also referred to as local municipalities, share municipal executive and legislative authority with Category C municipalities within whose area they fall (RSA, 1996). Category C municipalities are district municipalities and have municipal executive and legislative authority in an area that includes more than one local municipality (RSA, 1996).

The criteria used by the Demarcation Board to determine Category B municipalities also contained several principles that had to be followed, such as, the nearest neighbour, the type of settlements, functional linkages between areas, manageable sizes possibly with populations of 80 000 people and no less than 20 000 people and areas should be approximately 3 500 km^2, again without indicating which criteria should take preference (Jeeva & Cilliers, 2021). Furthermore, the use of vague criteria such as "manageable size" left this open to interpretation (Jeeva & Cilliers, 2021).

The 284 municipalities established before the December 2000 local government elections consisted of six Category A municipalities, 232 Category B municipalities and 46 Category C municipalities.

Although the establishment of a Municipal Demarcation Board represented an improvement from the nine provincial boards and the demarcation of boundaries in the interim phase, the tight timeframes between the establishment of the Demarcation Board and the local government elections implied that the demarcation process had to be rushed. Cameron concludes that even

though there was a reasonable amount of research that accompanied the 1998 White Paper on Local Government and the Municipal Demarcation Act, once the Demarcation Board started to operate, the tight electoral timeframes reduced the research required to more of a "quick" and "dirty" type of analysis (Human Sciences Research Council, 2006). He also acknowledges that there was some systematic research in respect of the metropolitan and district municipalities, but the framework for local municipalities and wards was rushed (Human Sciences Research Council, 2006).

Other criticisms levied against the Municipal Demarcation Board included the short times allowed for public participation which is a cornerstone of the final Constitution and an integral component of developmental local government; the fact that the electoral timetable did not allow time for the Board to debate appropriate theoretical approaches to demarcation; that commuting was used as a means of dealing with illogical spatial apartheid distortions to create "truly-bounded" boundaries which was not an issue for metropolitan areas, but became a central issue in post-2000 non-metropolitan areas; that in the case of the actual determination of local municipalities, the time pressure led to inconsistencies in the way research was used and how boundaries were demarcated with insufficient time to consider alternative demarcation options (Human Sciences Research Council, 2006).

Furthermore, in respect of category B municipalities, a minimum area size of 3 500 km^2 was used as a guideline on the basis that economies of scale could be achieved through enlarging local government areas, while the literature suggests that there is not a positive relationship between size and performance (Human Sciences Research Council, 2006).

The Department of Finance, now the National Treasury, also opposed the preliminary proposals of the Municipal Demarcation Board stating that the proposed boundaries would structurally weaken the fiscal position of non-metropolitan cities and towns and would constrain the ability of these municipalities to raise capital to develop infrastructure which was their key responsibility (Human Sciences Research Council, 2006). The Department was concerned that the proposed boundaries would reduce the creditworthiness of these municipalities and would create a dependence on government transfers as the only source of capital (Human Sciences Research Council, 2006). By analysing three existing towns, the Department demonstrated that Category B municipalities would generally face a marked structural decline in their fiscal position because of including considerably disadvantaged poor rural areas into their jurisdictions (Human Sciences Research Council, 2006).

According to Cameron, the Demarcation Board disputed the methodology used by the Department of Finance arguing that there was no indication of what power and function were being analysed against available income, that the Department ignored the fact that smaller boundaries would exacerbate spatial inequalities correlating with the old apartheid order and incorrectly assumed that boundary demarcation is a primary determinant of financial viability and creditworthiness (Human Sciences Research Council, 2006).

It is interesting to note that the Demarcation Board also responded by emphasising that it never stated that all its municipalities would be financially viable. Its research showed that 102 new municipalities—mostly B categories in the formerly independent and self-governing territories —are weak and have limited financial resources. Given spatial inequalities arising from apartheid underdevelopment, the task of making all municipalities viable was simply impossible. This was exacerbated by a lack of finality on national financial policy for local government. The Demarcation Board made several recommendations for extra sources of revenue, including a surcharge on personal income tax and a substantial increase in the equitable share (Human Sciences Research Council, 2006).

These proposals were not accepted by the Department of Finance and hence the local government municipal boundaries were demarcated with the condition that there would be additional revenue proposals.

3.3   Municipal demarcation and municipal fiscal health

This research study is not intended to provide a conclusion on the effect that the demarcation of municipal boundaries have had on the fiscal health of municipalities. However, from the perspective of municipal fiscal health, the objectiveness of the demarcation process, the clarity of the criteria used to demarcate boundaries and the determination of which were the overriding objectives used in the design of the "new" municipal dispensation are all important. Does the design impede financial health?

To what extent could the objectives of integrated development and cohesion, financial viability, governance and political consideration be achieved simultaneously and what were the trade-offs made in this respect? Was financially viability considered to be secondary in the hope that the intergovernmental fiscal framework would compensate municipalities through additional intergovernmental transfers?

3.3.1 *Towards a decentralised and developmental local government*

The design of the local government system in the final Constitution was informed by a set of constitutional principles adopted by the Convention for a Democratic South Africa (CODESA) in 1992. The principles included, amongst others, that government be structured at national, provincial and local levels with democratic representation at each level, that the Constitution set out a framework for local government powers, functions and structures and that the framework also makes provision for appropriate fiscal powers and functions for the different categories of local government (De Visser, 2005). In addition, "Local Government was to be afforded a constitutional right to an equitable share of revenue collected nationally to ensure the provision of basic services and the execution of functions" (De Visser, 2005).

In line with these principles, Chapter 7 of the 1996 Constitution of South Africa establishes local government as an autonomous sphere of the intergovernmental system and assigns to it a developmental mandate.

However, South Africa's choice for a decentralised local government system was weighted heavily on political considerations rather than on the perceived benefits of decentralisation. At the time, the African National Congress (ANC) and the National Party (NP) were the two main parties involved in the constitutional negotiations. Each held divergent views on the form of local government. Whilst the ANC was still undecided on local government, the NP preferred decentralisation to strong provinces as a result of their dominance in the Western Cape. The motive behind the NP's perspective was that decentralisation to strong provinces would apply the brakes on the power of the central government (De Visser, 2005). The NP knew that they were not going to win a national election and hoped that they could win power at a provincial level to create a weak national government and strong provincial governments (Van Ryneveld, 2020).

However, the ANC was very wary of Provinces and instead preferred strong local government (De Visser, 2005; Van Ryneveld, 2020). Mastenbroek, Steytler and De Visser state that the ANC's conversion to strong local government was driven firstly by the notion that "people-driven development" contained in both its election manifesto and the Reconstruction and Development Programme (RDP) as the first transformation policy of the ANC, was linked to a strong and developmental local government (De Visser, 2005). Secondly, that the civic movement of the 1980s, which took root in the ANC structures, was committed to local democracy and this played a critical role in swaying the decision to a constitutionally protected local sphere of government (De Visser, 2005). De Visser also adds a third reason: "The ANC's

political aversion against the notion of a provincial government, the acceptance of which was mandatory given the insistence of the IFP and the threat of civil war during the CODESA negotiations for an interim constitution, informed its choice for decentralisation to local government as opposed to decentralisation to provincial government" (De Visser, 2005).

3.3.2   *Decentralisation of local government*

The decision to decentralise local government in South Africa was heavily weighted by political and historical factors and less so on the perceived benefits to be derived from this process. However, in the 1990s, the decentralisation of government services and functions was also a popular choice amongst other developed and developing countries.

Decentralisation essentially involves reconfiguring the relationship between central government and subnational levels of government (provincial/local) through the transfer of powers and responsibilities from the central government level to elected authorities at the subnational level (OECD, 2019). There is usually some level of autonomy associated with the transfer of these powers at the subnational level.

Decentralisation encompasses three distinct but interrelated dimensions, namely, administrative, political and financial (OECD, 2019).
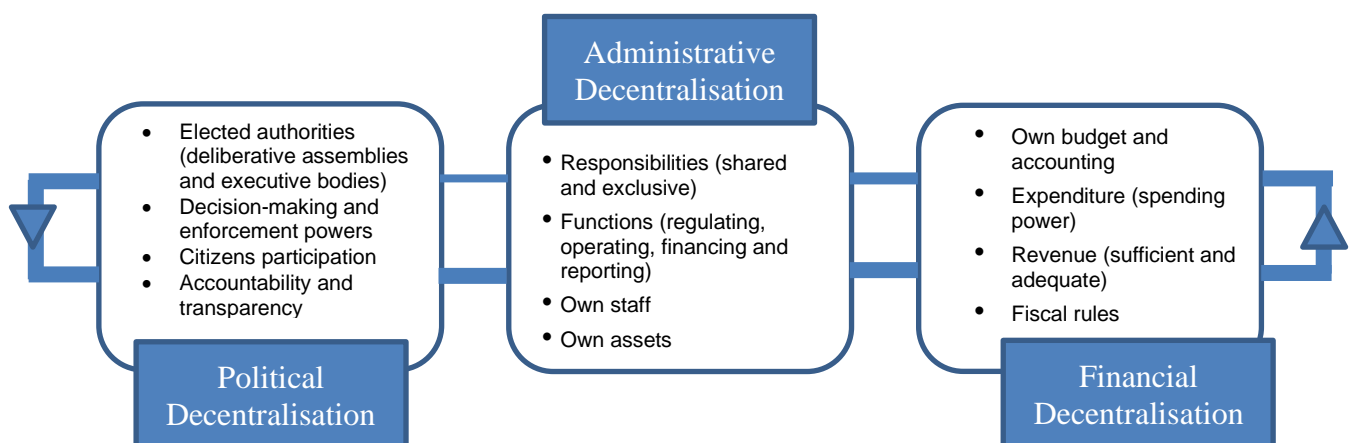
Figure 3.1: Dimensions of decentralisation (OECD, 2019)

The interdependent nature of these dimensions indicates that it is meaningless to have financial decentralisation without administrative and political decentralisation and decentralising on a

political and administrative level should likewise be accompanied by financial decentralisation, to be effective (OECD, 2019).

In addition to the dimensions, decentralisation also takes on different forms corresponding to the level of decision-making exercised at the subnational level (Bird & Vallaincourt, 1998).

Deconcentration is one form of decentralisation and refers to the dispersion of responsibilities within central government to regional branch offices or local administrative units (Bird & Vallaincourt, 1998). A defining element of deconcentration is that the allocation of responsibility is still within the hierarchy of central government (De Visser, 2005).

Delegation, as another form of decentralisation, refers to a situation in which local governments act as agents for central governments, executing certain functions on their behalf (Bird & Vallaincourt, 1998). Therefore, delegation takes place when a power that originally resides with the national government is being transferred to the subnational government, making the defining element a transfer of responsibility outside of the national government hierarchy, as opposed to deconcentration which occurs within the national government hierarchy (De Visser, 2005).

Devolution representing the most comprehensive form of decentralisation refers to a situation where both implementation and authority to decide what is done is transferred to local government (Bird & Vallaincourt, 1998). With devolution, the transfer of powers is meant to be permanent and is often done using a provision in the Constitution or framework legislation (De Visser, 2005). In cases of devolved responsibilities, the national government has only a supervisory role to play and the subnational government is not accountable to the central government (De Visser, 2005).

Municipalities in South Africa are decentralised by devolution with full political, administrative and financial responsibilities transferred to the local sphere of government. Municipalities have significant decision-making authority concerning their areas of jurisdiction. They report to national and provincial government which exercise a monitoring and supervisory role over local government functions. However, Section 139 of the Constitution also places a "limit" on local government autonomy allowing provincial government to intervene in municipalities under prescribed circumstances.

For decentralisation to work, there must be a match between the functions assigned to local government, the capacity of local government to execute these functions and consistency

between the revenue assignments and expenditure responsibilities of the municipalities (Bahl & Smoke, 2003). Equalisation measures in the form of intergovernmental transfers should be effected to overcome any gap that may exist between municipal expenditure requirements and fiscal capacities and to meet other national needs (Bahl & Smoke, 2003).

South Africa's intergovernmental fiscal system is based on a constitutional entitlement of municipalities to a share of nationally raised revenue to enable them to perform the functions allocated to them in the Constitution and perform their general administrative responsibilities. The revenue-sharing model, designed to achieve both vertical and horizontal fiscal equalisation, seeks to compensate municipalities with poor revenue-raising capacity.

Colonialism and later apartheid, created massive distortions in the spatial and economic landscape of South Africa giving rise to significant inequality amongst municipalities. Turok, Scheba and Visagie best describe the situation as follows: "Spatial gaps in material prosperity and subjective well-being are stark and deeply inscribed in the landscape. In the same cities and towns, exclusive business precincts and upmarket suburbs are juxtaposed against over-crowded townships and squalid informal settlements. In rural areas, remote villages with mud schools and no electricity contrast with luxurious private game lodges and affluent country estates" (Human Sciences Research Council, 2017). They also state that while apartheid through residential segregation, influx controls, forced removals, separate public administrations, differentiated education systems and so on exacerbated extreme spatial disparities, other factors are also responsible for persistent unequal development including powerful economic forces, uneven natural resource endowments, and continuing disparities between institutional capacity, essential infrastructure and public services (Human Sciences Research Council, 2017).

Despite constitutionally entrenched human rights, a plethora of local government legislation enacted since 2000 to improve development outcomes and foster greater equality and an increase in national and provincial fiscal transfers to municipalities and several capacity-building programmes over the last 25 years to better equip municipalities to perform their functions, there is sufficient official and unofficial evidence of communities still living in abject poverty, unemployment is still high across the country and access to economic opportunities and decent work is severely restricted.

The underlying intention of the "One City, One Tax Base" did not materialise as expected and South Africa is known to be one of the most unequal countries in the world with a Gini coefficient above 0.60 points.

3.4   Defining "developmental" local government

The 1998 White Paper on Local Government defines developmental local government as "local government committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs and improve the quality of their lives" (RSA, 1998). Characteristics of a developmental local government as defined in the White Paper on Local Government include: "maximising social development and economic growth, integrating and coordinating, democratising development and leading and learning" (RSA, 1998).

The transformation of the local government sphere in South Africa gave birth to a new generation of municipalities. Municipalities were no longer only responsible for basic service provision but were transformed into central agents of development tasked with the responsibility to create sustainable human settlements, grow local economies and execute other important objectives of South Africa's socio-political transformation.

The role of the municipality was thus expanded to include significant developmental duties requiring sophisticated planning, coordination and partnering. Municipalities were also endowed with increased powers to give effect to developmental duties. As an example, municipalities were given legislative powers to adopt by-laws and policies of their own and were no longer responsible only for implementing national and provincial laws.

Municipalities were additionally allocated substantial revenue-raising powers to levy property rates and user charges for services rendered. However, accompanying the change in responsibilities required the need for strong institutional capabilities to undertake complex planning, community engagements and to form the alliances and partnerships necessary for an improvement in the social, economic and material well-being of its citizens. Several programmes were initiated by national and provincial government to build institutional capacity in the local sphere. Support and capacity-building programmes for local government still exist today.

According to the White Paper, the main contribution to be made by local government in social and economic development is the provision of basic household infrastructure (RSA, 1998). However, affirmative procurement policies, linking municipal contracts to social responsibility, identifying and releasing land for development and the provision of recreational and communities were also identified as some of the simpler contributions to economic and social development (RSA, 1998). Furthermore, given that municipalities now exerted greater control

over their local economies, they needed to have a clear vision for the local economy and work in partnership with local businesses to create jobs, alleviate poverty and stimulate local investment (RSA, 1998).

Integrated development planning was regarded as the most important method to achieve greater coordination and integration with the Integrated Development Plan (IDP) itself being the most powerful tool to integrate and coordinate service delivery within a locality (RSA, 1998).

The central role played by municipal councils in promoting local democracy, the involvement of citizens and community groups in the design and delivery of community programmes is fundamental to democratising development, empowerment and redistribution (RSA, 1998). Municipalities are also expected to support individual and community initiatives and to direct energies into projects and programmes that benefit the community as a whole (RSA, 1998). To give further effect to democratising development, empowerment and redistribution, municipalities are required to adopt inclusive processes to foster community participation and must remove the obstacles and actively encourage the participation of marginalised groups in the community (RSA, 1998). However, the White Paper warns that participatory processes should not lead to local capture by small interest groups and impede the service delivery process (RSA, 1998).

Leading and Learning as the last developmental characteristic of local government relates to the rapid changes in the international, national and local contexts that require municipalities to rethink how they are organised and governed (RSA, 1998). Communities, through their municipalities, must find new ways to sustain their economies and build their societies, protect their environments, improve personal safety and eliminate poverty (RSA, 1998).

3.5   Powers and functions of municipalities in South Africa

The powers of local government and the functional areas of responsibility assigned to municipalities are contained in Chapter 7 of the Constitution of South Africa, 1996. Section 156 of the Constitution states:

"156   (1)   A municipality has executive authority in respect of, and has the right to administer –

(a) The local government matters listed in Part B of Schedule 4 and Part B of Schedule 5; and

(b) Any other matter assigned to it by national and provincial legislation.

(2)   A municipality may make and administer by-laws for effective administration of the matters it has the right to administer.

(3)   Subject to S151(4), a by-law that conflicts with national or provincial legislation is invalid. If there is a conflict between a by-law and national or provincial legislation that is inoperative because of a conflict referred to in S149, the by-law must be regarded as valid for as long as that legislation is inoperative.

(4)   The national government and provincial governments must assign to a municipality, by agreement and subject to any conditions, the administration of a matter related to Part A of Schedule 4 or Part A of Schedule 5, which necessarily relates to local government, if-
(a) that matter would most effectively be administered locally; and
(b) the municipality has the capacity to administer it.

(5)   A municipality has the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions." (RSA, 1996)

Municipalities in South Africa are thus assigned direct responsibilities in terms of the Constitution, but provision is also made for the assignment or delegation of national and provincial functions that would best be performed at the local level. Municipalities also derive legislative powers in terms of Part B of Schedules 4 and 5 as indicated in Section 156(2) of the Constitution.

3.6   Functional responsibilities of municipalities

Parts B of Schedules 4 and 5 of the Constitution list the functional areas that are the responsibility of local government. These can be regarded as original functions as they are constitutionally entrenched, and municipalities are provided with the necessary executive and legislative power to fulfil those functions. Changes to these functions can only be effected via an amendment to the Constitution.

In 2005, the Municipal Demarcation Board (MDB) issued a report ranking each local government function in terms of the importance attached to service delivery (National Treasury, 2011). The table below provides a list of municipal functions in terms of Part B of Schedules 4 and 5 of the Constitution distinguishing between different levels of priority. Priority 1 functions are regarded as high in importance, whilst priority 2 functions are those of moderate importance and priority 3 functions are considered low in importance (National Treasury, 2011).

Table 3.1: MDB's priority ranking of municipal

Priority 1 functions	Priority 2 functions	Priority 3 functions
• Water (Potable) • Municipal roads • Sanitation • Refuse removal, refuse dumps and solid waste disposal • Municipal planning • Stormwater • Cemeteries, funeral parlours and crematoria • Electricity reticulation • Municipal health services • Fire fighting • Traffic and parking	• Cleansing • Building regulations • Street lighting • Licensing and control of undertakings that sell food to the public • Street trading • Trading regulations • Control of public nuisance • Fencing and fences • Noise pollution • Pounds • Air pollution • Beaches and amusement facilities • Municipal public transport • Pontoons and ferries	• Local sport facilities • Municipal parks and recreation • Public places • Local tourism • Billboards and the display of advertisements in public places • Local amenities • Licensing of dogs • Municipal airport • Control of undertakings that sell liquor to the public • Childcare facilities • Facilities for the accommodation, care and burial of animals • Markets • Municipal abattoirs

Table 3.1: Ranking of priority in municipal functions - Municipal Demarcation Board (Source: National Treasury, 2011:33)

3.7 Delegation of functions to local government

Section 156 (4) of the Constitution provides for the assignment or delegation of national and provincial functions in terms of Part A of schedules 4 and 5 of the Constitution to local government. Two preconditions exist for the assignment of functions to local government, namely, the function will best be performed by local government and local government must have the capacity to perform the function.

"An assignment of functions entails the transfer of authority to local government over a function or competence that falls outside of its Schedule 4B and 5B functional areas" (Dullah Omar Institute, 2007). An assignment may take the form of an executive or legislative authority and can be a general assignment in that it is assigned to all municipalities or a specific assignment where the function is assigned to specific municipalities only (Dullah Omar Institute, 2007).

The delegation, on the other hand, is used to confer service provider responsibility to local government (Dullah Omar Institute, 2007). Municipalities, in this regard, are accountable to the

delegated authority and must abide by the framework of the legislation and the delegating authority (Dullah Omar Institute, 2007).

Areas of concurrent provincial and local government functions include housing, libraries, health and transport.

3.8   Conclusion

In this chapter, the evolution of local government was traced from an institution that was racially oppressive, segregated, economically and spatially distorted to a sphere of government with equal constitutional rights as that of the national and provincial spheres. Accompanying this radical change in the status of local government was a significant increase in the functional responsibilities of municipalities. Municipalities were no longer only responsible for the delivery of a limited set of services to a small part of the population but were key to realising the developmental goals of a new democratic dispensation. The reality is that most of the benefits to be accrued from post-apartheid South Africa would be experienced by South Africans at the local government level, placing local government at the heart of the developmental agenda.

However, the underlying principles of transformation and equality, such as the One City, One Tax Base, were easier to visualise and pen on paper than they were to execute in practice. There were several challenges encountered and complexities inherent in the transformation process that had to be addressed for transformation to be successful. The extent to which these matters were successfully addressed has a direct impact on the fiscal health of municipalities.

One of the most noteworthy challenges in this regard is related to the determination of new municipal boundaries to ensure spatial, social, economic and financial integration. How were 2 652 small local authorities to be consolidated into 284 wall-to-wall municipalities in preparation for the 2000 local government elections? The impact on the demarcation process of political gerrymandering and nine different provincial demarcation boards with different capacities were highlighted in this chapter. The move to establish a single demarcation board was an improvement, but was also hindered by time constraints required for adequate consultation, methodological issues and criteria that did not reflect a preference for one objective over another.

To conclude, the defining features of decentralisation and developmentalism entrenched in the new local government dispensation were outlined. The constitutional responsibilities of local

government were presented to indicate the increased scope of functions to be performed and the priority assigned to each of these functions. To fulfil their new constitutional responsibilities and advance development in South Africa, a key feature of devolution is that municipalities must be given full political, financial and administrative autonomy. The interdependence between the different forms of autonomy was discussed and it was observed that allocating one form of autonomy without the others would be meaningless in a system where functions were devolved from national to sub-national government.

In the next chapter, details of the local government fiscal framework are discussed to establish the link between the "newly assigned" expenditure responsibilities of local government and assigned revenue-raising capacity and explore the extent to which these are matched.

Chapter 4: Municipal fiscal and legislative framework

If municipalities are to effectively perform their constitutionally mandated functions, they must have access to sufficient sources of revenue. The design of an adequate intergovernmental fiscal framework is fundamental and must be informed by the functional responsibilities of local government. The principle of "finance follows function" is therefore critical. In this chapter, the overarching local government fiscal framework is discussed to understand the basic assumptions of the framework and to review the extent to which these assumptions are still relevant in the current environment in which municipalities operate.

In the second part of this chapter, a brief overview of key municipal legislation is presented to illustrate that despite the administrative autonomy of local government, the sector is still highly regulated. All spheres of government are deemed equal in the Constitution; however, national and provincial government have a responsibility to protect the developmental agenda of the country and must therefore oversee and support the effective performance of local government.

4.1 Theoretical foundations for assigning local government taxing powers

A fundamental step in the design of any intergovernmental fiscal relations system is to ensure that the functional responsibilities of the different levels of government are assigned (Morgan & Trinh, 2016). Once expenditure assignments are defined, consideration should be given to the adequacy of the tax base to fund those assigned expenditures. The level of revenue-raising or taxing powers assigned to any level of government should be commensurate with the expenditure functions to be performed by that level of government.

Following the determination of revenue assignments, the issue of resolving any imbalance in revenue-raising capacity becomes important. In this regard, the key questions are how imbalances in the assignment of expenditure and revenue of sub-national governments are to be resolved—referred to as a vertical imbalance; and to what extent should compensation be provided for the different needs and revenues of governmental units at the same level of government—referred to as a horizontal imbalance or equalisation (Bird, 2000).

According to Musgrave and Oates, the standard fiscal federalism model suggests that following rules for the assignment of tax functions to local government, namely, lower levels of government should be responsible for the levying of taxes on immobile assets; the tax base

should be evenly distributed amongst jurisdictions; and that they should rely on taxes that provide a relatively stable yield in real terms (Morgan & Trinh, 2016).

Bahl and Bird also proposed four principles to be considered in assigning taxing powers to local government, namely that local governments in the richest jurisdictions should be able to raise adequate revenue to finance services for its residents; that local government taxes should only be levied on those who benefit from the service within the jurisdiction of the local government and that all levels of government should bear responsibility at the margin for financing expenditure for which they are politically responsible; and that taxes assigned to local government should not result in the undue distortion of resource allocation (Morgan & Tinhr, 2016).

Based on the above, in many countries, local government is generally allocated the responsibility to levy those taxes associated with the ownership of land and property (property rates) and imposing fees or user charges for services provided by the municipality, such as water, electricity, sanitation and refuse removal, amongst others.

4.2   The intergovernmental fiscal framework in South Africa

South Africa's intergovernmental system is based on the principle of cooperation between the national, provincial and local spheres of government. The Constitution describes each sphere as "distinct, interdependent, and interrelated" and requires that each sphere of government work together in mutual trust and good faith (RSA, 1996). For this cooperative relationship to work well in practice, the Constitution also requires that each sphere of government must not encroach on the geographical, functional and institutional integrity of government in another sphere (RSA, 1996).

Legislation has been enacted to formalise the different roles and responsibilities of the spheres and provides for the establishment of consultative structures to facilitate cooperation (National Treasury, 2011).

However, there are instances when more than one sphere of government assumes responsibility for the execution of a particular function. This overlap is referred to as concurrency. In South Africa, concurrent functions related to health, transport, housing and libraries are shared between municipalities and provinces. The actual division of roles and responsibilities between the spheres is not always clear at the level at which these functions are executed, with the result

that municipalities often regard these services as being underfunded by the fiscal framework and thus placing a substantial burden on their existing fiscal resources and fiscal health.

A fiscal framework is intended to provide the parameters in terms of rules, policies, regulations and procedures for determining how government spending should be planned, approved, monitored and evaluated.

The Local Government Fiscal Framework is defined by the Financial and Fiscal Commission of South Africa as the aggregate revenue framework for local government relative to the aggregate expenditure mandates of the sphere to ensure that individual municipalities are financed sufficiently to render services to communities and fulfil their constitutional obligations (Public Affairs Research Institute, 2020).

An ideal local government fiscal framework should ensure sufficient revenue to meet all mandated expenditure requirements while acknowledging the effects of a social wage on service charges, and thus income (Public Affairs Research Institute, 2020).

The local government fiscal framework in South Africa is composed of funding to be raised from own-source revenues through the assignment of taxing powers to municipalities, transfers from national and provincial government to address vertical and horizontal imbalances as well as borrowing under limited and prescribed circumstances. These are depicted in the table below:

Table 4.1: Local Government Fiscal Framework

Sources of Funding	Constitutional Provisions	Governing Legislation
Municipal Own Revenue Sources		
Rates on Property	Section 229 and 227(2)	Municipal Property Rates Act
Surcharges on fees for services provided on behalf of the municipality	Section 229 and 227(2)	Municipal Fiscal Powers and Functions Act
Service charges/fees	Section 229 and 227(2)	Municipal Systems Act; Municipal Finance Management Act; Electricity Act and Electricity Regulation Act; National Water Act and Water Services Act; Provincial Land Use Planning ordinances
Other taxes, levies or duties	Section 229 and 227(2)	Municipal Fiscal Powers and Functions Act

Administrative Fees		Municipal Systems Act
Fines		National Road Traffic Act
Borrowing	Section 230A	Municipal Finance Management Act
Credit Control and Debt Collection		Municipal Systems Act
Transfers from national and provincial government		
Local Government Equitable Share	Section 214 and 227	Intergovernmental Fiscal Relations Act and the Annual Division of Revenue Act
Fuel Levy Sharing with metropolitan municipalities	Section 229(1)(b)	The Annual Taxation Laws Amendment Act
Conditional grants from National Government	Section 214(c), 226(3) and 227(1)(c)	Intergovernmental Fiscal Relations Act The Annual Division of Revenue Act The Annual National Appropriation Act
Conditional grants from Provincial Government	Section 226	The Annual Division of Revenue Act The Annual Appropriation Act of the relevant Province

Table 4.1: Local Government Fiscal Framework (National Treasury, 2011: 36)

According to the National Treasury, transfers from national government are intended to fund the provision of services to poor households with some level of municipal subsidisation while services for non-poor households must be paid for through municipal own revenues (Nkosi, 2018). For the whole of local government, own revenues fund 75% of budgets, but in rural areas with high levels of poverty, transfers can fund up to 80% of budgets in these municipalities (Nkosi, 2018).

4.2.1 *Municipal own-revenue sources*

Section 229 of the Constitution describes the overall revenue-raising powers of municipalities, while simultaneously imposing limits on the extent to which those powers may be exercised.

Section 229 states:

"Municipal fiscal powers and functions

1. Subject to subsections (2), (3) and (4), a municipality may impose ¬

a. rates on property and surcharges on fees for services provided by or on behalf of the municipality; and

b. if authorised by national legislation, other taxes, levies and duties appropriate to local government or to the category of local government into which that municipality falls, but no municipality may impose income tax, value-added tax, general sales tax or customs duty.

2. The power of a municipality to impose rates on property, surcharges on fees for services provided by or on behalf of the municipality, or other taxes, levies or duties ¬

a. may not be exercised in a way that materially and unreasonably prejudices national economic policies, economic activities across municipal boundaries, or the national mobility of goods, services, capital or labour; and

b. may be regulated by national legislation.

3. When two municipalities have the same fiscal powers and functions with regard to the same area, an appropriate division of those powers and functions must be made in terms of national legislation. The division may be made only after taking into account at least the following criteria:

a. The need to comply with sound principles of taxation.

b. The powers and functions performed by each municipality.

c. The fiscal capacity of each municipality.

d. The effectiveness and efficiency of raising taxes, levies and duties.

e. Equity.

4. Nothing in this section precludes the sharing of revenue raised in terms of this section between municipalities that have fiscal power and functions in the same area.

5. National legislation envisaged in this section may be enacted only after organised local government and the Financial and Fiscal Commission have been consulted, and any recommendations of the Commission have been considered.

(*Date of commencement: 1 January 1998*)"

Municipalities are primarily allocated responsibility for local taxes in the form of property rates and service charges. No municipality is allowed to impose any national tax, such as taxes on income and sales. When imposing municipal taxes, municipalities are prohibited from doing so in a manner that is prejudicial to national imperatives. Municipal taxing powers may be regulated by national legislation after statutory bodies such as the South African Local Government Association (SALGA) and the Financial and Fiscal Commission have been consulted and comments considered.

Apart from property rates and service charges which are explicitly provided for in the Constitution, municipalities also raise revenue from other sources, including interest on outstanding debtor accounts, interest on bank balances, the imposition of development levies, etc. However, the income to be realised from these sources varies considerably between municipalities and is partly dependent on the level of fiscal effort exercised in a municipality. Interest on outstanding debtor balances, for example, is often regarded as a "book-entry" in line

with municipal credit and debt collection policies, however, it is seldom realised in actual terms as many consumers cannot afford to pay the actual municipal account let alone the interest charged on that account. While these interest estimates appear to be high in the face of increasing consumer debt, collections are minimal in this regard. Furthermore, charges to be levied on developments to fund municipal infrastructure as a source of municipal income are not fully exploited by municipalities and further work in this area is being undertaken at the national government level. However, metropolitan and urban municipalities stand to benefit more from the levying of development charges as a source of municipal revenue compared to rural and semi-rural municipalities. Development charges will most probably only be viable option to increase municipal revenue in rural and semi-rural municipalities if these municipalities or the government as a whole provides some sort of incentives to encourage business investment in these areas.

4.2.2 *Intergovernmental transfers to municipalities*

Intergovernmental transfers to local government consist of both an unconditional transfer to municipalities and conditional grants which are allocated for specific purposes. These are direct grants allocated to municipalities. However, national and provincial government also contribute through the provision of indirect grants to local government. These grants are not transferred directly to the recipient municipality but are instead spent on their behalf by either national or provincial government.

Section 227 (a) of the Constitution also entitles local government to "an equitable share of revenue raised nationally to enable it to provide basic services and perform the functions allocated to it" (RSA, 1996). The local government equitable share is an unconditional grant, the division of which is formula-based and will be discussed in greater detail below.

Section 227(2) of the Constitution absolves national government of any obligation to compensate municipalities that do not raise revenue commensurate with their fiscal capacity and tax base (RSA, 1996). Hence, the local government equitable share does not provide additional funding to municipalities with low fiscal effort as this creates a disincentive for municipalities to maximise their revenue collection and creates a dependence on the national fiscus. Municipalities are thus required to exercise the requisite fiscal effort to ensure that tax bases are fully exploited and that all revenues owing to the municipality are collected. This section also prohibits penalising municipalities in their allocations for any additional revenue that they may raise.

4.2.3   *Unconditional transfers: the local government equitable share*

The local government equitable share gives effect to Section 227 of the 1996 Constitution. It is an equalisation measure intended to address the vertical and horizontal imbalances arising from how expenditure and revenues have been assigned between the spheres and between municipalities. Although the equitable share is an unconditional grant, it is intended to fund the provision of free basic services to poor households and subsidise the cost of administration and other core services for municipalities that have the lowest potential to fund these costs from their revenues (National Treasury, 2016).

The local government equitable share is formula-driven using demographic and other data to determine each municipality's relative share of the national allocation (National Treasury, 2016). The formula consists of three parts and five components and is structured as outlined in the textbox below:

Local Government Equitable Share Formula

$$LGES = BS + (I + CS) \times RA \pm C$$

Where:

LGES is the Local Government Equitable Share
BS is the Basic Services component
I is the Institutional component
CS is the Community Services component
RA is the Revenue Adjustment factor
C is the Correction and Stabilisation factor

Textbox 4.1: Local government equitable share formula (Source: National Treasury, 2016)

There are three main parts to the local government equitable share formula. In the first part of the formula, the intention is to provide for the cost of free basic services to poor households (National Treasury, 2016). The basket of basic services includes a minimum of six kilolitres of free water, 50 kWh of free electricity, basic sanitation and refuse removal. A poor household is considered to refer to those households below an affordability threshold determined annually by national government. An average monthly household income equivalent to two old-age pensions usually defines the affordability threshold used in the formula.

The second part of the formula is intended to help those municipalities with limited resources afford basic administrative and governance capacity and perform core municipal functions (National Treasury, 2016). Three components are used to achieve this objective, namely:

- The institutional component (I) subsidises basic administrative costs in a municipality (National Treasury, 2016);
- The community services component (CS) provides funds for other core municipal services which are not included in the basic services component (National Treasury, 2016); and
- The revenue adjustment factor (R) ensures that funds from this part of the formula are only provided to municipalities with limited potential to raise their revenue. Therefore, municipalities that are least able to fund these costs from their internally generated revenues receive the most funding (National Treasury, 2016).

The final part of the formula provides for predictability and stability through the correction and stabilisation factor which ensures that all of the formula's guarantees are met (National Treasury, 2016).

4.2.3.1 *How much of the equitable share does local government receive?*

Of the revenue raised nationally, local government receives the smallest share compared to the other two spheres of government since local government has substantial own revenue raising powers. The table below indicates the allocation of nationally raised revenues across the three spheres of government for the financial years 2012/13 to 2018/19.

Table 4.2: Division of nationally raised revenues 2012/13 to 2018/19

R million	2012/13 Outcome	2013/14 Outcome	2014/15 Outcome	2015/16 Revised	2016/17 Estimate	2017/18 Estimate	2018/19 Estimate	Average annual growth (%)
National Government	412 881	444 768	475 336	533 113	548 440	585 026	628 311	
National Growth (annual)		7.7%	6.9%	12.2%	2.9%	6.7%	7.4%	7.3%
Provincial Government	310 741	336 495	359 922	386 500	410 699	441 831	474 852	
PGES Growth (annual)		8.3%	7.0%	7.4%	6.3%	7.6%	7.5%	7.4%
Local Government	37 139	38 964	41 592	50 507	52 569	57 012	61 732	
LGES Growth (annual)		4.9%	6.7%	21.4%	4.1%	8.5%	8.3%	9%

Table 4.2: Division of nationally raised revenues 2012/13 to 2018/19 (National Treasury, 2016: 6)

From the table above, it is evident that relative to the national and provincial spheres of government, local government receives the smallest allocation of national revenue. However, the average annual growth rate of the local government equitable share exceeded that of the national and provincial spheres for the period specified in the table.

4.2.4 *Conditional transfers to local government*

In addition to the unconditional local government equitable share, municipalities are also allocated direct conditional grants mainly for infrastructure purposes. These grants have specific conditions attached to them and municipalities must spend in line with these conditions. The table below indicates the total conditional grants allocated to local government for the financial years 2012/13 to 2018/19.

Table 4.3: Local government conditional grant allocations 2012/13 to 2018/19

R million	2012/13 Outcome	2013/14 Outcome	2014/15 Outcome	2015/16 Revised	2016/17 Estimate	2017/18 Estimate	2018/19 Estimate	Average annual growth (%)
Local Government Conditional Grants	30 021	34 018	35 874	38 485	41 132	44 543	51 611	
Annual Growth rate		13.3%	5.5%	7.3%	6.9%	8.3%	15.9%	9.5%

Table 4.3: Local government conditional grant allocations for 2012/13 to 2018/19 (National Treasury, 2016:6)

4.3 Municipal revenue-raising assumptions

One of the formative assumptions regarding the revenue-raising ability of local government is contained in the 1998 White Paper. The White Paper assumed that on average, municipalities have sufficient revenue-raising powers to fund 90% of their recurrent expenditure from their revenues (RSA, 1998). The White Paper also acknowledged the variations in municipalities across the countries and, in particular, that rural municipalities would be able to fund far less of their expenditure than urban municipalities (RSA, 1998). Rural municipalities would require greater subsidisation from the state.

Designing a new fiscal framework that would provide sufficient revenue and revenue raising capacity to municipalities to meet their expanded service delivery goals and deliver on the developmental agenda, was a complex task. South Africa was characterised by major socioeconomic distortions when the White Paper was finalised in 1998. There were huge service delivery backlogs in many parts of the country, extreme poverty in most areas and very uneven local economies which required integration. Furthermore, there was a lack of

information regarding what it would cost municipalities to extend services to previously disadvantaged areas and what could reasonably be recovered through service charges and property rates.

Despite this lack of information, the local government fiscal framework was premised on the assumption that local governments would largely be self-financing except for rural municipalities. The main sources of own revenue would be raised via property rates and services charges for water, electricity, sanitation and refuse removal and these would be held for all other municipalities, except rural municipalities. The fiscal framework, therefore, assumed a "one size fits all" approach to municipal finance. Also inherent in these assumptions was that all South Africans would be both willing and able to pay for services and that services would be affordably priced.

The White Paper made further assumptions regarding the potential margins to be realised from property rates and other service charges. Property rates were expected to contribute 19.89% of municipal revenue, electricity sales would be the major revenue contributor accounting for 41.4% of municipal revenue; sales from water would contribute 11.8% while sewerage and refuse removal would each contribute 8.22% to municipal revenue. Sales from electricity would also be expected to cross-subsidise other municipal expenses as the perceived margins were higher given that the cost of electricity supply was low at the time of finalising the White Paper.

It is evident that the assumptions in the White Paper may not have been aligned to the reality in existence at the time and even less so to the reality in existence today. There was weak empirical evidence to support the fiscal framework given that most of the assumptions were based on a small proportion of previous so-called "white" municipalities. Furthermore, the assumptions in the White Paper were deemed to be relevant to all municipalities and did not consider the huge discrepancies across the different parts of the country.

After more than two decades, it is unambiguously clear that there are several municipalities in financial distress. Financial distress is reflected in the increased number of municipalities that are unable to fund their expenditure from current revenue collections and any accumulated surpluses from prior years. There is also an increase in the number of unfunded budgets adopted annually by municipal councils. An unfunded budget is the first sign of fiscal stress in a municipality and refers to a situation where a budget is approved and adopted but for which insufficient funding exists in the form of realistically anticipated revenues to be collected for that year and any surplus funds that may have accrued from previous years. In the 2020/21 financial year, 106 municipal councils adopted unfunded budgets (National Treasury, 2020).

It is acknowledged that the design of the local government fiscal framework is not the only contributory factor to municipal financial distress and that the poor state of municipal governance, weak institutional capability, political factionalism and other factors raised in the reports of the National Treasury, the Department of Cooperative Governance and Traditional Affairs (COGTA) and the Auditor General also play a significant role. However, it is not simply a question of either/or. These factors combine to create fiscal problems in municipalities and in finding a suitable solution to the fiscal plight of many municipalities, it is fundamental that the causes of fiscal distress be understood holistically.

4.4 An overview of the municipal policy, statutory and regulatory framework in South Africa

The legislative framework for South African municipalities includes both institutional and sectoral legislation including any regulations that are issued following both types of legislation.

Institutional legislation according to Steytler refers to legislation that is intended to structure the institutions and processes of local government by regulating and monitoring the exercise of competencies to give effect to the developmental mandate of local government as per Chapter 7 of the Constitution (South African Law Reform Commission, 2019).

Section 151(3) of the Constitution recognises the autonomy of local government by conferring on municipalities the "right to govern, on its own initiative the local government affairs of its community" but then subjects this autonomy to national and provincial legislation (RSA, 1996). In addition, Section 155(7) of the Constitution states that "the national government, subject to Section 44, and the provincial governments have the executive and legislative authority to see to the effective performance by municipalities of their functions in respect of matters listed in Schedules 4 and 5, by regulating the exercise by municipalities of their executive authority referred to in Section 156(1)" (RSA, 1996).

Both the 1996 Constitution of South Africa and the 1998 White Paper on Local Government provided the framework for enabling municipal legislation. Local government institutional legislation is mainly administered by the Department of Cooperative Governance and Traditional Affairs and the National Treasury. The suite of local government institutional legislation includes:

(a) the Disaster Management Act, 2002 (Act 57 of 2002);
(b) the Intergovernmental Fiscal Relations Act, 1997 (Act 97 of 1997);

(c) the Intergovernmental Relations Framework Act, 2005 (Act 13 of 2005);

(d) the Local Government Transition Act, 1993 (Act 209 of 1993);

(e) the Local Government: Municipal Demarcation Act, 1998 (Act 27 of 1998);

(f) the Local Government: Municipal Electoral Act, 2000 (Act 27 of 2000);

(g) the Local Government: Municipal Finance Management, 2003 (Act 56 of 2003);

(h) the Local Government: Municipal Property Rates Act, 2004 (Act 6 of 2004);

(i) the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998);

(j) the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000); and

(k) the Municipal Fiscal Powers and Functions Act, 2007 (Act 12 of 2007).

(Source: South African Law Reform Commission, 2019)

The Financial and Fiscal Commission of South Arica also noted the plethora of regulations that accompanied the institutional legislation, namely the Municipal Asset Transfer Regulations, the Municipal Regulations and Guidelines on Minimum Competency Levels, the Municipal Regulations on Standard Chart of Accounts, the Municipal Budget and Reporting Regulations, the Municipal Regulation on Debt Disclosure, the Municipal Financial Misconduct Regulations, the Municipal Investments and Municipal Public-Private Partnerships Regulations, and the Municipal Supply Chain Management Regulations with which municipalities have to comply (South African Law Reform Commission, 2019). This places onerous reporting requirements on municipalities.

Municipalities must also comply with sectoral legislation issued by sector departments. Sectoral legislation is intended to regulate the functional areas of schedules 4B and 5B of the Constitution. Sectoral legislation to date includes, but is not limited to:

(a) the Water Services Act, 1997 (Act 108 of 1997);

(b) the National Health Act, 2003 (Act 61 of 2003);

(c) the Electricity Regulation Act, 2006 (Act 4 of 2006);

(d) the National Water Act, 1998 (Act 36 of 1998);

(e) the National Heritage Resources Act, 1999 (Act 25 of 1999);

(f) the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004);

(g) the National Environmental Management: Waste Management Act, 2008 (Act 59 of 2008);

(h) the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013);

(i) the National Environmental Management: Integrated Coastal Management Act, 2008 (Act 24 of 2008); and

(j) the National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004).

(Source: South African Law Reform Commission, 2019)

Sectoral legislation is also accompanied by regulations.

There is an abundance of legislation governing the local government sector. Whether the legislation assists or hampers local government in the execution of its functions is a matter of perspective. However, common criticisms include the fact that considerable human and financial resources are required at the municipal level to meet reporting requirements (South African Law Reform Commission, 2019). Furthermore, the legislation applies uniformly to all municipalities and the lack of differentiation places a burden on the financial and human resources of deep rural municipalities compared to that of their urban counterparts (South African Law Reform Commission, 2019). The Department of Cooperative Governance and Traditional Affairs approached the South African Law Reform Commission to investigate in this regard.

It does not fall within the scope of this research to discuss all of the statutes and regulations impacting local government, however, only those relevant to this research topic will be briefly discussed.

4.4.1 *The Constitution of the Republic of South Africa, Act No 108 of 1996*

The final Constitution of South Africa in 1996 affirmed the autonomy of local government by recognising local government as a level of government in its own right. The previous hierarchical system characterised by a subservient command and control type of relationship between the province and local government was replaced by a system where all three spheres were recognised as equal, interdependent and required to work together in a spirit of cooperative governance.

The Constitution provides municipalities with the mandate to ensure that all citizens receive services required to satisfy their basic needs, that citizens are actively involved in the governance affairs of the local community and that there is a progressive realisation of the Bill of Rights reflecting a need for human dignity, equality and freedom and that the principles of the Constitution are upheld (Van der Waldt, 2007).

However, the autonomy of local government is in some way limited in so far as the institutional aspects of the system are considered. Statutes and regulations issued by national government impose parameters on the institutional systems and processes of municipalities.

Furthermore, the Constitution also protects the developmental agenda of local government by allowing for provincial intervention into local government under specific and predefined conditions. S139 of the Constitution allows for intervention by the provincial executive when there is a failure to fulfil an executive obligation, when there is a failure to pass a budget and when there is evidence of a financial crisis in a municipality (RSA, 1996). S139(7) also allows the national executive to intervene directly in a municipality when the provincial executive cannot or fails to intervene in a municipality (RSA, 1996). In terms of S139(8) of the Constitution, provision is made for the passing of national legislation to regulate the implementation of S139 municipal interventions. In this regard, Chapter 13 of the Municipal Finance Management Act, No. 56 of 2003 provides for the resolution of financial problems in municipalities and distinguishes between financial problems which warrant the preparation of a discretionary financial recovery plan and more serious financial crises as per S139(5) of the Constitution which requires that a mandatory financial recovery plan be imposed on the affected municipality.

4.4.2   *The 1998 White Paper on Local Government*

The 1998 White Paper on Local Government was described as a "mini-constitution" for local government by the then Minister of Provincial Government and Constitutional Development, Minister Valli-Moosa. It is not an Act of Parliament but is rather a policy document for local government.

The 1998 White Paper was the outcome of an 18-month intensive process of research and consultation. Its purpose was to "spell out the framework and programme in terms of which the existing local government system will be radically transformed, establishing the basis for a system which is centrally concerned with working with local citizens and communities to find sustainable ways to meet their needs and improve the quality of their lives" (RSA, 1998).

The White Paper consisted of eight sections. A summary of each section is provided below:

In the first section, the current reality is laid out commencing with a brief history of local government under apartheid and locating the transition process in the context of South Africa's history, it refers to the different types of local government, namely metropolitan and non-metropolitan municipalities and identifies some of the challenges for the transformation associated with existing settlement patterns (RSA, 1998).

The second section addresses the issues related to a developmental local government. It defines developmental local government, identifies the characteristics of developmental local government and urges local government to focus on realising developmental outcomes such as the provision of household infrastructure and services, the creation of liveable integrated cities, towns and rural areas, and the promotion of local economic development and community empowerment and redistribution (RSA, 1998). It also specifies the approaches which can assist municipalities in becoming more developmental namely, through the use of integrated planning and budgeting processes and methodologies, performance management and working together with local citizens and partners (RSA, 1998).

In the third section, the issue of cooperative government is addressed. It acknowledges the role of local government as a sphere of government in its own right, highlights the responsibilities of national and provincial government concerning local government and recognises local government as the point of integration and coordination for the delivery of national programmes (RSA, 1998).

The fourth section of the White Paper addresses the institutional systems for local government motivating the retention of metropolitan government systems in metropolitan areas and the role that metropolitan government is expected to play in social and economic transformation, strategic land-use planning and coordinated public investment (RSA, 1998). It motivates for district government outside metropolitan areas that would assume responsibility for district-wide integrated development planning, infrastructural development, provision of technical assistance to category B municipalities and direct provision of municipal services in areas where Category B municipalities lacked capacity (RSA, 1998).

Lastly, it referred to three types of Category B municipalities, urban, rural and an amalgamation of urban and rural. It also discusses the relationship between traditional leadership and local government where traditional leadership will be afforded representation on Category B and C local councils in all areas where there is traditional leadership (RSA, 1998). The section concludes by outlining the criteria for municipal demarcation (RSA, 1998).

In the fifth section, political systems are addressed highlighting the importance of dynamic political leadership, the delegation of municipal powers by the municipal council to either an Executive Committee or an Executive Mayor and proposes a mixed municipal electoral system where proportional representation adjusts for distortions in representivity and how the number of councillors can be reduced (RSA, 1998).

Section six addresses the administrative systems in local government noting that changes to administrative systems because of amalgamation have yet to take place. This section also addresses a range of service delivery systems, municipal public-private partnerships and other options available, but encourages municipalities to choose the transformation options that best meet their local circumstances.

Section seven deals with the issue of municipal finances. It is here where some of the most contentious issues are raised about the ability of municipalities to self-finance most of their operating expenditure requirements. The section notes the disparities between the revenue bases of different municipalities and puts forward principles to guide the development of a new framework on municipal finance, including local revenue instruments and policies, the regulation of the property tax system, additional sources of revenue, the development of clear tariff policies and credit control mechanisms to ensure access to basic services and that services are sustainable (RSA, 1998). It also discusses intergovernmental transfers and the introduction of a formula-based system for funding operating costs which will constitute an equitable share of national revenue that will enable municipalities to provide a basic level of services to low-income households (RSA, 1998). The leveraging of additional investment is also discussed as well as budgeting, reporting, accounting and management systems (RSA, 1998).

In the final section of the White Paper, municipal transformation is addressed. National Government is committed to establishing a stable framework, however, the success of the transformation process ultimately rests in the hands of each municipality where municipalities are required to think critically about how they operate and relate to local communities, how they develop their strategies for meeting local needs and promoting the social and economic development of communities in their local jurisdictions (RSA, 1998).

4.4.3   *The Municipal Structures Act, No 117 of 1998*

The Municipal Structures Act is intended to provide for the establishment of municipalities following the requirements relating to the categories and types of municipality; to establish criteria for determining the category of municipality to be established in an area; to define the types of municipality that may be established within each category; to provide for an appropriate division of functions and powers between categories of municipality; to regulate internal systems, structures and office-bearers of municipalities; to provide for appropriate electoral systems; and to provide for matters in connection therewith (RSA, 1998).

4.4.4   *The Municipal Systems Act, No 32 of 2000*

The objectives of the Municipal Systems Act, No. 32 of 2000 are to, inter alia, provide for the core principles, processes and systems that are required to enable municipalities to progressively realise the social and economic upliftment of communities and to ensure universal access to essential services that are affordable to all (RSA, 2000). In addition, the Municipal Systems Act defines the legal nature of the municipality as including the local community within the municipal area, working in partnership with the municipality's political and administrative structures; provides for the manner in which municipal powers and functions are exercised and performed; provides for community participation; establishes a simple and enabling framework for the core processes of planning, performance management, resource mobilisation and organisational change which underpin the notion of developmental local government; to provide a framework for local public administration and human resource development; to empower the poor and ensure that municipalities put in place service tariffs and credit control policies that take their needs into account by providing a framework for the provision of services, service delivery agreements and municipal service districts; to provide for credit control and debt collection, to provide a framework for support, monitoring and standard setting by other spheres of government in order to progressively build local government into an efficient, frontline development agency capable of integrating the activities of all spheres of government for the overall social and economic upliftment of communities in harmony with their local natural environment; to provide for legal matters pertaining to local government; and to provide for matters incidental thereto (RSA, 2000).

4.4.5   *The Municipal Finance Management Act, No 56 of 2003*

The objectives of the Municipal Finance Management Act, No. 56 of 2003 are to secure sound and sustainable management of the financial affairs of municipalities and other institutions in the local sphere of government; to establish Treasury norms and standards for the local sphere of government and to provide for matters connected therewith (RSA, 2003).

Although the objectives are succinctly stated, the Municipal Finance Management Act consists of 16 chapters and 180 sections. It is a comprehensive piece of legislation and seeks to cover all aspects related to financial management, including inter alia, issues related to revenues, primary bank accounts, cash and investments, municipal budgets, debt and borrowing, responsibilities of mayors, municipal officials and the administration, municipal entities in respect of the financial governance, fiduciary duties of accounting officers, borrowing, supply chain management, financial reporting and auditing, the resolution of financial problems and financial misconduct.

In addition, Treasury norms and standards, mainly in the form of Regulations, Circulars, Directives and Practice Notes, have also been issued concerning supply chain management, municipal budgets and reporting and financial misconduct.

4.4.6 *The Local Government: Municipal Property Rates Act, No 6 of 2004*

The Municipal Property Rates Act was legislated in 2004. The Act intends to regulate the power of a municipality to impose rates on property; to exclude certain properties from rating in the national interest; to make provision for municipalities to implement a transparent and fair system of exemptions, reductions and rebates through their rating policies; to make provision for fair and equitable valuation methods of properties; to make provision for the objections and appeals process; to amend the Local Government Municipal Systems Act, 2000 to make further provision for the serving of documents by municipalities; to amend or repeal certain legislation; and to provide for matters connected therewith (RSA, 2004).

4.4.7 *The Municipal Fiscal Powers and Functions Act, No 12 of 2007*

The Municipal Fiscal Powers and Functions Act, No. 12 of 2007 aims to promote predictability, certainty and transparency in respect of municipal fiscal powers and functions and to ensure that these powers and functions are exercised in a manner that will not materially and unreasonably prejudice national economic policies, economic activities across municipal boundaries, or the national mobility of goods, services, capital or labour (Dullah Omar Institute, 2007). The Act regulates municipal taxes and surcharges referred to in Section 229 of the Constitution, other than property rates (which are regulated by the Municipal Property Rates Act) but does not list or identify specific taxes that municipalities may enact (Dullah Omar Institute, 2007). Responsibility for initiating a tax proposal rests with municipalities and organised local government (SALGA); they may propose any tax not prohibited by the Constitution. The Act further provides for the process and procedure necessary for the authorisation of taxes, levies and duties that municipalities may impose under Section 229(1)(b) of the Constitution in a way that allows for the evaluation of applications for consistency with national economic policy and other constitutional requirements (Dullah Omar Institute, 2007). It also regulates the exercise by municipalities of their power to impose surcharges on fees for services under Section 229(1)(a) by empowering the Minister of Finance to prescribe norms and standards (Dullah Omar Institute, 2007).

4.5   Conclusion

The adequacy of municipal revenue is key to determining the extent to which municipalities can fulfil their constitutional mandates. Without adequate revenue sources, even the best politically and administratively managed municipalities will struggle to meet legislated expenditure assignments. Over time, the chasm between revenue requirements and expenditure obligations will give rise to serious financial health problems in municipalities. In this chapter, an overview of the local government fiscal framework was provided with a critique of some of the underlying assumptions. Many of the assumptions in the 1998 White Paper may no longer be relevant and require review to better align with the current reality.

The legislation to which local government must conform was also discussed. While municipalities may be autonomous in South Africa, they are subject to a significant amount of legislative and regulatory burden. However, despite such a highly regulated environment, local government financial and institutional performance continues to deteriorate.

Chapter 5:   Fiscal health monitoring of local government in South Africa

Two official reports express an opinion on the fiscal health of municipalities in South Africa. These are *The State of Local Government Finances and Financial Management Report* published annually by the National Treasury and the *Annual Consolidated General Report* published by the Auditor General of South Africa. In this chapter, some of the key differences between the two reports will be highlighted and an analysis of the National Treasury fiscal health monitoring tool will be discussed.

5.1   The State of Local Government Finances and Financial Report versus The Report of the Auditor General

The State of Local Government Finances and Financial Management Report provides a financial health assessment of all municipalities in South Africa based on the audited financial performance and in-year reports of the municipalities. The assessment is based on a selection of predetermined ratios and is linked to the funding compliance methodology outlined in the Municipal Budget Reporting and Reform Regulations that were issued by the National Treasury in 2009.

The audit of municipal financial and performance information has three main objectives. Firstly, it expresses an audit opinion on whether the financial statements of a municipality fairly presents the financial position at the financial year-end and the results of their operations for that financial year (AGSA, online). Secondly, all municipalities are required by legislation to report against their predetermined objectives. The audit process establishes whether the reported performance against the predetermined objectives reported by a municipality is useful and reliable based on predetermined criteria (AGSA, online). Lastly, the audit process helps to determine compliance with applicable legislation such as the Municipal Finance Management Act and the Municipal Systems Act in which the objectives of proper financial management and performance management, transparency, accountability and stewardship are stated. Municipalities must identify and fully disclose any unauthorised, irregular, fruitless and wasteful expenditure which is the most part is incurred as a result of non-compliance with legislation (AGSA, online).

While there are similarities between the two reports, they are not synonymous as the objectives of the two reports differ. The AGSA Report is intended to audit compliance with legislation,

rules and regulations whilst the NT report analyses the financial performance and sustainability of a municipality. The question is then on which report should S139 interventions be invoked? According to the National Treasury, the audit report is insufficient to invoke financial interventions in terms of S139(5) of the Constitution as it does not point to the absence of financial problems in a municipality and does not assess the adequacy of a municipality's cash reserves, the credibility of funding the municipal budget, the allocative efficiency of the municipality's spending priorities, the quality of the municipality's revenue management capabilities, the effectiveness of municipal spending, the sustainability of the municipality's capital budget and the debt burden and the nature and extent of unauthorised, irregular, fruitless and wasteful expenditure (National Treasury, 2011). These are critical elements of financial sustainability and therefore, using the AGSA Report as a trigger for a financial intervention can result in a number of municipal financial crises going undetected. However, from a governance and institutional performance viewpoint, the AGSA report is useful in providing information on governance related parameters which include political, administrative, leadership and financial issues (unauthorised, irregular, fruitless and wasteful expenditure) and from that perspective is extremely useful in identifying governance related dysfunction which may require an intervention in terms of S139(1) of the Constitution and which could also serve as a precursor to a future financial crisis in a municipality.

The table below illustrates the disjuncture that often arises between the municipal fiscal health assessment of the National Treasury and the audit outcomes of the Auditor General. As seen in the table, the Emfuleni Local Municipality in Gauteng has a history of financial distress according to the National Treasury indicator-based assessment, however, for each of these financial years, the financial statements were unqualified by the Auditor General based on applicable governance parameters. Most Provincial Executive Committees generally use the AGSA report as a trigger for invoking an intervention and therefore where they may be a real financial crisis in a municipality, this could go undetected if only the AGSA report is used with no appropriate intervention invoked to deal with the underlying financial distress. Conversely, the Rustenburg, Thulamela and Makhado municipalities generally do not have a history of financial distress, however, their audit opinions were qualified by the Auditor General which might still necessitate an intervention although not necessarily one invoked on financial grounds.

Table 5.1: Selected fiscal distress outcomes and audit opinions

Municipality	Fiscal Distress (National Treasury)					Audit Outcome (Auditor General)				
	2014/15	2015/16	2016/17	2017/18	2018/19	2014/15	2015/16	2016/17	2017/18	2018/19
Emfuleni	Y	Y	Y	Y	Y	Unqualified – E	Unqualified – E	Unqualified – E	Unqualified - E	Outstanding
J B Marks	N	N	N	N	Y	-	-	Disclaimer	Qualified	Qualified
Madibeng	N	Y	Y	Y	Y	Qualified	Disclaimer	Disclaimer	Disclaimer	Disclaimer
Mathjabeng	Y	Y	Y	N	Y	Disclaimer	Unqualified – E	Unqualified – E	Qualified	Outstanding
Rustenburg	N	N	N	N	Y	Unqualified – E	Qualified	Qualified	Qualified	Qualified
Sol Plaatjie	N	N	N	Y	N	Unqualified –E	Unqualified – E	Unqualified - E	Qualified	Qualified
uMhlatuze	N	N	N	N	N					
Greater Giyani	N	N	Y	Y	N	Qualified	Qualified	Adverse	Qualified	Qualified
Thulamela	N	N	N	N	N	-	-	Qualified	Disclaimer	Qualified
Makhado	N	N	N	Y	N	Qualified	Qualified	Adverse	Qualified	Qualified

Table 5.1: Fiscal distress outcomes and audit opinions (Source: Own)

For these reasons and to align with the purpose of this research, the indicators in *The State of Local Government Finances and Financial Management Report* published by the National Treasury will be used as the basis in this research to assess financial health monitoring systems for municipalities.

5.2 Indicators used to assess the financial health of municipalities in South Africa

According to *The State of Local Government Finances and Financial Management Report* for the 2010/11 financial year, which was the first of these reports to be published on the website of the National Treasury, seven key measures were used to assess the strength of municipal fiscal health.

Table 5.2: Municipal fiscal health indicators

Measure	Purpose of measure
(i) Cash as a percentage of operating expenditure	To determine cost coverage – does the municipality have adequate cash available to meet its operating expenditure requirements
(ii) Persistence of negative cash balances	Identifies whether cash shortages or bank overdrafts pose a chronic problem for the municipality
(iii) Overspending or original operating budgets	Tests the effectiveness of municipal spending – are municipalities spending following resources available to them, what is the credibility of the budget and are municipalities able to adjust expenditure should planned revenues not materialise?

Measure	Purpose of measure
(iv) Underspending of original capital budgets	Tests the effectiveness of municipal capital spending – but also provides an indication of whether municipalities are compromising on capital programmes to resolve cash flow challenges, are there planning deficiencies that are impacting service delivery, etc.
(v) Debtors as a percentage of own revenue	Examines the revenue management capability of municipalities
(vi) Year on year growth in debtors	Is the municipality exercising fiscal effort in collecting an outstanding municipal debt? To what extent is financial distress the result of poor debtor management?
(vii) Creditors as a percentage of cash and investments	Is the municipality able to meet its monthly commitments – does it have sufficient cash to pay its creditors in line with the requirements of the Municipal Finance Management Act?

Table 5.2: Indicators measuring the state of local government fiscal health for 2010/11 and 2011/12 (National Treasury, 2012: 20)

The selected financial measures or indicators were congruent with the major reforms in municipal finance management at the time and the requirements for accrual-based accounting contained in the Municipal Finance Management Act, No.56 of 2003. Municipalities were required to ensure that budgets were funded as opposed to being balanced, budget assumptions had to be credible and revenue and expenditure estimates had to be realistic based on trends of the previous years (RSA, 2003). However, it is observed that the selection of indicators refers primarily to the short- and medium-term financial liquidity of the municipality. While the indicator measuring under-spending of original capital budgets can refer to service level sustainability, its inclusion was primarily to determine if capital grants were being used to meet operational expenditure requirements and not to determine if capital spending was adequate to meet current and future demand. Measures that determine investment in municipal infrastructure maintenance were not included; neither were there explicit indicators that examine the changes in socioeconomic conditions of municipalities, such as population growth, unemployment, etc. However, the growth in debtors could be an indicator of both the fiscal effort exercised by a municipality and changing socioeconomic circumstances where fiscal effort remains the same.

The non-inclusion of service delivery and socioeconomic measures of fiscal health must be understood in the context of the local government reform processes undertaken at the time. Municipalities were relatively newly demarcated, reporting processes differed amongst

municipalities and provinces, there was no standardised reporting framework for municipalities, and the credibility and reliability of information were generally poor (National Treasury, 2012).

In the 2012/13 financial year, an eighth measure was added to the above list. The eighth measure related to the reliance on national and provincial transfers and was intended to measure the level at which municipalities can generate funds to finance revenue-generating assets and enhance and sustain revenue-generating streams (National Treasury, 2013). This indicator relates to the concept of vulnerability as per the definition provided by Greenberg and Hiller discussed under the literature review in Chapter 2.

In the 2018/19 financial year, National Treasury increased the number of measures used in the financial health assessment from eight to 13. The full set of indicators are outlined in the table below:

Table 5.3: Financial health indicators 2018/19

Measure	Method	Link to Previous indicator	Norm/ Standard
(i) Cash/Cash equivalent position	Cash + short-term investments – bank overdraft	Persistence of negative cash balances (ii)	
(ii) Cash coverage	(Cash + short-term investments - bank overdraft) / ((Employee related costs + remuneration of councillors + debt impairment + finance charges + bulk purchases + contracted services + repayment of borrowing + other materials + other expenditure + cash transfer and grants)) / 12	Cash as a percentage of operating expenditure (i)	3 months
(iii) Cash plus investments less applications	Cash + short-term investments + long-term investments – bank overdraft less application of cash		
(iv) Repairs and maintenance expenditure level	Repairs and Maintenance expenditure as a percentage of property, plant and equipment (carrying value)		8% of PPE
(v) Asset renewal/rehabilitation expenditure level	(Total Renewal of existing assets + total upgrading of existing assets) / Total capital expenditure		40% of total CAPEX
(vi) Asset Renewal/Depreciation level	(Total Renewal of existing assets + total upgrading of existing assets) / depreciation and asset impairment		100% of assets (depreciated and impaired)

Measure	Method	Link to Previous indicator	Norm/ Standard
(vii) Total Capital Expenditure as a percentage of total expenditure	Total capital expenditure / (Total operating expenditure + total capital expenditure) X 100		Between 10% and 20%
(viii) Liquidity ratio	(Cash + short-term investments) / Total current liabilities		≥1
(ix) Debtor Days	(Total consumer debtors / (property rates + service charges electricity revenue + service charges water revenue + service charges sanitation revenue + service charges refuse revenue)) / 365	Debtors as a percentage of own revenue (v) and year on year growth in debtors (vi)	30 days
(x) Creditor Days	(Trade Payables / (bulk purchases + other materials + contracted services + other expenditure + total capital expenditure)) / 365		Within 30 days of receiving the invoice
(xi) Debt (total borrowing) versus total operating revenue	(Bank overdraft + current liabilities borrowings + non-current liabilities borrowings) / Total operating revenue		Borrowing of up to 45 % of total operating revenue
(xii) Current Ratio	Current assets / current liabilities	Creditors as a percentage of cash and other revenue (viii)	≥1
(xiii) Solvency ratio	Total assets / total liabilities	Creditors as a percentage of cash and other revenue (vii)	≥1

Table 5.3: The latest set of financial indicators used by the National Treasury (National Treasury; 2018: 16)

The inclusion of additional asset management and asset maintenance indicators into the financial health assessment tool is important. It establishes the link between the state of a municipality's infrastructure, the quantity and quality of services and overall municipal fiscal health. As expressed by Bird on the fiscal health of Canadian municipalities in Chapter 2, fiscal health is not only about balancing a budget but ensuring that the requisite investments are made in infrastructure (Bird, 2013).

It is observed that there are no measures included in the tool to determine demographic and social changes that could potentially impact on affordability and the ability of customers to pay for services. It is further observed that the tool no longer contains an explicit measure of municipal vulnerability as measured by the dependence of local government on national and provincial grants. In summary, while the new assessment indicators in the tool represent an

improvement in measuring municipal fiscal health, there is still room to factor in indicators that would improve the understanding as well as the prediction of fiscal health outcomes and inform the action needed to avert fiscal distress and fiscal crises in municipalities.

5.3 Municipal interventions

A consequence of monitoring and measuring municipal fiscal health should be to institute remedial action in cases where fiscal health assessment outcomes show signs of fiscal stress, fiscal distress or a fiscal crisis. Remedial action will depend on the severity of the situation within each municipality.

In South Africa, such remedial action is provided for in S139 of the Constitution of South Africa, Act No 108 of 1996. According to S139, provinces via the Provincial Executive are permitted to intervene in the affairs of a municipality under three circumstances, namely, if a municipality cannot fulfil or fails to fulfil an executive obligation in terms of the Constitution or legislation (S139(1)), if a municipality cannot or does not fulfil an executive obligation in terms of the Constitution or legislation to approve a budget or any revenue-raising measures necessary to give effect to the budget (S139(4)), or if a municipality as a result of a crisis in its financial affairs is in serious or persistent material breach of its obligations to provide basic services or to meet its financial commitments, or admits that it is unable to meet its commitments or financial obligations (S139(5)) (RSA, 1996).

S139(5) interventions are specifically aimed to remediate financial crises and serious financial problems in municipalities.

S139(4) and S139(5) are further regulated by the Municipal Finance Management Act, No 56 of 2003. In terms of this act, they are further broken down into two types, namely, interventions that are *discretionary* instituted mainly where there are financial problems in a municipality and interventions that are *mandatory* and are instituted where there is a financial crisis in the municipality. Criteria to determine whether an intervention should be discretionary or mandatory are also provided for in sections 138 and 140 of the Municipal Finance Management Act. Information on the names of municipalities meeting these criteria is published quarterly on the website of the National Treasury.

However, if there are currently 163 municipalities reported by the National Treasury to be in financial distress, it can be concluded that the right of provinces to intervene in a municipality is either not being invoked or where interventions are invoked, they do not result in sustainable

outcomes for the affected municipalities. Similar findings were contained in a study on the efficacy of S139 interventions undertaken on behalf of the National Treasury by the Public Affairs Research Institute in 2018. The study concluded that where interventions were invoked, they were usually of the wrong type and invoked under the incorrect subsection of S139, they were invoked too late and ended too early, they did not address the root causes of the problems in municipalities and they did not comply with the procedural and substantive requirements of S139 of the Constitution (Public Affairs Research Institute, 2018). The study also found that several municipalities were worse off after the intervention and many interventions had to be repeated in municipalities (Public Affairs Research Institute, 2018).

The table below provides a summary of municipal financial health outcomes per province for the financial years 2010/11 to 2018/19. It also reflects the number of interventions that are currently in place in each province. The greater the number of municipalities in financial distress, the greater the number of interventions that should be invoked to address this problem.

Table 5.4: History of financial distress and municipal interventions

Province	Total number of municipalities	History of Financial Distress (State of LG Finances Report)									S139 Intervention (current)	
		2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	S139 (1)	S139 (5)
Eastern Cape												
Total Eastern Cape	39	8	13	7	9	8	8	18	21	22	1	2
Free State												
Total Free State	23	9	15	9	9	15	14	16	16	21	2	1
Gauteng												
Total Gauteng	11	4	2	1	2	2	3	8	9	9	1	2
Kwazulu Natal												
Total KwaZulu-Natal	54	15	13	26	14	16	15	26	25	29	11	0
Limpopo												
Total Limpopo	27	6	4	5	5	7	7	12	12	17	1	0
Mpumalanga												
Total Mpumalanga	20	6	6	7	7	6	9	12	9	12	1	5
Northern Cape												
Total Northern Cape	31	5	13	14	13	6	13	22	17	27	1	0
North West												
Total North West	22	3	8	5	8	8	9	11	12	19	4	0
Western Cape												
Total Western Cape	30	2	5	4	3	2	1	3	4	7	0	1

Table 5.4: History of financial distress per province and municipal interventions (National Treasury, various)

As can be seen from the above table, the number of municipalities in financial distress has increased significantly amongst all provinces since the 2015/16 financial year. The total number of interventions currently invoked in municipalities does not correspond with the number of municipalities in financial distress. It is also evident that most of the interventions are in terms of S139(1) of the Constitution which is intended to resolve a failure to fulfil an executive

obligation rather than to address growing financial distress. In the Northern Cape, for example, 27 municipalities out of a total of 31 municipalities are in financial distress in the 2018/19 financial year and no financial interventions have been invoked in terms of S139(5) of the Constitution. In the North West Province, 19 municipalities out of a total of 22 municipalities in the province are financially distressed, however, there are only four municipalities under a S139(1) intervention. Similar outcomes are evident in the KwaZulu-Natal and Limpopo provinces.

The national growth in the number of municipalities in financial distress in the 2016/17 to 2018/19 financial years compared to that of the 2014/15 and 2015/16 financial years raises further questions about the causes of financial distress in municipalities. If financial distress is primarily the result of poor leadership, weak governance and management-related matters, as asserted in reports by the National Treasury, the Auditor General and the Department of Cooperative Governance and Traditional Affairs, why is there then growth in poor fiscal health amongst all nine provinces? Furthermore, why has fiscal health deteriorated since the 2016/17 financial year when the fiscal health measurement system indicators remained consistent until the 2017/18 financial year? The trend also raises questions on the strength of the monitoring and oversight role played by the national and provincial spheres of government to avert such outcomes. Could it also be that growing financial distress in municipalities is linked to factors beyond the control of the municipality, such as structural changes in the national economy or some of the systemic issues that originated during the local government transformation process?

5.4   Socio-economic issues in post-apartheid South Africa

A brief overview of the general socio-economic trends in South Africa will be useful in understanding and possibly even explaining some of the general trends observed in overall municipal fiscal health described in the previous section.

According to the second publication of the Men, Women and Children Report produced by Statistics South Africa in 2015, 25,2 per cent of South Africa's adult population defined as 18 years or older, were found to be living below the food poverty line, 40 percent were collectively living below the lower bound poverty line and a total of 55,5 per cent were found to be living below the upper bound poverty line (Statistics South Africa, 2015). These statistics highlight that poverty is rife in South Africa with more than half of South Africa's adult population living below the upper bound poverty line and more than 40 per cent living below the lower bound poverty line.

According to a country report on South Africa produced by the International Monetary Fund in 2020, an annual average decline in the real GDP per capita was observed (International Monetary Fund, 2020). The average annual percentage change in the GDP per capita declined from 0.3 percentage points in 2014 to a negative 0.7 percentage points in 2018 and was projected to decline even further to negative 1.1 percentage points in 2019 (International Monetary Fund, 2020). The decline in the overall health of South Africa's economy during the period 2014 to 2019 could be an explanatory factor in why fiscal distress amongst municipalities has increased. Given that South Africa has wall-to-wall municipalities covering the entire country, the declines in national economic growth would most likely effect the growth in individual municipalities although the extent of these declines are not evenly distributed amongst all municipalities.

The country report of the International Monetary Fund also reports an increase in the annual average unemployment rate within South Africa during the period 2014 to 2019 (International Monetary Fund, 2020). In 2014, the average annual unemployment rate as a percentage of the labour force increased from 25.1 per cent in 2014 to 27.1 percent in 2018 with a projected increase to 28.6 percent in 2019. According to Statistics South Africa, the unemployment rate which covers the labour market activities of those between the ages of 15 and 64 years of age is defined as "the proportion of the economically active population that is unemployed" (Statistics South Africa, 2002). In addition, unemployment is computed using two definitions, the official and the expanded definition. According to the official definition, the unemployed are "those individuals who (a) did not work during the seven days prior to the interview, (b) want to work and are available to start work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview" (Statistics South Africa, 2002). Under the expanded definition, individuals who have not taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview are not included in the official unemployment rate. Those discouraged from finding employment are thus not included.

Under the expanded definition, unemployment rates in South Africa are much higher. According to quarter 4 of the 2014 labour force survey undertaken by Statistics South Africa, the expanded unemployment rate was 34.6 percent compared to 24.3 percent quoted as the official unemployment rate for the same period (Statistic South Africa, 2015). This reflects a difference of more than 10 percentage points between the official and expanded definition. In the fourth quarter of 2019, the unemployment rate as per the expanded definition was 38.7

percent compared to the formal unemployment rate of 29.1 percent for the same quarter (Statistics South Africa, 2020). The actual unemployment rate in 2019 was even higher than the projections of the International Monetary Fund. Between 2014 and 2019, an overall increase in unemployment is observed in both the formal and expanded definitions.

Inequality has also remained high in South Africa. According to Statistics South Africa, South Africa is known to be one of the most unequal countries in South Africa (Statistics South Africa; online) with a Gini-coefficient of 0.63 in 2015 (International Monetary Fund, 2020). According to the figure below, a comparison of inequality between other emerging markets and South Africa, shows that inequality has increased in South Africa between 1993 and 2015 (International Monetary Fund, 2020).

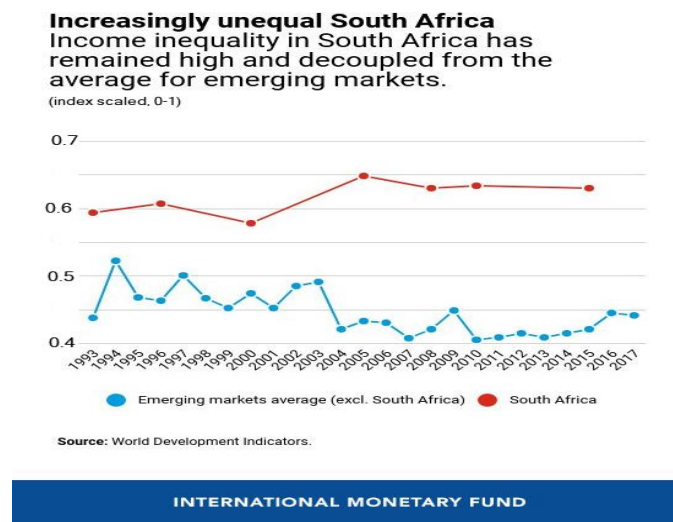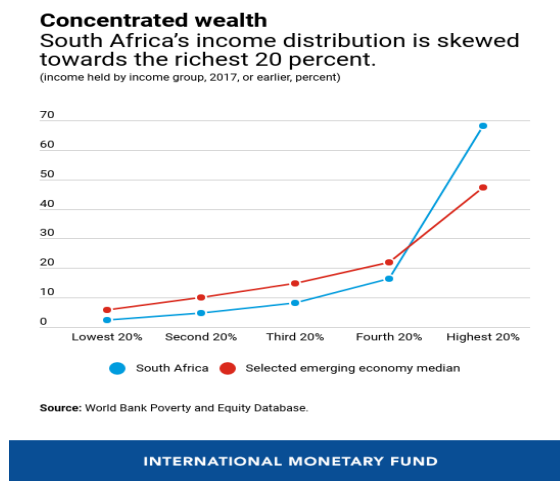**Figure 5.1: Income inequality in South Africa**

Figure 5.1: Income inequality in South Africa (International Monetary Fund: 2020, np)

Income inequality between South Africa and emerging markets (Source: International Monetary Fund, 2020)

The report of the International Monetary Fund further demonstrates that income distribution remains highly skewed with the top 20% of the population holding over 68% of the income and the bottom 40% of the population holding only 7% (International Monetary Fund, 2020). The figure below depicts the contrast in income inequality between South Africa and selected emerging economies.
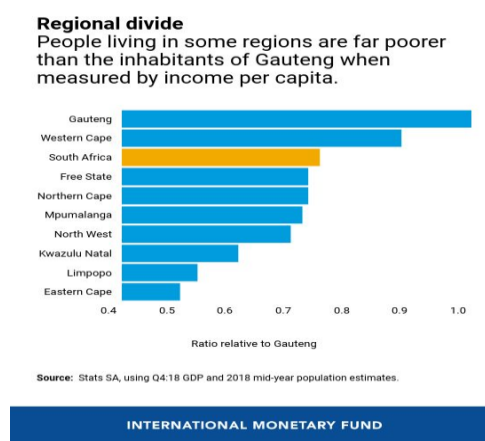
Figure 5.2: Income inequality in South Africa (top 20% versus bottom 40%)

Concentrated wealth
South Africa's income distribution is skewed towards the richest 20 percent.
(income held by income group, 2017, or earlier, percent)

Figure 5.2: Income inequality in South Africa versus that of selected emerging economies (International Monetary Fund, 2020: np)

Concluding the discussion on inequality, the report of the International Monetary Fund also shows that amongst the nine provinces in South Africa, there is significant inequality in per capita income amongst the rural areas and those closer to economic centres where job and income prospects are significantly higher (International Monetary Fund, 2020). These disparities are depicted in the figure below where per capita incomes for the other eight provinces are compared to that of Gauteng which is deemed to be the economic centre of the country.

Figure 5.3: Per capita income ratios for all provinces compared to that of Gauteng

Regional divide
People living in some regions are far poorer than the inhabitants of Gauteng when measured by income per capita.

Figure 5.3: Per capita income ratios for all provinces based on 2018 data (International Monetary Fund, 2020: np)

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As is evident from the table above, per capita incomes in the Eastern Cape and Limpopo provinces are significantly lower than that of Gauteng and Western Cape, with all, except for Gauteng and Western Cape, falling even below the average for South Africa.

5.5   Conclusion

Poor financial health amongst municipalities in South Africa arises from a combination of systemic, structural and management related issues. From a systemic point of view, it was necessary to have an overarching policy framework for the local government sector before the local government election in December 2000. However, it seems that in the lead up to this process, several compromises were made, the consequences of which may well be playing out in the current performance of local government. Timeframes did not allow for the kind of in-depth research and extensive consultation required.

Similarly, the municipal demarcation process appears to have been hastily concluded due to the tight timeframes within which demarcation had to be achieved, with insufficient consultation on the methodological approach and an alignment that favoured geopolitical boundaries rather than boundaries based on ensuring the financial viability of municipalities. Furthermore, there appears to be a lack of empirical evidence to support the revenue assumptions contained in the White Paper on Local Government. The non-payment for services promoted as part of the rent boycotts during the apartheid era also appear to have become entrenched as part of a general culture of non-payment amongst many South Africans.

Concerning the structural issues, South Africa suffers from extreme inequality, unemployment and poverty. The interconnectedness between these issues is evident in that growing unemployment leads to higher levels of poverty and therefore contributes to the higher levels of inequality. Although several growth-related policies have been introduced since 1994, such as the Reconstruction and Development Programme (RDP), the Growth, Employment and Redistribution (GEAR) Framework, the Accelerated and Shared Growth Initiative for South Africa (ASGISA) and the National Development Plan 2030 (NDP), these have unfortunately not resulted in significantly changing the status quo concerning poverty, unemployment and inequality.

The growth in unauthorised, irregular, fruitless and wasteful expenditure amongst municipalities in South Africa is concerning and validates the contribution of management and leadership failure to the erosion of municipal fiscal health. Although unauthorised and irregular expenditure does not necessarily mean that money has been wasted or fraud has been committed, it does indicate irregularities in the processes followed, primarily in the area of

procurement of goods and services and is a measure of a municipality's ability to comply with legislative requirements (Auditor General, 2015). In the 2014/15 financial year, 88% of municipalities or 240 municipalities incurred irregular expenditure amounting to R14,75 billion. By the end of the 2018/19 financial year, irregular expenditure incurred by municipalities grew to R32,06 billion (Auditor General, 2019).

By contrast, fruitless and wasteful expenditure refers to any expenditure that was made in vain and could have been avoided had reasonable care been exercised by the municipality (Auditor General, 2015). In the 2014/15 financial year, 83% or 227 municipalities incurred fruitless and wasteful expenditure of R1.34 billion. In the 2018/19 financial year, 200 municipalities lost a total of R2.07 billion to fruitless and wasteful expenditure (Auditor General, 2019).

In the 2018/19 report on municipal audit outcomes, the Auditor General determined that 91% of municipalities did not comply with legislation and that a lapse in oversight and a lack of controls were evident in several areas including supply chain management (Auditor General, 2019). These point to significant governance failures within these municipalities and can be a precursor to future municipal financial distress or financial crises if left unaddressed. Poor municipal financial health is often linked to failures in governance and leadership, which create fertile ground for financial mismanagement, fraud and corruption and eventually a collapse of service delivery.

Chapter 6: Research design and methodology

In this chapter, the underlying research paradigm, research strategy and research design will be discussed. The rationale for the selection of secondary cities as the population for this study, which are generally large cities with dense urban populations and high levels of economic activity, will be explained and the process adopted to stratify and select a sample of secondary cities for analysis will be elaborated on. The chapter will also include a discussion of the relevant theoretical and practical socioeconomic variables identified in the literature review and motivate why each variable is important in the South African context. The chapter will conclude with a discussion of the data collection method, the use of confirmatory factor analysis as the statistical tool to analyse the data, ethical considerations and limitations associated with this research as well as a high-level contextual summary of each secondary city included in the sample.

6.1 Research question

The question underlying this research study is: "What are the relevant theoretical and practical socioeconomic indicators of municipal fiscal health and how do these factors impact a selected sample of secondary cities?"

The study, therefore, aims to determine whether a causal relationship exists between socioeconomic indicators identified through theory and practice and municipal fiscal health in South Africa.

6.2 Research design

Research is a process of systematic inquiry, aimed at generating knowledge or improving the understanding of phenomena based on the collection, analysis, interpretation and use of data (Mertens, 2019).

A paradigm is a way of looking at the world consisting of certain philosophical assumptions that guide and direct thinking and action (Mertens, 2019). Each research paradigm in turn consists of a research ontology, defined as the philosophy or the nature of reality, a research epistemology which refers to the philosophy of knowledge or how we come to know and the relationship between the knower and would-be-known as well as the research methodology

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which encapsulates the particular practices used to obtain knowledge or how a researcher intends to find out (Mertens, 2019; Krauss, 2005).

Research paradigms generally distinguish between positivist-oriented and interpretivist-oriented research. Within the positivist research paradigm, a distinction is made between positivists and post-positivists, while the interpretivist paradigm distinguishes between interpretivism, where knowledge is interpreted so that reality can be understood and constructivism, where knowledge is constructed, so that reality can be constructed.

6.3   Research paradigm

The study is framed within a post-positivist research paradigm which has its roots in positivism. Positivists believe that the social world can be studied in the same way as the natural world and that the method for studying the social world is value-free and can be explained in terms of causal relationships (Mertens, 2019). Positivism is associated with certainty and the existence of a single reality, while post-positivism which succeeded positivism deals with probability. It is based on a deterministic philosophy in which causes (probably) determine effects or outcomes.

6.4   Research ontology

In respect of ontology, positivists believe that there is a single reality (naïve realism) that is tangible, relatively constant over time and setting, and that the reality is objective and independent of the researcher's interest in it (Chilisa & Kawulich, 2012). The job of the researcher is thus to discover that reality. While post-positivists concur that there is a reality, they hold the view that this reality can only be known imperfectly because of the researcher's human limitations, referred to as critical realism (Chilisa & Kawulich, 2012). Mertens and Ponterotto, Chilisa and Kawulich state that the researcher can discover reality within a certain realm of probability (Chilisa & Kawulich, 2012). Post-positivists therefore cannot "prove" a theory but can make a stronger case by eliminating alternatives (Mertens, 2019).

6.5   Research epistemology

Early positivists believed that the researcher and participants in a study were assumed to be independent and as such did not influence each other (Mertens, 2019). However, post-positivists modified this belief by asserting that the background knowledge, theories and

hypotheses of the researcher can influence what is observed (Mertens, 2019). However, the researcher must follow prescribed processes rigorously to remain neutral and prevent personal biases from influencing outcomes (Mertens, 2019).

6.6   Research methodology

Consistent with a post-positive research paradigm and as stated above, the purpose of this research is to determine whether a causal relationship exists between socioeconomic factors and fiscal health outcomes. Given that municipal fiscal health is a construct, it can be observed but not measured directly. Actual audited own-source revenues of the sample municipalities will be used as a proxy for municipal fiscal health based on the assumption that own-source revenues should be reflective of both the fiscal capacity and the fiscal effort of a municipality. The greater the availability of own-source revenues provided that the municipality has an efficient expenditure management system, the stronger the possibility of positive fiscal health outcomes for the municipality. Both revenue and expenditure are important elements of managing and maintain good fiscal health outcomes however, for purposes of this study, the focus is more on municipal revenues rather than municipal expenditure management. The use of municipal own revenues as opposed to total municipal revenues will also eliminate any distortions that result from national or provincial equalisation measures such as the allocation of unconditional grants to municipalities.

The relevant theoretical and practical socioeconomic factors identified in the literature review will also be represented by a selection of indicators that can be directly observed and measured.

The study follows a quantitative approach making use of data that is already publicly available on the websites of municipalities, the National Treasury, Statistics South Africa and provincial government departments. No interviews will be conducted with human participants and no data will be sourced from private service providers.

6.7   Sampling frame

This population for this study is limited to intermediate cities, previously referred to as secondary cities in South Africa. According to the South African Cities Network, the term "intermediate cities" has replaced that of "secondary cities" and all government documentation in South Africa now refers to intermediate cities rather than secondary cities (SACN, 2021). Intermediate cities are a subset of local (Category B) municipalities in South Africa. The South African local government legislative framework does not make provision for intermediate cities

and the Municipal Structures Act, No 117 of 1998 refers only to municipal categories, namely, Category A, B and C municipalities (SACN, 2021).

However, as a result of global urbanisation trends and the fact that the United Nations estimates that by 2030, more than 71% of South Africans will be living in urban areas, there is a need to differentiate amongst municipalities beyond the categorisation provided for in the legislation, to manage urban development and future growth. Intermediate cities today form a critical component of South Africa's governmental policies (SACN, 2021).

6.7.1   *What is a secondary/intermediate city?*

The term "secondary city" was first made popular in the 1970s by Dennis Rondinelli, who defined a secondary city as an urban settlement with a population of at least 100 000 people but not including the largest city in the country (World Bank, 2014).

The UN-Habitat which uses a classification system from the 1950s defines a secondary city as an urban area generally having a population of between 100 000 and 500 000 people (Roberts, 2014). Friedman suggested that secondary cities have a core and semi-periphery structure within the economic geography of regions (Roberts, 2014). There is no singular definition of a secondary city, neither is there a singular perspective on how a secondary city should be defined. In some countries, secondary cities, which are often referred to as intermediate cities, are defined and classified based on population size, whereas in other countries, economic contribution, political or other considerations may be more important to the definition and classification of secondary cities.

Despite the definition and classification being context- and country-specific, there is, however, general agreement that the term "secondary city" is most often used to describe the second level or tier in the hierarchy of cities below the primary level (World Bank, 2014). Rondinelli defines a primary level city "as the leading city in its country or region, disproportionately, larger than any others in the urban hierarchy" (World Bank, 2014). In South Africa, there is no official list of secondary cities, although two official quasi-lists have been developed by the National Treasury (SACN, 2012). The first list consists of 19 cities within the category B municipalities with the largest municipal budget size whilst the second list which was developed as part of the Cities Support Programme (CSP) in National Treasury lists 22 cities that are not governed by a metropolitan municipality and extends to include other factors such as population and size of the economy (SACN, 2012).

6.7.2 *Why are intermediate cities important to this study?*

Intermediate cities play an important functional role in both national and global economic growth. According to the South Africa Cities Network, intermediate cities act as catalysts for development in a country playing a distinct and specialised role in the national economy typically alleviating demographic pressures faced by metropolitan areas and often offering a better quality of life than densely populated urban areas (SA Cities Network, 2014). The UN-Habitat expresses a similar sentiment in the 2020 *World Cities Report*, by stating that "urban areas are accelerators of economic growth … generating economic value across a range of spatial scales – local, regional and national" (UN-Habitat, 2020). The report further states that cities are "advertisers" for foreign direct investment because they are where the biggest factors attracting these investments are located, including trade regimes, quality institutions, labour force and infrastructure (UN-Habitat, 2020).

Intermediate cities have the potential to play a pivotal role in the spatial distribution and economy of a country. However, their contributions are dependent on how well they can meet social and economic demands, which in turn depends on their fiscal health. If intermediate cities wish to attract either foreign direct investment or a greater share of local industries into the local jurisdiction, these cities must demonstrate that they have the necessary infrastructure and services to support such economic growth. Additionally, infrastructure must be maintained to prevent service interruptions and the provision of municipal services must be reliable, consistent, affordable and of the right quality. Intermittent water and electricity supplies because of failing infrastructure, underinvestment and fiscal stress can be an economic deterrent. In addition, as intermediate cities attract investment, they must demonstrate an ability to cope with expanding populations and the associated demand for services accompanying an increase in economic activity.

6.8   Sampling methodology

The total population of 39 municipalities identified by the South African Cities Network as intermediate cities have been included in the research. However, findings from the study can be applied to other municipalities that generate most of their revenues from their sources. Based on an indication of the total number of municipalities in South Africa, the population of intermediate cities would constitute approximately 15% of all municipalities in South Africa and 19% of all local or Category B municipalities. The intermediate cities are listed in the table below according to the South African Cities Network classification system:

Table 6.1: Intermediate cities in South Africa

Large and Semi-diverse	Mining	Manufacturing	Service Centre	Low GVA and high population density
Emfuleni	Rustenburg	Mogale City	Matlosana	Bushbuckridge
Msunduzi	Mathjabeng	Newcastle	Maluti-a-Phofung	Makhado
Mbombela	Emalahleni	Govan Mbeki	Nkomazi	Greater Tzaneen
Polokwane	Madibeng	uMhlathuze	Thulamela	Mahikeng
	Rand West	Drakenstein	Sol Plaatje	Enoch Mgijima
	Steve Tshwete	KwaDukuza	Mogalakwena	King Sabata Dalindyebo
	Merafong	Alfred Duma	J B Marks	
	Greater Tubatse/Fetakgomo	Metsimaholo	George	
	Ba-Phalaborwa	Stellenbosch	Greater Giyani	
	Lephalale		Ray Nkonyeni	

Table 6.1: Intermediate cities in South Africa (SACN, 2021: 11)

6.8.1   *Data collection*

Data for this study will be collected from data sources already available in the public domain. These include websites of the sample municipalities, the districts within which they fall, national and provincial government departments and the South African Cities Network. All data used in this study is, therefore, secondary data. The main sources of data include the municipal Integrated Development Plans, Spatial Development Frameworks, Local Economic Development Plans, Annual Reports, Annual Financial Statements and the annual municipal budgets.

Socioeconomic data will also be sourced directly from the website and publications produced by Stats SA, such as the non-financial census of municipalities, the Census 2011 and the Community Survey, 2016.

Data will be triangulated to enhance the reliability of the data used in this research. Data sourced from municipal documents will be verified against the data in the district documentation, National Treasury and Statistics SA documentation.

6.9   Data analysis

Factor analysis will be used as the statistical procedure in this research study to test the extent to which the measured variables represent the identified constructs.

6.9.1   *Factors and variables*

As indicated earlier, municipal fiscal health is a construct and cannot be measured directly. For this research, actual audited own municipal revenues raised from a combination of property rates and service charges will be used as a proxy for municipal fiscal health. This is based on the assumption that all other things being equal, municipal own revenues collected by a municipality during a financial year should be a reflection of both the fiscal capacity and the fiscal effort of a municipality. It is not within the scope of this research project to explore the extent to which fiscal capacity is utilised and fiscal effort is exercised by the sample municipalities.

In Chapter 2, a review of the international literature and existing models developed by Nathan and Adams, Groves and Valente, Zafra-Gomez and Rodriguez Bolivar revealed that common socioeconomic variables identified in fiscal health studies include unemployment, dependency, income level per capita and tourism (Nathan & Adams, 2009; Groves & Valente, 2003; Zafra-Gomez, 2009 Rodriguez-Bolivar, 2015). Nathan and Adams and Rodriguez-Bolivar also view levels of education as an important socioeconomic indicator (Nathan & Adams, 2009; Rodriguez-Bolivar, 2015) while Groves and Valente and Zafra-Gomez view the industrial and commercial business activity as being important to the fiscal health of a municipality (Groves & Valente, 2003; Zafra-Gomez, 2009).

A review of South African literature reveals that poverty, unemployment and inequality are still rife in South Africa with the latest *Men, Women and Children Report* indicating that more than 40% of South Africa's adult population lives below the lower-bound poverty line (Statistics South Africa, 2015), formal unemployment in the fourth quarter of 2019, which was before the COVID-19 pandemic was 29.1% (Statistics South Africa, 2020) and that the Gini-coefficient still hovers around 0.63 (International Monetary Fund, 2020) indicating that inequality is still very prevalent in South Africa despite more than 26 years of democracy.

Poverty, unemployment and inequality directly impact the fiscal health of municipalities. The greater the levels of unemployment in a municipality, the greater the levels of poverty decreasing the fiscal capacity of the municipality and impeding fiscal effort by making it more difficult for a municipality to collect outstanding revenues. Furthermore, higher levels of poverty also imply higher levels of indigents and poor households and therefore the need for increased municipal subsidies. Lower fiscal capacity, challenges in revenue collection and the

need for greater subsidisation to poor households collectively harm the fiscal health of municipalities.

Inequality in South Africa also manifests in the extent to which citizens have access to basic services, such as water, electricity, sanitation and refuse removal, housing, education, transport and health care. Municipalities are not directly responsible for all of these functions; however, secondary cities are responsible for the provision of water, electricity, sanitation and refuse removal to households for which they must bill and collect revenue.

Given South Africa's history of deep-rooted spatial segregation and inequality, before 1994, many citizens did not have access to basic and essential services. Through the development of the Reconstruction and Development (RDP) Programme which was the country's first post-apartheid socioeconomic framework document, meeting the basic needs of South Africans was identified as a priority programme in the RDP. For local government, this meant ensuring that all citizens had access to at least a basic level of essential services, including water, electricity, sanitation and refuse removal.

Although significant improvements have been made over the last two decades in extending access to services in previously disadvantaged and rural areas, universal access to basic services has not yet been attained in South Africa. In 2016, approximately 1.7 million households or 8.8% of all households in South Africa did not have access to piped water (Statistics SA, 2016), 4.1 million or 24.4% of the population did not have access to improved sanitation, 30.1% of all households in South Africa lacked any kind of refuse facilities and 12.4% of the population did not have access to electricity (Statistics SA, 2016). However, the 2016 Community Survey also notes that in respect of all four services, backlogs are more prevalent in rural than urban areas and the limited ability of municipalities to generate revenue in these areas could be the reason why extending access to services is lagging (Statistics, SA, 2016).

Furthermore, in many municipalities, although levels of access to basic services have been improved, it does not automatically imply that households are provided with individual access to services for which they can be billed. For example, access to water also includes the provision of a communal standpipe within 200 metres of the household. In such cases, individual household consumption cannot be measured and billed for by the municipality. So, while the target of providing access to basic services may have been met on a technical level, the effect of providing such levels of access on municipal fiscal health will increase the fiscal burden placed on municipalities by requiring subsidisation measures to be put in place. Nevertheless, it is important to consider access to services as an indicator that is specific to South Africa given

the country's history of inequality. However, access to services from the viewpoint of this study should be measured in terms of services that are provided to an individual household, the consumption of which can be measured and billed for by the municipality.

Based on both the international and local literature review, the following factors and variables were identified for this study:

Table 6.2: List of theoretically relevant and practical factors and variables

Factor	Variable
Population and HH size	• Total population • Child population (0-14 years) • Working-age population (15-64 years) • The elderly population (65 years and over) • Number of Households • Average Household size • Population Density
Population Dependency	• Total Dependency • Child Dependency • Elderly Dependency
Education Profile	• Adults aged 20 and above with no schooling • Adults aged 20 and above with matric (Grade 12) only • Adults aged 20 and above with higher education
Poverty	• Registered number of indigents • Number of unemployed people • Percentage of people living below the food poverty line • Percentage of people living below the lower bound poverty line • Percentage of HH with no income
Inequality	• Gini-coefficient • Number of HH with access to piped water inside the dwelling/yard • Number of HH supplied with electricity from the municipality (pre-paid or monthly billing) • Number of HH with access to a flush toilet connected to a public sewerage system • Number of HH with refuse removal once a week • Formal dwellings • Informal dwellings • Percentage of the population living in urban areas
Economy	• GDP-R (Gross Domestic Product – Region) • Average annual economic growth rate (2006-2016) • Tress Index

Table 6.2: List of theoretically relevant and practical socioeconomic indicators to be used (Source: Own)

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6.9.2 *Demography*

A larger population can have both a positive and/or negative effect on municipal fiscal health. Larger populations generally signal increased economic opportunities and hence higher economic growth within a municipality, translating into stronger fiscal capacity. However, the cohorts of the population are important as economic opportunities will only be possible if there is a large working-age population compared to the child and elderly population and if a significant proportion of the working-age population is economically active and employed. Conversely, a large population characterised by high percentages of children and the elderly do not have positive economic benefits for the municipality, neither does a large population that is unemployed or not economically active. Large populations can therefore also lead to significant developmental challenges and increased cost pressures associated with municipal service provision.

The total number of households in a municipality from which the average household size can be calculated has a further impact on municipal financial health. Most urban areas are characterised by rapid urbanisation caused primarily by the in-migration of people from rural to urban areas. The increase in the number of households places an additional burden on municipal service delivery requirements, in many cases without concomitant compensation on the revenue side of the fiscal framework. Based on the literature review in Chapter 2, demographic indicators related to population size and population denisty were identified as relevant for inclusion by Rodriguez Bolivar (2015) and Groves, Valente and Nollenberger (2003) who classified these variables as part of the environmental factors that impact on municipal financial health.

6.9.3 *Population dependency*

As an indicator of municipal fiscal health and linked to demography, population dependency is important to reflect the percentage of the population who depend on the working-age population for their well-being. To calculate total municipal population dependency, the sum of the child population (defined as those who are between 0 and 14 years old) and the elderly population (defined as those who are 65 years and older) is divided by the working-age population to reflect the "burden" imposed by children and the elderly on those aged between 15 and 64 years of age. The higher the total population dependency, the greater the burden on the working-age population to support these groups. Dependency as a socio-economic indicator of municipal fiscal health was deemed to be a relevant factor in terms of all four socio-economic models

discussed in Chapter 2 of this research, namely, the City Hardship Index developed by Nathan and Adams (1989), the Financial Trend Monitoring System (FTMS) developed by Groves, Valente and Nollenberger (2003), research undertaken by Zafra–Gomez, Hernandez and Bastida (2009) and Rodriguez-Bolivar (2015).

A higher dependency ratio can also indicate a need for greater social assistance and levels of subsidisation within a municipality which directly affects the fiscal health of a municipality. Dependency ratios can be determined separately for children and the elderly to determine the individual burden placed by each of these groups on the working-age population. It can also be useful in assisting secondary cities with pre-empting investment needs to ensure future the growth and sustainability of their communities.

6.9.4   *Education profile*

The higher the education profile of a municipality, the greater the likelihood of skilled labour, and the greater the earning potential of a municipality's citizens. Higher earning potential translates into higher demand for services, an increase in the ability of citizens to pay for services, increased fiscal capacity and consequently increased municipal fiscal health. Three variables are used to assess the education profile of a municipality, namely the number of people aged 20 and older that have had no schooling, the number of people aged 20 and older that have passed matric and the number of people aged 20 and older with education levels higher than matric. The City Hardship Index (Nathan and Adams, 1989) and the research undertaken by Rodriguez-Bolivar (2015) have also identified the relevance of education levels on municipal fiscal health. These are discussed in Chapter 2.

6.9.5   *Poverty*

The impact of poverty on municipal fiscal health has already been outlined in this chapter. The variables used to indicate levels of poverty within a municipality include the registered number of indigent/poor households, the unemployment rate within the municipality, the poverty headcount, poverty intensity and the number of households with no income. These variables are consistent with those identified by Nathan and Adams (1989), Zafra-Gomez, Hernandez and Bastida (2009) and Rodriguez Bolivar (2015) discussed in Chapter 2 of this research document.

Information relating to the indigent or number of poor households in each municipality has been obtained from the annual non-financial census compiled by Statistics South Africa.

However, the classification of a household as indigent depends on the income threshold applied by each municipality as well as the method and onerousness of the system used to target such households.

The greater the number of indigent households, households with no income and unemployment in a municipality, the greater the level of poverty decreasing the ability of the municipality to generate revenue from these households and reducing the fiscal capacity of the municipality.

The municipal poverty headcount is a useful indicator to determine the extent of poverty in a municipality and is represented as the number of people living below the poverty line. In South Africa, the national poverty headcount for people living below the lower-bound poverty line of R647 (2015 prices) was 40% in 2015 while just over a quarter of the population or 25.2% of people in South Africa were living below the food poverty line of R441 in 2015 (Statistics SA, 2017). The food poverty line (FPL) is described as the rand value below which individuals are unable to either purchase or consume enough food to provide them with the minimum daily energy requirements to ensure adequate health (Statistics SA, 2017). People who live below the lower-bound poverty line (LBPL) do not have enough resources to purchase and consume both food and non-food items and therefore must sacrifice food items to obtain essential non-food items (Statistics SA, 2017).

6.9.6 *Inequality*

The Gini coefficient expressed on a scale of 0 to 1 is the most common measure of inequality. An index score of 0 represents total equality in a society where everyone shares the same level of income while an index score of 1 represents total inequality where one person in the society receives all the income and the others get none (Statistics SA, 2017). South Africa is known to be one of the most unequal countries in the world with a Gini coefficient above 0.6 (Statistics SA, 2017). A high municipal Gini coefficient indicates high levels of societal inequality and hence impacts the fiscal capacity of a municipality.

Inequality can also be reflected in the extent to which South Africans are provided with access to basic services such as water, electricity, sanitation and refuse removal. However, as discussed earlier in this chapter, the universal access to basic services from a municipal fiscal health perspective is not a useful indicator as many households are provided with basic service levels but are not billed by the municipality for the service as individual consumption cannot be measured.

Therefore, from a municipal fiscal health perspective, it was considered more relevant to include those households provided with services through individual metered connections. Consumption by these households can be accurately determined and should thus be billed for by the municipality. This is both indicative of municipal fiscal capacity and fiscal effort. The greater the number of households that are individually metered, the greater the fiscal capacity of the municipality.

The number of formal and informal dwellings can also be a further representation of inequality. According to Statistics South Africa, an informal dwelling is defined as "a makeshift structure not approved by a local authority and not intended as a permanent dwelling" (Housing Development Agency, 2013). Informal settlements which consist of several informal dwellings are generally associated with illegality and informality, inappropriate locations, social stress, poverty and vulnerability (Housing Development Agency, 2013). Formal dwellings, by contrast, are usually built under approved building plans, for example, a house on a stand, a flat, apartment, townhouse and these structures usually have access to municipal services, such as water, electricity, refuse and sanitation.

Inequality as a socio-economic indicator of municipal fiscal health was also discussed in the Literature Review in Chapter 2 of this research document. Variables related to inequality, such as crowded housing and income levels were included in the City Hardship Index (Nathan and Adams, 2009) while Zafra-Gomez, Hernandez and Bastida (2009) and Rodriguez Bolivar (2015) focused included variables such as unemployment as a measure of inequality.

6.9.7 *Economic indicators*

Information in the public domain relating to the municipal economy is limited. In Chapter 2, the relevance of economic indicators to municipal fiscal health was determined by Zafra-Gomez, Hernandez and Bastida (2009) who identified tourism, industry and commerce as relevant variables of the economy. Rodriguez-Bolivar (2015) also determined that touristic activity, firm concentration and gross domestic product (GDP) were relevant in so far as municipal fiscal health was concerned.

Despite the limited information on the municipal economy, many secondary cities, however, provide information in their planning documents on the contribution made by each of the sectors to the overall municipal economy. The primary sector is typically composed of agricultural and mining activity including quarrying; the secondary sector consists of

manufacturing, electricity and construction; while the tertiary sector includes finance, retail, government services, community, social and personal services.

Tourism information is scant and unreliable, in many cases. Not all secondary cities provide tourism information and hence it has been excluded from the list of indicators to measure economic activity.

Information relating to the contribution of each secondary city to the national gross development product (GDP) was also deemed to be a relevant indicator for this study as cities with greater GDP contributions would have greater economic strength translating into greater fiscal capacity for the municipality. Gross Value Added by Region (GVA-R) is commonly used to describe the GDP of a region or subnational entity (such as a provinces or cities). The GVA-R is the equivalent of the national GDP and describes the output by region or entity (SACN, 2012).

The average annual economic growth rate for 2006–2016 has also been included as a measurable variable to determine economic growth over some time. The municipal Tress Index measures the diversification of economic sectors within the municipality. The more diverse an economy, the greater the ability of the municipality to withstand economic disturbances or pressures.

6.10 Ethical considerations

The research is focused on the use of secondary data already available in the public domain. No human participants or institutions were interviewed or approached to provide data and information.

6.11 Limitations

The development of a consistent dataset has been the most significant limitation in terms of this study. Both the availability and quality of municipal socioeconomic data varies considerably between municipalities. In many secondary cities, data from the 2011 Census and the 2016 Community Survey are used to inform integrated development and planning. In other cities, data is sourced from private service providers.

Although the use of Census 2011 data could be regarded as relatively outdated, until the new Census is conducted in 2021, the 2011 data remains the best publicly available source of data

for this research study. Some statistics, however, such as the population numbers, household sizes, access to services and the types of dwellings have been updated through the 2016 Community Survey, whereas indicators relating to education levels, income levels, employment levels will not reflect the changes that have occurred over the past 10 years. However, the number of publicly available sources that could be consulted to obtain this information is severely limited and quarterly labour force statistics are not collected at the municipal level.

To develop a consistent dataset across the 39 intermediate cities, most of the data used in this study is taken from the 2011 Census and the 2016 Community Survey, although provinces, such as the Western Cape, publish updated municipal socioeconomic data annually. There is also evidence of socioeconomic profiling being undertaken for municipalities in the Eastern Cape Province. The most recent report on intermediate cities published by the South African Cities Network has also provided useful information (SACN, 2021). However, all other provinces, in which the sample municipalities are located, do not undertake regular socioeconomic profiling in respect of their municipalities.

A further limitation of this study is the exclusion of the contribution made by the informal sector to employment and municipal revenue. People employed in the informal sector have not been included in the rate of employment to reduce total unemployment percentages. This is primarily because information on the informal sector is very limited and, in many instances, it is difficult to determine whether many of these jobs in this sector are survivalist in nature.

6.12 Conclusion

The factors identified for further research in this study have been aligned to international fiscal health models. In addition, factors specific to the South African context were identified for inclusion, such as poverty, unemployment and inequality. The importance of the selected factors to municipal fiscal health was highlighted in this chapter. Variables to measure the factors were identified, however, the lack of availability of municipal socioeconomic data limits the number of variables that can be employed. Data is either not available in the public domain and where data is available, it is usually outdated. Many municipalities also do not report on the same socioeconomic indicators in their planning documents.

The rationale for intermediate cities as the population for this study was also outlined in this chapter. There are 39 intermediate cities in South Africa which constitute the sample for this study.

Chapter 7: Research findings

In this chapter, the key findings of the statistical analysis are presented following the third objective of this research study which sought to test the relationship between theoretically relevant and practical socioeconomic variables and municipal financial health. The sample included all 39 intermediate cities in South Africa and 29 variables grouped into six socioeconomic factors were identified through the literature review in Chapter 2 and the research design in Chapter 6. The two variables used as proxies for municipal financial health included municipal own-source revenues and municipal expenditure. While the theory suggests that positive municipal financial health depends on an equilibrium between total municipal revenue (inclusive of grant funding) and total municipal expenditure, most intermediate cities in South Africa are expected to be self-financing. For this study, it was therefore deemed appropriate to test the relationship between socioeconomic indicators and own municipal revenue sources. Findings are presented using figures and tables.

7.1 Data distribution frequencies

The first part of this chapter is focused on describing the individual variables and how these variables are distributed across the 39 intermediate cities. Two variables are used as proxy measures of municipal fiscal health in this study. These include:

Figure 7.1: Variables of municipal fiscal health
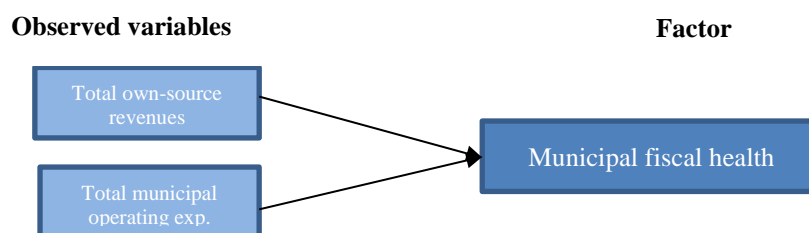
Figure 7.1: Variables of municipal fiscal health (Source: Own)

7.1.1 *Distribution of total own-source revenue*
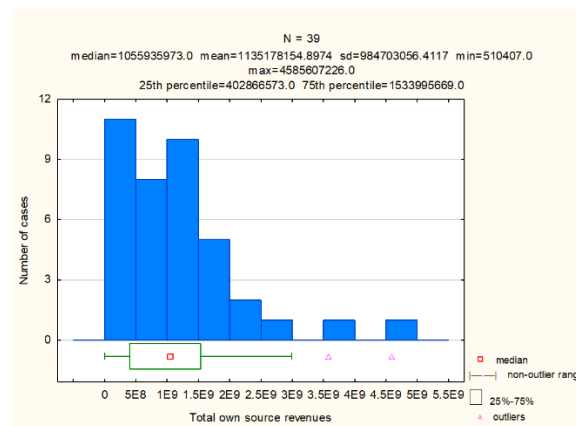
Figure 7.2: Distribution of own-source revenues in intermediate cities

The distribution of the total own-source of revenues amongst the 39 cities was positively skewed. The highest observed frequencies were located to the left of the histogram—in the first three bins. The mean value of 1135178154.8974 was higher than the median of 105593573.0 as a result of the high own-source revenues of the Emfuleni and Msunduzi municipalities, represented by the two outliers which have pushed up the average (mean) value. Based on the histogram, it is evident that more than half of the cities generate lower levels of own-source revenues with a median clustered around the common ranges.

7.1.2 *Distribution of total operating expenditure*
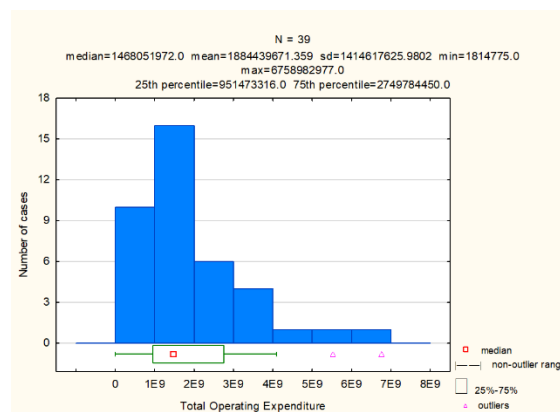
Figure 7.3: Distribution of total operating expenditure in intermediate cities

Similar to own-source revenues, the distribution of operating expenditure across the 39 intermediate cities was also positively skewed. The mean value of 1 884 439 671.359 exceeded the median of 1 468 051 972.0. The mean value was pushed up as a result of the high expenditure incurred in the Emfuleni and Msunduzi municipalities. The two most common frequencies occur in the first and second bin of the histogram indicating that operating

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expenditure for half of the intermediate cities falls in the lower-range values, which is similar to the distribution of own-source revenues.

7.2 Distribution of the socioeconomic variables in the 39 intermediate cities

Six socioeconomic factors observed through 29 variables have been identified through the literature review as being relevant to this study. These factors include population and household size, poverty, inequality, dependency, education and economic indicators.

7.2.1 *Demographic indicators (population and household size)*

The total population of a city matters greatly from a municipal fiscal health perspective. Cities with larger populations may have increased fiscal capacity due to the presence of more people but larger populations also increase the demand for services which drives up municipal expenditure. Other characteristics of the total population must be considered to better inform the impact on municipal revenue and expenditure, for example, rates of poverty, the age distribution of the population, education levels and access to services.
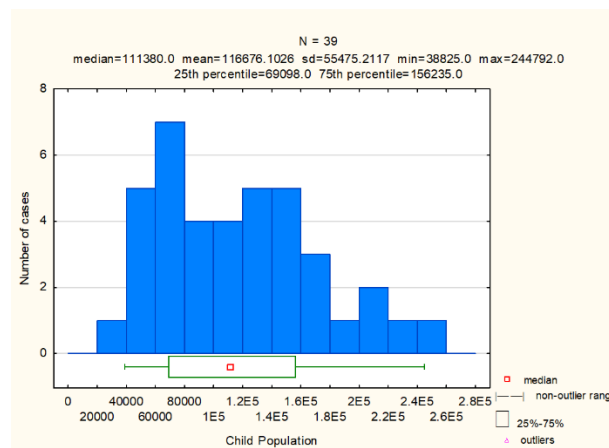
7.2.1.1 Distribution of the total population
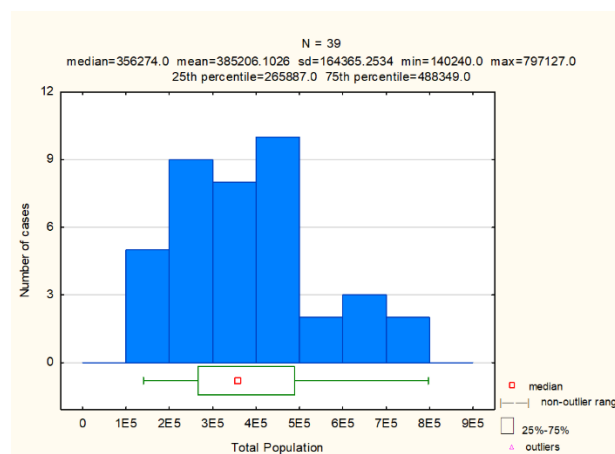
Figure 7.4: Distribution of population in intermediate cities

The distribution of the population amongst the 39 intermediate cities follows a unimodal distribution with a positive skew. The minimum population was approximately 140 240 people (Lephalale) and the city with the largest population (Polokwane) contained approximately 797 127 people. This gave rise to a mean value of 385206.1026 which exceeded the median value of 356274.0. No outliers were identified. The highest frequency was observed in the

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middle of the histogram in the range 400 001 to 500 000 people with the other most commonly occurring frequencies observed to the left of the chart. The graph indicates in more than half of all cities, the total population falls in the lower ranges, although there are a few cities with very large populations which push up the average value.

7.2.1.2   *Distribution of the child population*

While a city's total population is important, analysing the population cohorts are also important to better understand the split between the potentially economically active population and the proportion of the population that cannot contribute to the revenue of a municipality, such as the child population. For this purpose, data on the age cohorts of the population were separately analysed.

Figure 7.5: Distribution of the child population in intermediate cities

The distribution of the child population amongst the intermediate cities was measured in intervals of 20 000 children. Although the histogram is positively skewed, there is a small difference between the mean value of 116 676.1024 and the median value of 111 380.0. The highest frequency which contained seven of the 39 cities had populations of between 60 001 to 80 000 children. This was followed by an equal number of cities in the ranges 40 001 to 60 000; 120 001 to 140 000 and 140 001 to 160 000. This indicates greater variability in the distribution of the child population amongst cities.

7.2.1.3   *Distribution of the adult population*

The adult population is comprised mainly of the cohort that is deemed to be of working age who can contribute to municipal own revenues and thus the fiscal capacity of a city. However, not all people in this cohort may be economically active. It would have been more appropriate

to only consider those who are economically active and can contribute to municipal revenues and hence municipal fiscal capacity. However, many cities do not report separately on this data.
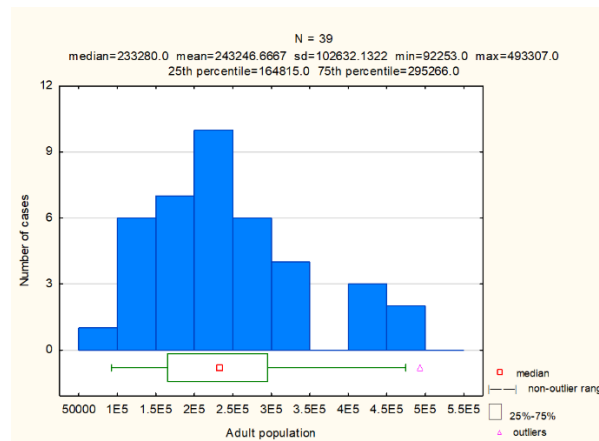

Figure 7.6: Distribution of the adult population in intermediate cities

The adult population reflects a unimodal distribution with a positive skew. Intervals of 50 000 adults were used. The mean value of 243 247.6667 exceeded the median value of 233 280.0. The higher mean value can be attributed to the high adult population in the Emfuleni and Polokwane municipalities. Most of the frequencies are observed to the left of the chart with the highest observed frequency consisting of 10 cities located in the range of between 200 001 to 250 000 adults. The mode and the median are clustered, are all clustered closely together, although not equal.

7.2.1.4 *Distribution of the elderly population*

The elderly population of a municipality is generally associated with greater levels of dependency. This cohort of the population generally impacts municipal expenditure through increased levels of subsidisation. Elderly people are usually classified as pensioners and hence pay preferential rates and taxes.
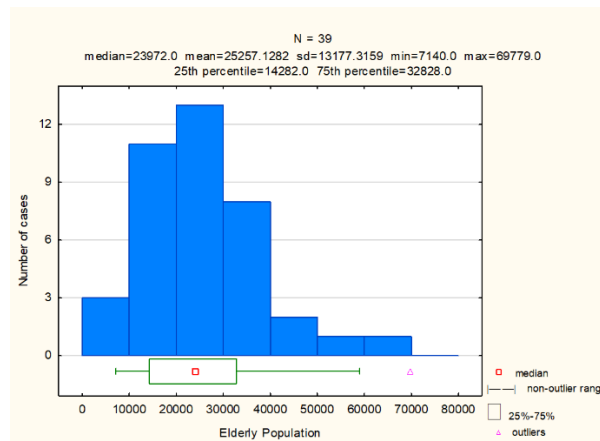
Figure 7.7: Distribution of the elderly population in intermediate cities

The distribution of the elderly population was positively skewed, with the two highest frequencies occurring to the left of the histogram. The mean value of 25 257.1282 was above the median value of 23 972.0. The highest frequency consisting of 13 of the 39 cities have an elderly population of between 20 001 to 30 000 people. This is followed by another 11 cities that have elderly populations of between 10 001 to 20 000 people. The mean, median and mode were located within the same range. There is little variability amongst most of the cities, however, there is also evidence of a few extreme values observed in the histogram. The outlier is related to the Emfuleni municipality where the elderly population consists of close to 70 000 people.

7.2.1.5   *Distribution of the total number of households*

Similar to population, the greater the number of households in a city, the greater the presumed fiscal capacity due to a larger number of municipal customers. This would be the case provided that these are not primarily poor households, that these households have access to levels of service for which the municipality can measure consumption and bill the household for services consumed.
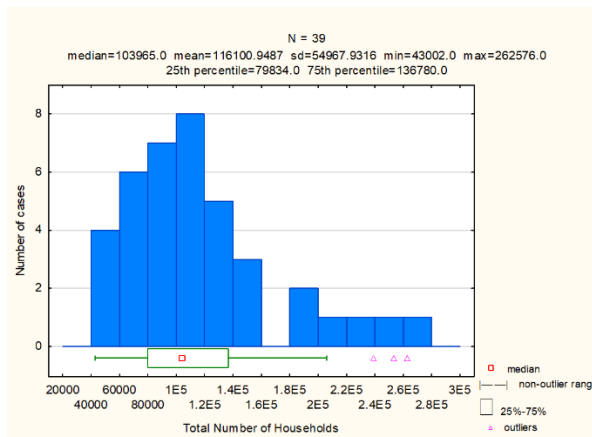
Figure 7.8: Distribution of the total number of households in intermediate cities

There is a unimodal distribution of households amongst the cities with a positive skew. The most commonly observed ranges are clustered to the left of the histogram. The highest observed frequency occurs in the range of 100 001 to 120 000 households. The mean value of 116100.9487 is higher than the median value of 103965.0 being pushed upwards by a higher number of households in the Emfuleni, Rustenburg and Polokwane municipalities. The median is clustered around the two most common ranges. Intervals of 20 000 households have been used. There is little variability in the distribution of the data amongst households in the lower range, however, extremely high values are observed.

7.2.1.6 *Distribution of average household size*

The average household size is expressed as the ratio between the total population and the total number of households in a city. Household sizes are generally useful in making assumptions related to service consumption levels. Large households are assumed to be larger consumers of services. In South Africa, this assumption does not always hold as many large households can also be associated with higher levels of poverty.
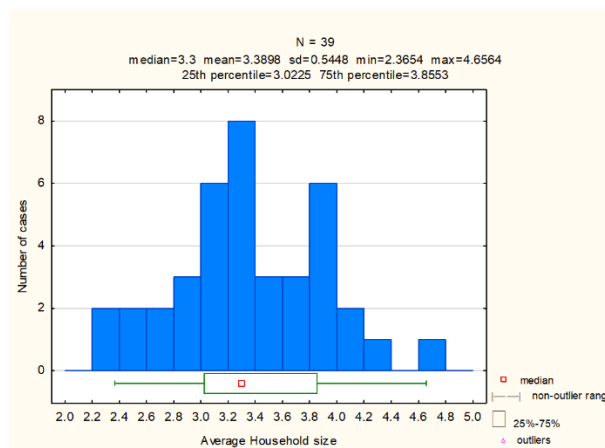

Figure 7.9: Distribution of average HH size in intermediate cities

The distribution of average household size reflected a more or less symmetrical distribution with the median value of 3.3 almost equal to the mean value of 3.3898, implying an average HH size that is concentrated around the median and mode. Household sizes ranged from a minimum size of 2.3654 people per household to a maximum of 4.6564. The intervals used are small, creating the impression of more variability in the data, however, this is misleading.

7.2.1.7   *Distribution of population density*

The closer people and households are clustered together, the greater the opportunity for the city to benefit from economies of scale in terms of infrastructure provision and maintenance. A greater number of households can be serviced with each square kilometre of infrastructure and hence the costs associated with the delivery of the service can be spread amongst a larger number of households.
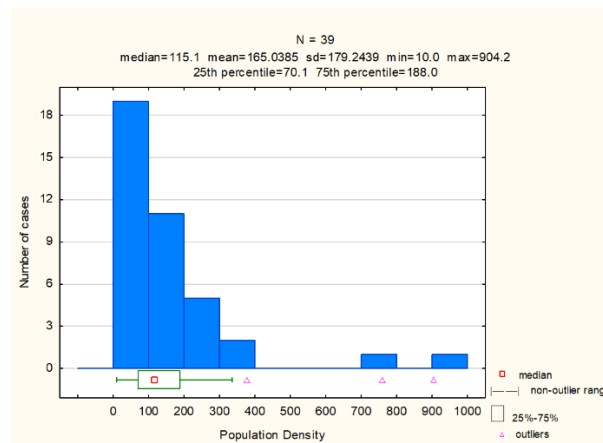

Figure 7.10: Distribution of population density in intermediate cities

The population density was positively skewed. The mean value of 165.0385 which exceeded the median value of 115.1 was the result of a small number of densely populated cities including the Emfuleni and Msunduzi local municipalities with population densities of 759.3 and 904.2 people per square kilometre respectively. Most of the values were concentrated to the left of the histogram with the most frequently observed value (19 cities) occurring in the range of 0 to 100 people followed by 11 cities in the range of 101 to 200 people. This indicates that there is little variability in the data amongst cities despite the observance of outliers.

7.2.2   *Distribution of variables related to poverty*

Higher levels of poverty usually imply more of an expenditure burden on a city because of higher levels of municipal subsidisation and grants to indigent households and can therefore be associated with lower levels of municipal fiscal health.

7.2.2.1   *Distribution of registered indigent households*

Indigent households refer to poor households in a municipality. Most intermediate cities use a self-targeting mechanism to identify these households. Thresholds based on monthly household income are used for classification purposes. Although these thresholds may not necessarily be equal in all cities, they do fall within similar ranges.
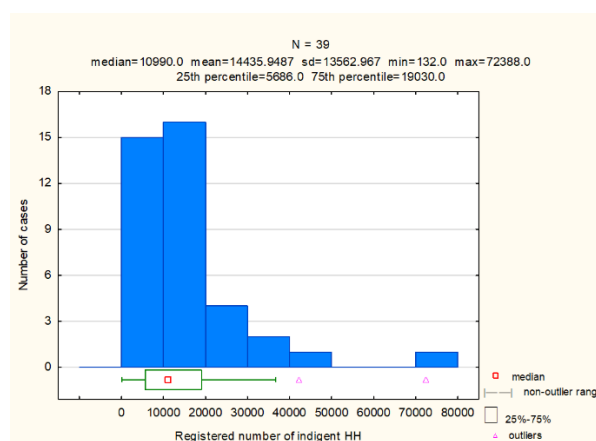

Figure 7.11: Distribution of indigent households in intermediate cities

The distribution of indigent households amongst the cities is skewed to the right. The two most commonly observed frequencies occur in the first two bins to the left of the histogram. This indicates little variability in the number of indigent households across 31 of the 39 intermediate cities. The mean value of 14 435.9487 is significantly higher than the median value of 10 990.0 being pushed upwards as a result of the Ba-Phalaborwa and Emfuleni municipalities who have high indigent populations of over 42 000 and 72 000 households respectively.

7.2.2.2   *Distribution of unemployed people*

Higher levels of unemployment increase the number of poor households and thus poverty in a city. Higher unemployment rates are therefore associated with lower fiscal capacity.
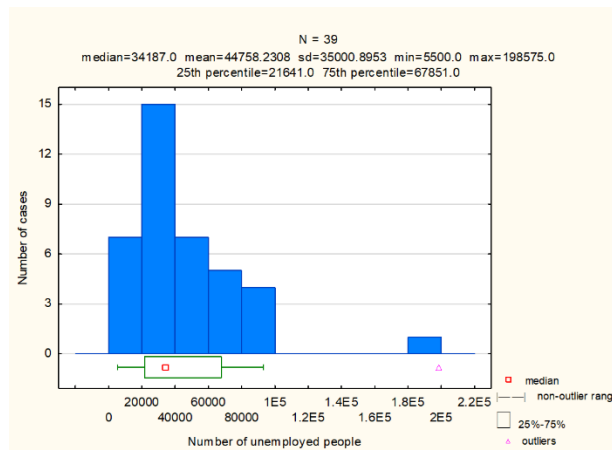
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Figure 7.12: Distribution of unemployed people in intermediate cities

The distribution of unemployed people reflects a unimodal distribution with a positive skew. The highest observed frequency of 15 municipalities occurs in the second bin of the histogram located in the range 20 001 to 40 000 unemployed people. The mean value of 44 758.2308 value exceeded the median value of 34187.0 because of the high number of unemployed people in the Emfuleni municipality which was the outlier in the graph.

7.2.2.3 *Distribution of people living below the food poverty line*

Similar to unemployment, higher numbers of people living below the food poverty line harm the revenue-raising capacity of a city. The number of people below the food poverty line is expressed as a percentage.
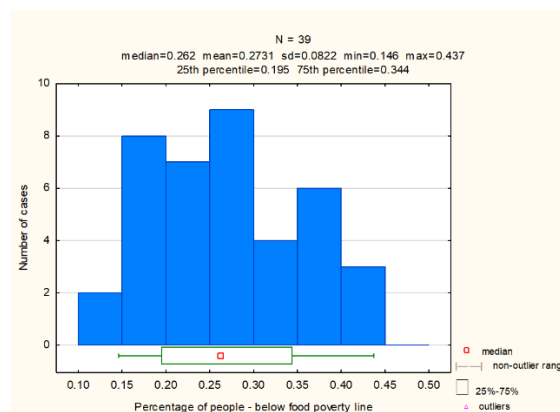

Figure 7.13: Distribution of people living below the food poverty line in intermediate cities

The distribution of the people living below the food poverty line reflected an almost symmetrical distribution although not identical on both sides of the centre. The median value of 0.262 was only slightly lower than the mean value of 0.2731. Given that these values are measured in percentages, the difference of 0.011% is relatively small. The highest observed

frequencies were found to the left of the histogram. The most frequent observations were clustered around the median. There were no outliers observed but the shape of the distribution of the data suggests variability amongst the intermediate cities.

7.2.2.4 *Distribution of people living below the lower-bound poverty line*

The distribution of people living below the lower-bound poverty line in intermediate cities was almost symmetrical but not equal on both sides of the centre. The median value of 0.412 was slightly below the mean of 0.4221. Since these values are measured in percentages, the calculated difference between the median and the mean of 0.01% can be considered negligible. Data is clustered towards the left of the histogram. There were no outliers observed.
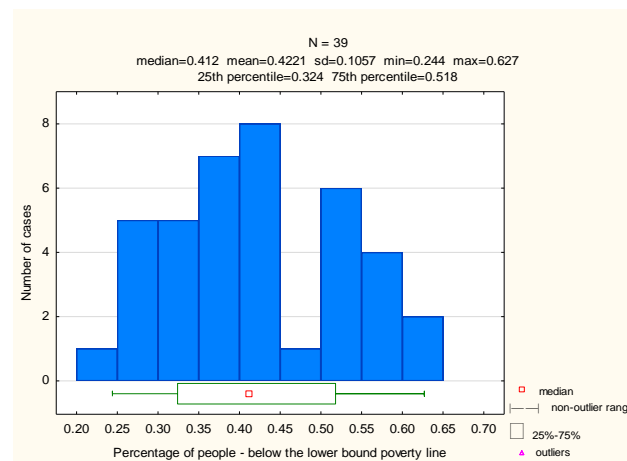

Figure 7.14: Distribution of people living below the lower-bound poverty line in intermediate cities

7.2.2.5 *Distribution of households with no income*

Similar to the other indicators of poverty, households with no income negatively affect the fiscal capacity of a city. Households with no income increase the municipal expenditure side of the fiscal health balance because of increased subsidisation to ensure access to basic levels of service by these households.
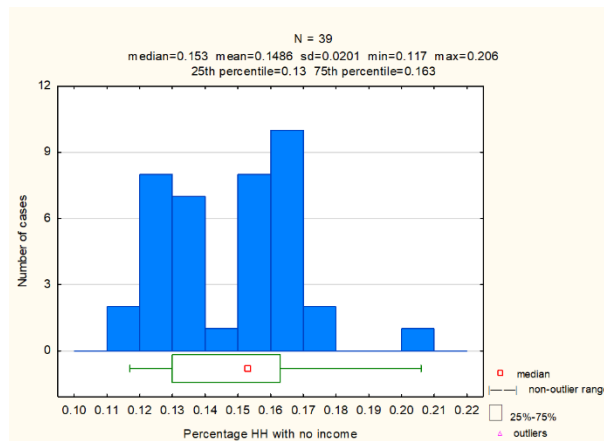
Figure 7.15: Distribution of HH with no income in intermediate cities

The histogram reflected a random distribution with two peaks (modes) to the right and another to the left. The median value of 0.153 was slightly higher than the mean of 0.1486 value implying a negatively skewed distribution of the data. Although the graph depicts some variability in the distribution, the intervals on the x-axis comprise 1% intervals which are relatively small and observations can therefore be misleading. Half of all cities have just over 15% of households with no income.

7.2.3 *Distribution of variables related to Inequality*

7.2.3.1 *Distribution of the Gini-coefficient*

The Gini-coefficient is used as a measure of income inequality. Values closer to one indicate higher inequality. In South Africa, inequality remains a major challenge. Higher levels of inequality reduce municipal fiscal capacity.
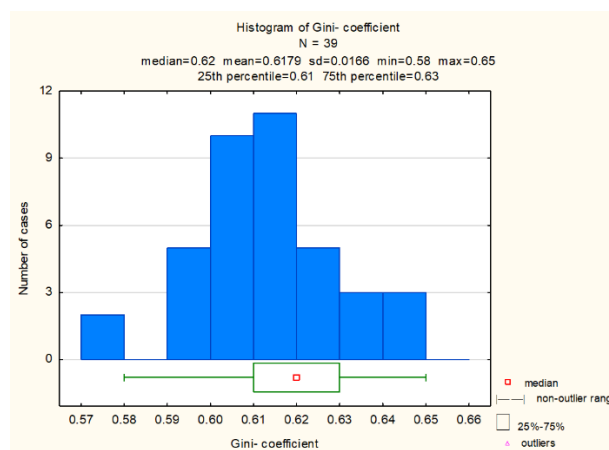

Figure 7.16: Distribution of the Gini-coefficient in intermediate cities

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The distribution of income inequality amongst the intermediate cities is almost symmetrical although not equal on both sides of the centre. The median value of 0.62 is almost equal to the mean value of 0.6179. The graph is negatively skewed. The highest observed frequencies occur towards the middle of the histogram depicting a scenario of relative economic inequality amongst the population. No outliers were observed.

7.2.3.2 *Distribution of the number of households with access to piped water inside the dwelling/yard*

Access to piped water within a dwelling or yard is an indicator of the ability of a city to provide individual households with access to services, to measure the consumption of these services by each household and therefore be able to generate an individual household bill. Higher levels of individual access by households impact positively on municipal fiscal capacity. Access by individual households is also an indication of the living standards within a municipality.
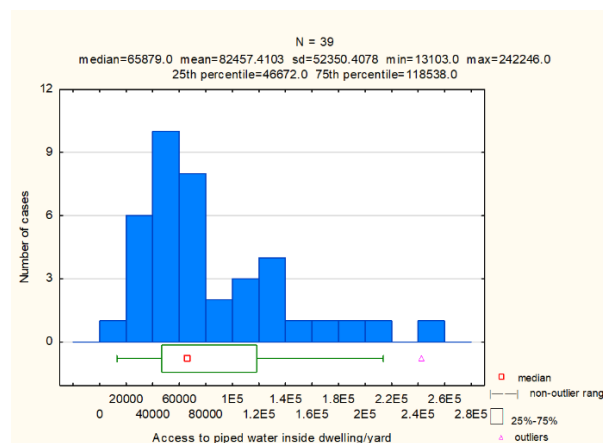

Figure 7.17: Distribution of access to piped water inside dwelling/yard in intermediate cities

The data reflected a positively skewed distribution with a mean value of 82 457.4103 and a median value of 65879.0 value. Most of the observed frequencies were located to the left of the histogram indicating that household access to piped water in the dwelling or yard fell in the lower ranges in several intermediate cities. The high access rates by a small number of municipalities have resulted in the average being pushed upwards. The outlier relates to the Emfuleni municipality where there is generally a larger number of households compared to other intermediate cities and most of these households are provided with piped water either in the dwelling or the yard.

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7.2.3.3 Distribution of households with access to a flush toilet connected to a sewerage system

Similar to water, the more households that are connected to a formal sewerage system, the greater the ability of the municipality to bill households for the sanitation service thus increasing municipal revenues and municipal fiscal capacity.
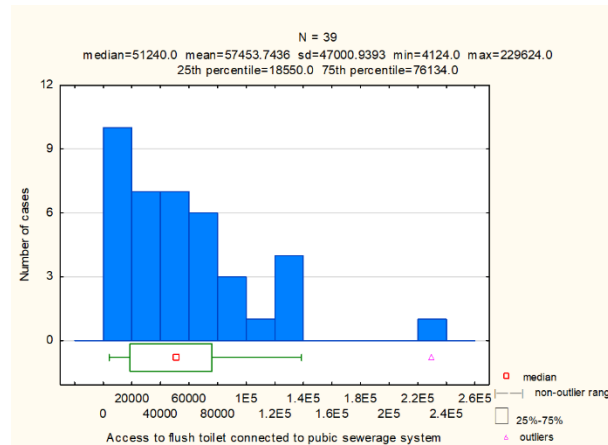

Figure 7.18: Distribution of households with access to a flush toilet in intermediate cities

In the above histogram, the mean value of 57453.7436 is higher than the median value of 51240.0 value representing a positively skewed distribution. Most of the values are concentrated to the left of the histogram with the highest observed frequency of 10 municipalities falling in the range of 0 to 20 000. This indicates that in almost a quarter of intermediate cities, less than 20 000 households have access to flush sanitation services. Variability in levels of access to flush sanitation amongst the intermediate cities is observed in the histogram although, in about half of all cities, access tends to fall in the lower ranges. The outlier relates to the Emfuleni municipality where access to access to flush sanitation is provided to over 90% of all households.

7.2.3.4 Distribution of households with electricity provided directly by the municipality

Similar to water and sanitation, improved household access to electricity supplied directly by the city either through prepaid or conventional metering implies increased fiscal capacity.
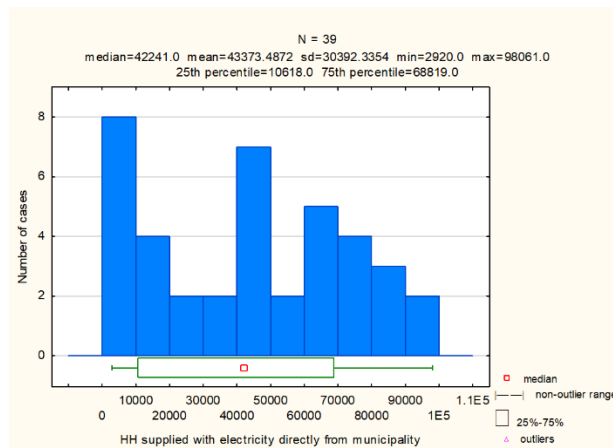
Figure 7.19: Distribution of HHs supplied with electricity directly by intermediate cities

The above graph depicts a positive skew with random peaks. The mean value of 43373.4872 is higher than its median value of 422410.0. The highest observed frequency consisting of eight municipalities occurs in the extreme left bin of the histogram in the range of 0 to 10 000 households. Although no outliers were observed in the data, variability in access to electricity supplied directly by the municipality is observed.

7.2.3.5 *Distribution of households with access to a weekly refuse removal service*
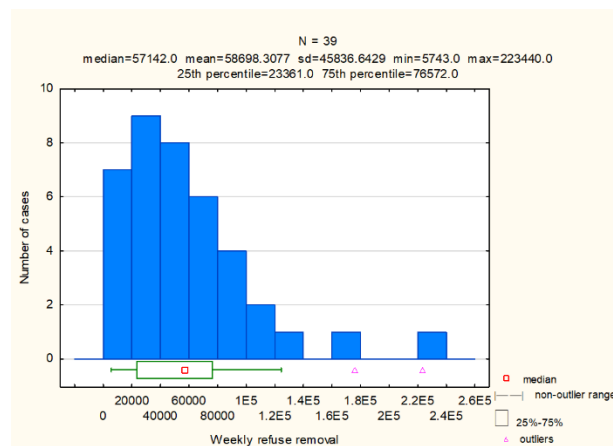
Figure 7.20: Distribution of access to weekly refuse removal in intermediate cities

The above graph depicts a positively skewed distribution with most of the observed values in the lower ranges of the histogram. The mean value of 58698.307 exceeds the median value of 57142.0. The outliers are due to high levels of a weekly refuse removal service in the Rustenburg and Emfuleni municipalities. There is some variability observed in the data although in general access by households to a weekly refuse removal service tends to fall in the lower ranges.

7.2.3.6   Distribution of formal households

The higher the number of formal households in a city, the more likely that households are to be connected to formal services. This implies that the city can meter and bill for the consumption of these services and thus increase its fiscal capacity.
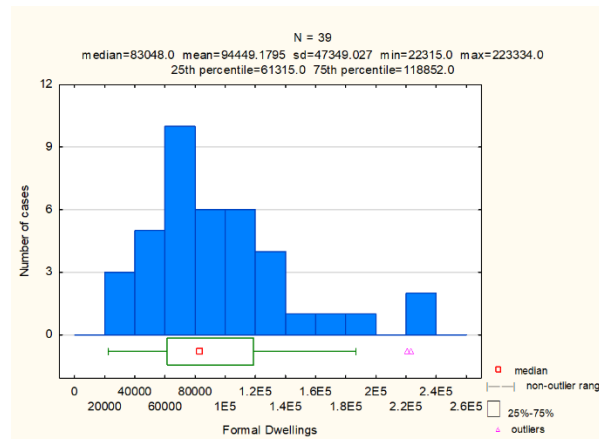

Figure 7.21: Distribution of formal households across intermediate cities

The distribution of formal households reflects a positively skewed distribution with the mean of 94449.1795 being higher than the median value of 83048.0. The highest observed frequencies consisting of 22 cities occur in the range from 60 001 formal households to 120 000 formal households. The outliers are due to the high numbers of informal households in the Emfuleni and Polokwane municipalities. The level of formalisation of households varies amongst the 39 cities.

7.2.3.7   Distribution of informal households

The converse of formalisation holds for informal households. The greater the number of informal households in a municipality, the more the municipality is required to provide subsidised basic services to these households for which it cannot recover costs.
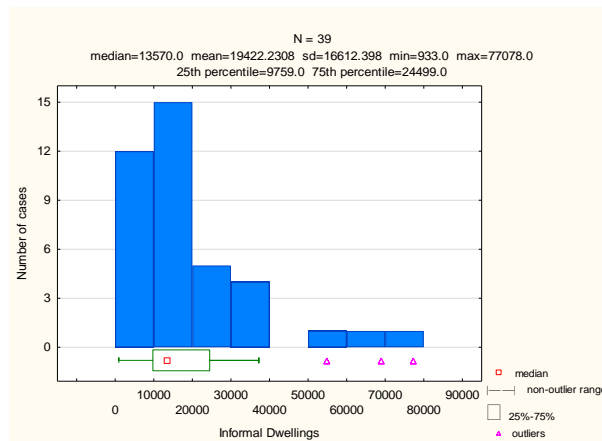
Figure 7.22: Distribution of informal households in intermediate cities

The distribution of informal households as presented in the above histogram shows a positive skew with most observed frequencies left of the histogram, and 27 cities have 20 000 or fewer informal households. The mean value of 19422.2308 is significantly greater than the median of 13570.0 distorted by the higher-than-average number of informal households in the Madibeng, Rustenburg and King Sabata Dalindyebo municipalities. However, there appears to be little variability amongst most of the cities in the number of informal households.

7.2.3.8   *Distribution of the percentage of the population living in urban areas*

Greater levels of municipal urbanisation can be associated with increased economic activity, greater economic opportunities and hence improved access to services which positively impacts municipal revenues.
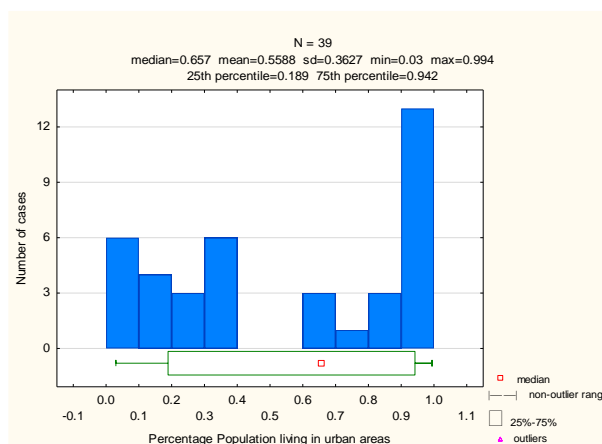

Figure 7.23: Distribution of the population living in urban areas in intermediate cities

In the above graph, there is a negatively skewed distribution of the data. The median value of 0.657 is higher than the mean value of 0.5588 value indicating a higher level of urbanisation than average amongst intermediate cities. The highest observed frequency occurs to the extreme

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right of the graph where 13 cities are classified as having urbanisation rates of between 90 and 100%. However, 19 cities have lower levels of urbanisation ranging from 0 to 40%. The data shows variability in the rates of urbanisation amongst cities.

7.2.4   *Dependency*

Dependency ratios are used to indicate the burden placed on the working-age population by children and the elderly. Dependency can be measured in three ways, namely total dependency, child dependency and elderly dependency. High rates of dependency affect the disposable income of households and thus the ability to pay for municipal services consumed.

7.2.4.1   *Distribution of total dependency in secondary cities*
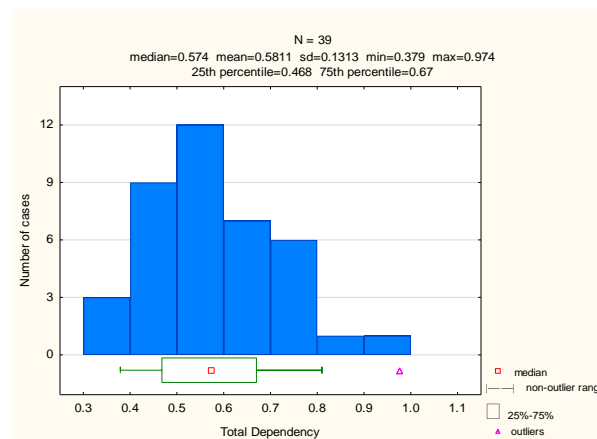
Figure 7.24: Distribution of total dependency in intermediate cities

The graph reflects a unimodal distribution with a positive skew. The highest observed frequencies occur towards the left of the histogram. The highest frequency represented by 12 cities occurred in the 50 to 60% range. The mean value of 0.5811 is slightly higher than the median of 0.574. Given that this variable is measured in percentages, the difference between the mean and median values is only 1%, which is small.

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7.2.4.2   *Distribution of child dependency in intermediate cities*
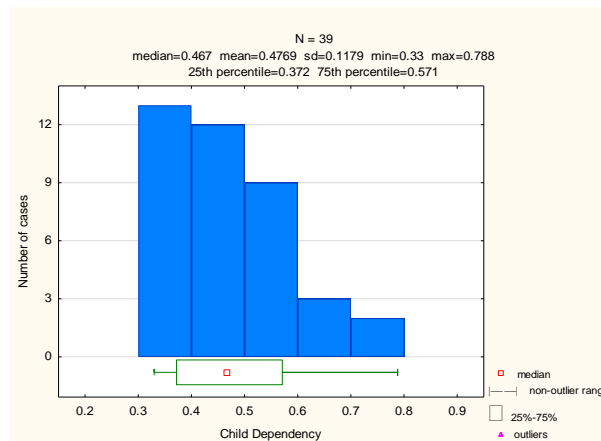
Figure 7.25: Distribution of child dependency in secondary cities

The distribution of child dependency data across the 39 intermediate cities shows a positively skewed distribution with most of the observed frequencies occurring to the left of the histogram. The mean value of 0.4769 value slightly exceeds the median value of 0.467. The difference between the mean and the median is 1%, which is relatively small. The highest observed frequency consisting of 13 cities reflected a child dependency rate of between 31 and 40%. This was followed by 12 cities where child dependencies were between 41 and 50%. The distribution of the data reflects some variability amongst the cities concerning child dependency rates.

7.2.4.3   *Distribution of elderly dependency in intermediate cities*

Figure 7.26: Distribution of the elderly population in intermediate cities

The graph reflects an almost symmetrical distribution, although not equal on both sides of the centre. The median value of 0.107 is almost equal to the mean value of 0.1042. Most of the observed frequencies are concentrated towards the middle of the histogram in the ranges 10%

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to 14%. Although the x-axis contains intervals of only 2%, there does appear to be variability in how the data is distributed amongst the cities.

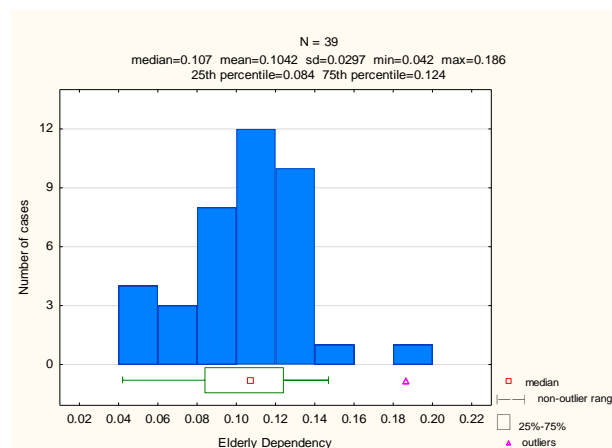### 7.2.5   *Education*

Levels of education are usually linked to the types of labour available within a municipality, namely low-skilled labour, semi-skilled labour, high-skilled or professionals. The different types of skilled labour is a representation of possible earning potential, household incomes and ability to pay. Higher levels of education are therefore associated with better economic opportunities and hence improved municipal fiscal capacity.

7.2.5.1   Distribution of people aged 20 years and older with no schooling in cities

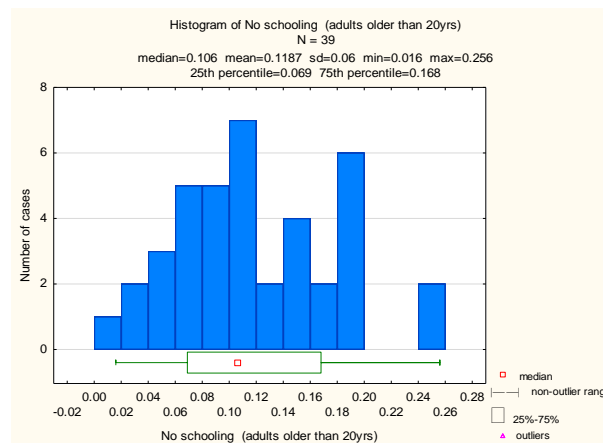Figure 7.27: Distribution of adults aged 20 years and older with no schooling in intermediate cities

The distribution of people aged 20 years and older with no schooling showed a positively skewed distribution with two peaks. There is a clustering of values to the left of the graph. The mean value of 0.1187 is greater than the median of 0.106. Variability in the distribution of the data is observed amongst the cities.

7.2.5.2 Distribution of people aged 20 years and older with a matric certificate
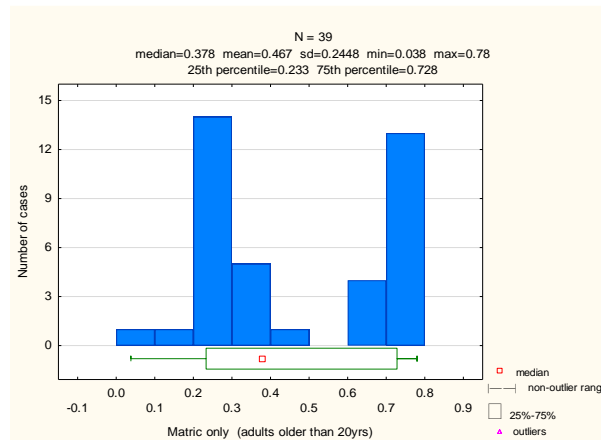
Figure 7.28: Distribution of people 20 years and older with a matric certificate

The above graph represents a bimodal distribution with two peaks—one in the lower range of the histogram and the other to the far right. The mean value of 0.467 is higher than the median of 0.378. The graph represents two extremes—one where the highest observed frequency of 14 municipalities reflects that the number of people aged 20 years and older with a matric certificate is between 21% and 30% which is relatively low, while the second-highest peak shows the number of people aged 20 years and older with a matric certificate is between 71 and 80% in 13 municipalities.

7.2.5.3 Distribution of people aged 20 years and older with a qualification higher than matric
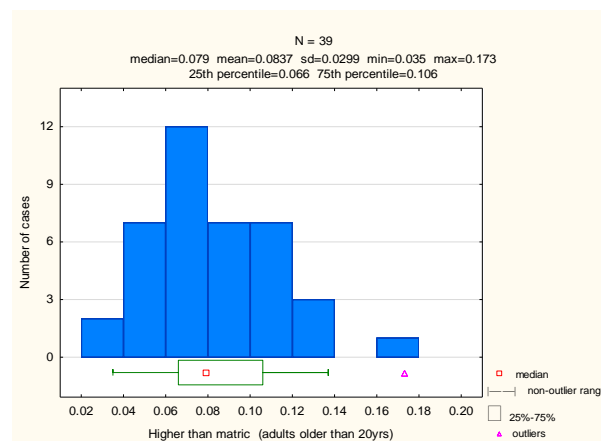
Figure 7.29: Distribution of people aged 20 years and older with a qualification higher than matric

The data represents a positively skewed distribution with a mean value of 0.0866 which is higher than the median of 0.078. The highest observed frequency consisting of 12 cities is found in the 6% to 8% range. A concentration of values towards the middle of the histogram is also

observed. Although the intervals used in the graph are small, there is some variability observed in the distribution of the data amongst the cities.

7.2.6 *Economic factors*

The selection of variables to measure the impact of economic factors on municipal financial health was severely constrained by a lack of municipal economic data. Intermediate cities do not report on a consistent data set making it difficult to obtain comparative data for cities. Three indicators that were found to be relevant in terms of the literature review and for which data could be sourced include the gross domestic product by region (GDP-R), the average annual economic growth rate between 2006 and 2016 and the tress index, which is a measure of municipal economic diversification.

7.2.6.1 *Distribution of the gross domestic product by region (GDP-R)*

The gross domestic product by region measures the market value of goods and services produced by a region (city/municipality). It is a measure of economic activity within that area. Higher levels of economic activity would positively impact municipal fiscal health.
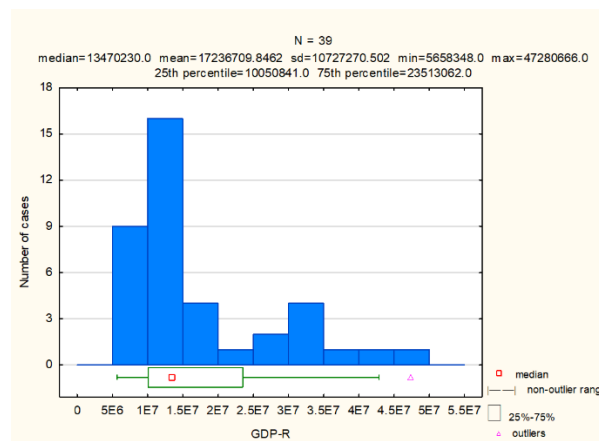
Figure 7.30: Distribution of GDP-R in cities

The highest observed frequencies consisting of a total of 25 cities are concentrated in the lower ranges of the histogram. The mean value of 17 236 709.8462 is higher than the median value of 13 470 230.0 implying a positively skewed distribution. Amongst the remaining 14 cities, variability in the data is observed with the GDP-R of some cities being almost double that of other intermediate cities. The outlier is related to a higher GDP-R in the Mbombela municipality.

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7.2.6.2 Distribution of the average annual economic growth (2006 to 2016) in cities

The average annual growth rate of a city impacts its fiscal base and hence fiscal capacity. Economic contractions are associated with declining fiscal capacities while expansions signal an increase in the fiscal base and fiscal capacity.
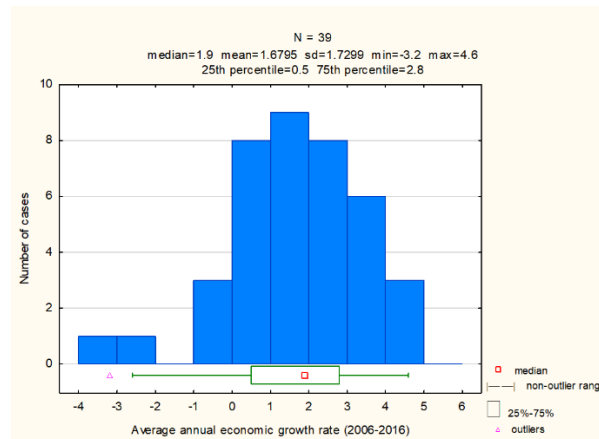
Figure 7.31: Distribution of the average annual economic growth rates in cities (2006-2016)

The average annual rate of economic growth has been positive in 34 of the 39 cities over the period 2006 to 2016. However, economic contractions have been observed in five cities. The median value of 1.9 is higher than the mean value of 1.6795, indicating a negatively skewed distribution. It also indicates that in half of the intermediate cities, the average annual growth rate was above average during the period.

7.2.6.3 Distribution of the Tress Index in cities

The Tress Index provides a measure of economic diversification within the city. A more diversified economy is more likely to be resilient to economic shocks brought on by a particular sector and hence the fiscal health of a city will be impacted less severely when the economy contracts.

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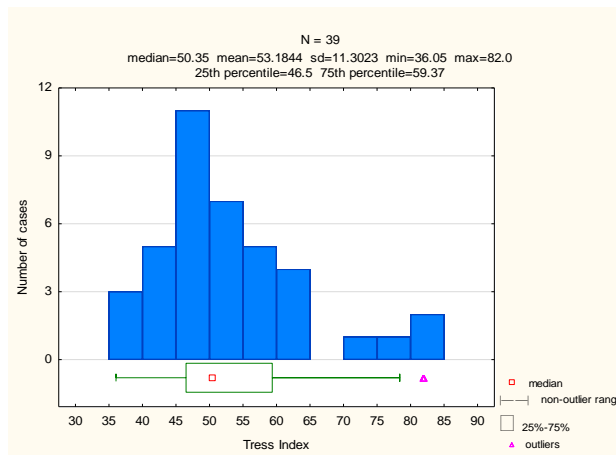
Figure 7.32: Distribution of the Tress Index in cities

The histogram is unimodal with the most observed frequency of 11 municipalities occurring towards the left of the histogram. The mean value of 53.1844 is higher than the median of 50.35 value indicating a positively skewed distribution. There is variability in the distribution of the data across the 39 cities.

7.3 Correlation sets: socioeconomic factors and municipal fiscal health

Correlation tests were used to determine the statistical relationship between the identified variables and overall municipal fiscal health indicators in the 39 cities. The results are discussed below:

Table 7.1: Population and household size versus fiscal health indicators

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
1	Total Population	Total own-source revenues	0.3	0.06	39
2	Total Population	Total Operating Expenditure	0.43	<0.01	39
3	Child Population	Total own-source revenues	0.13	0.41	39
4	Child Population	Total Operating Expenditure	0.27	0.1	39
5	Adult population	Total own-source revenues	0.39	0.01	39
6	Adult population	Total Operating Expenditure	0.51	<0.01	39
7	Elderly Population	Total own-source revenues	0.22	0.17	39
8	Elderly Population	Total Operating Expenditure	0.33	0.04	39
9	Total Number of Households	Total own-source revenues	0.43	<0.01	39

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
10	Total Number of Households	Total Operating Expenditure	0.54	<0.01	39
11	Average Household size	Total own-source revenues	-0.4	0.01	39
12	Average Household size	Total Operating Expenditure	-0.41	0.01	39
13	Population Density	Total own-source revenues	0.61	<0.01	39
14	Population Density	Total Operating Expenditure	0.53	<0.01	39

Table 7.1: Population and household size versus fiscal health indicators

a) ***Total population versus total own-source revenues:***

The coefficient of 0.3 points to a positive but weak monotonic relationship between the total population and total own-source revenues of the 39 cities. The p-value of 0.06 implies that the relationship was not significant at 5% as the p-value was >0.05 but was significant at less than 10% (<0.1).

7.3.1 *Total population versus total operating expenditure*

There is a positive moderate relationship between total population and total operating expenditure as observed by the Spearman coefficient of 0.43. The relationship between total population and total operating expenditure is stronger than that between the total population and total own-source revenues. The p-value of <0.01 is statistically significant indicating a true relationship between the variables.

7.3.2 *Child population versus total own-source revenues*

There exists a very weak, but positive relationship between the child population and total own-source revenues. The Spearman coefficient between these variables is 0.13. The p-value of 0.41 indicates that there is no evidence supporting a relationship between the variables.

7.3.3 *Child population versus total operating expenditure:*

The Spearman coefficient was calculated to be 0.27 which shows a positive, but weak relationship between the child population and total operating expenditure. The p-value of 0.1 is statistically significant implying a true relationship between the variables.

7.3.4 *Adult population versus total own-source revenues:*

The Spearman coefficient of 0.39 points to a positive but weak relationship between the variables. The p-value of 0.01 is statistically significant.

7.3.5 *Adult population vs total operating expenditure*

The relationship between the adult population and total operating expenditure points to a positive moderate relationship between the two variables. The Spearman coefficient was calculated as 0.51. The p-value of <0.01 indicates a significant relationship between these variables.

7.3.6 *Elderly population versus total own-source revenues*

The Spearman coefficient of 0.22 shows a weak positive relationship between these variables. The p-value of 0.17 indicates weak evidence supporting this relationship.

7.3.7 *Elderly population versus total operating expenditure*

There is a positive but weak relationship between the elderly population and total operating expenditure reflected by the Spearman coefficient of 0.33. The p-value of 0.04 indicates that there is enough evidence to support that the existence of a relationship between the variables.

7.3.8 *Total number of households versus total own-source revenues*

The total number of households showed a positive medium relationship with total own-source revenues. The Spearman coefficient was calculated as 0.43. The p-value of <0.01 is significant indicating a true relationship between these variables does exist.

7.3.9 *Total number of households versus total operating expenditure*

The Spearman coefficient of 0.54 indicates a positive strong relationship between the variables. The p-value is <0.01 implies that there is enough evidence to support the existence of this relationship.

7.3.10 *Average household size versus total own-source revenues*

The Spearman coefficient for these variables is -0.40 which reflects a negative moderate relationship between the average household size and total own-source revenues. The p-value of 0.01 indicates that the evidence supporting this relationship is strong.

7.3.11 *Average household size versus total operating expenditure*

Similar to the above relationship, the Spearman coefficient of -0.41 shows a negative but moderate relationship between the variables. The p-value of 0.01 points to a statistically significant relationship that does exist between the two variables.

7.3.12 *Population density versus total own-source revenues*

The Spearman coefficient of 0.61 points to a strong positive relationship between the variables. The p-value of <0.01 supports the existence of the relationship between population density and total own-source revenues.

7.3.13 *Population density versus total operating expenditure*

The relationship between population density and total operating expenditure was also positive but moderate. The p-value of <0.01implies that the relationship is statistically significant and that there is enough evidence to suggest a true relationship between the variables.

7.4 **Poverty versus fiscal health indicators**

Table 7.2: Poverty and fiscal health

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
1	Registered no. of indigent HH	Total own-source revenues	0.06	0.69	39
2	Registered no. of indigent HH	Total Operating Expenditure	0.14	0.39	39
3	No. of unemployed people	Total own-source revenues	0.51	<0.01	39
4	No. of unemployed people	Total Operating Expenditure	0.62	<0.01	39
5	% of people - below food poverty line	Total own-source revenues	-0.56	<0.01	39
6	% of people - below food poverty line	Total Operating Expenditure	-0.49	<0.01	39
7	% of people - below the lower bound poverty line	Total own-source revenues	-0.58	<0.01	39
8	% of people - below the lower bound poverty line	Total Operating Expenditure	-0.5	<0.01	39
9	% HH with no income	Total own-source revenues	0.19	0.24	39
10	% HH with no income	Total Operating Expenditure	0.3	0.06	39

Table 7.2: Poverty versus fiscal health indicators

7.4.1 *Registered number of indigent households versus total own-source revenues*

The Spearman coefficient of 0.06 indicates a very weak positive relationship between the variables. The p-value of 0.69 implies no relationship exists.

7.4.2 *Registered number of indigent households versus total operating expenditure*

The Spearman coefficient of 0.14 also indicates a positive but very weak relationship between the registered number of indigent households and the total operating expenditure. The p-value of 0.39 also implies no relationship between the variables.

7.4.3 *Number of unemployed people versus total own-source revenues*

The relationship between the number of unemployed people and total own-source revenues shows a positive and strong relationship reflected by the Spearman coefficient of 0.51. The p-value of <0.01 implies that there is enough evidence to suggest a true relationship between the variables.

7.4.4 *Number of unemployed people versus total operating expenditure*

The Spearman coefficient of 0.62 indicates a strong positive relationship between the variables. The p-value of <0.01 is statistically significant supporting a relationship between the variables,

7.4.5 *Percentage of people living below the food poverty line versus total own-source revenues*

There exists a strong negative relationship between the percentage of people living below the food poverty line and the total own-source revenues of the 39 cities. The Spearman coefficient was calculated as -0.56. The p-value of <0.01 points to a statistically significant and true relationship between the variables.

7.4.6 *Percentage of people living below the food poverty line versus total operating expenditure*

The Spearman coefficient of -0.49 also indicates that there is a negative but medium relationship between the variables. The p-value was also significant indicating a true relationship between the variables.

7.4.7 *Percentage of people living below the lower bound poverty line versus total own-source revenues*

There is also a negative strong relationship between the people living below the lower bound poverty line and total own-source revenues. The Spearman coefficient was -0.58. The p-value of <0.01 implies that there is enough evidence to suggest a relationship between the variables.

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7.4.8 *Percentage of people living below the lower bound poverty line versus total operating expenditure*

The Spearman coefficient of -0.50 points to a negative strong relationship between the two variables. The p-value of <0.01 implies that the relationship is statistically significant.

7.4.9 *Percentage of households with no income versus total own-source revenues*

There is a positive but very weak relationship between the percentage of households with no income and total own-source revenues of cities reflected by the Spearman coefficient of 0.19. The p-value of 0.24 implies no relationship between the variables.

7.4.10 *Percentage of households with no income versus total operating expenditure*

The Spearman coefficient of 0.30 indicates a positive but weak relationship between the variables. The p-value of 0.06 implies that there is sufficient evidence at the p<0.1 level to suggest that the relationship exists.

7.5 Inequality versus fiscal health indicators

Table 7.3: Inequality and fiscal health

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
1	Gini-coefficient	Total own-source revenues	0.09	0.6	39
2	Gini-coefficient	Total Operating Expenditure	-0.03	0.84	39
3	Access to piped water inside dwelling/yard	Total own-source revenues	0.73	<0.01	39
4	Access to piped water inside dwelling/yard	Total Operating Expenditure	0.83	<0.01	39
5	Access to flush toilet connected to public sewerage system	Total own-source revenues	0.86	<0.01	39
6	Access to flush toilet connected to public sewerage system	Total Operating Expenditure	0.85	<0.01	39
7	HH supplied with electricity directly from municipality	Total own-source revenues	0.72	<0.01	39
8	HH supplied with electricity directly from municipality	Total Operating Expenditure	0.64	<0.01	39
9	Weekly refuse removal	Total own-source revenues	0.84	<0.01	39
10	Weekly refuse removal	Total Operating Expenditure	0.85	<0.01	39
11	Formal Dwellings	Total own-source revenues	0.41	0.01	39
12	Formal Dwellings	Total Operating Expenditure	0.55	<0.01	39
13	Informal Dwellings	Total own-source revenues	0.45	<0.01	39
14	Informal Dwellings	Total Operating Expenditure	0.43	<0.01	39

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
15	Percentage Population living in urban areas	Total own-source revenues	0.64	<0.01	39
16	Percentage Population living in urban areas	Total Operating Expenditure	0.55	<0.01	39

Table 7.3: Inequality versus fiscal health indicators

7.5.1 *Gini-coefficient versus total own-source revenues*

The Spearman coefficient of 0.09 indicates a positive but very weak correlation between the two variables. The p-value of 0.6 shows no relationship between these variables.

7.5.2 *Gini-coefficient versus total operating expenditure*

The Spearman coefficient between the variables was calculated as -0.03. This indicates that there is a negative and very weak relationship between the two variables. The high p-values of 0.84 suggests no relationship between the variables.

7.5.3 *Access to piped water inside dwelling/yard versus total own-source revenues*

There exists a strong positive relationship between access to piped water inside the dwelling or yard and total own-source revenues. The Spearman coefficient is 0.73. The p-value of <0.01 is statistically significant.

7.5.4 *Access to piped water inside dwelling/yard versus total operating expenditure*

A very strong positive relationship exists between access to piped water inside the dwelling/yard and total operating expenditure. The Spearman coefficient of 0.83 indicates a stronger relationship between access to piped water and total operating expenditure than the relationship between access to piped water and total own-source revenues described above. Furthermore, the p-value of <0.01 implies that there is strong evidence to suggest a relationship between these variables.

7.5.5 *Access to flush toilet connected to public sewerage system versus total own-source revenues*

The Spearman coefficient of 0.86 indicates a very strong positive relationship between the variables. The p-value of <0.01 is a statistically significant relationship with enough evidence to support relationship between these variables.

7.5.6 *Access to flush toilet connected to public sewerage system versus total operating expenditure*

Similar to the relationship between the variables described in e), the Spearman coefficient of 0.85 indicates a very strong positive relationship between the access to a flush toilet connected to a public sewerage system and total operating expenditure. The p-value of <0.01 is statistically significant.

7.5.7 *Household supplied with electricity directly from the municipality versus total own-source revenues*

The Spearman coefficient of 0.72 indicates there is a strong positive relationship between the two variables. The p-value of <0.01 is statistically significant implying relationship true relationship between these variables.

7.5.8 *Household supplied with electricity directly from the municipality versus total operating expenditure*

There is a strong positive relationship between households supplied with electricity and total operating expenditure, as indicated by the Spearman coefficient of 0.64. The p-value of <0.01 implies a statistically significant relationship.

7.5.9 *Weekly refuse removal versus total own-source revenues*

The Spearman coefficient of 0.84 indicates a very strong positive relationship between the variables. The p-value of <0.01 also points to a statistically significant relationship between these variables.

7.5.10 *Weekly refuse removal versus total operating expenditure*

There is a very strong positive relationship between the variables expressed by the Spearman coefficient of 0.81. The p-value of <0.01 implies a statistically significant relationship between these variables.

7.5.11 *Formal dwellings versus total own-source revenues*

There is a moderate positive relationship between formal dwelling and total own-source revenues of the cities. The Spearman coefficient was 0.41 and the p-value of <0.01 points to a true relationship between the variables.

7.5.12 *Formal dwellings versus total operating expenditure*

There is also a strong positive relationship between formal dwellings and total operating expenditure of intermediate cities expressed by a Spearman coefficient of 0.55. The p-value of

<0.01 implies that there is enough evidence to suggest the relationship between these variables exists.

7.5.13 *Informal dwellings versus total own-source revenues*

The Spearman coefficient of 0.45 implies a positive moderate relationship between the variables. The p-value of <0.01is statistically significant.

7.5.14 *Informal dwellings versus total operating expenditure*

There is a moderate but positive relationship between informal dwellings and the total operating expenditure of cities. The Spearman coefficient is 0.43 and the p-value of <0.01 points to a statistically significant relationship between these two variables.

7.5.15 *Percentage population living in urban areas versus total own-source revenues*

The Spearman coefficient of 0.64 indicates a strong positive relationship between the two variables. Furthermore, the p-value of <0.01 also indicates that there is enough evidence to suggest that this relationship exists.

7.5.16 *Percentage population living in urban areas versus total operating expenditure*

The Spearman coefficient of 0.55 points to a strong positive relationship between the variables with the p-value of <0.01 suggesting that the relationship is statistically significant.

7.6 Dependency versus fiscal health

Table 7.4: Dependency and fiscal health

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
1	Total Dependency	Total own-source revenues	-0.46	<0.01	39
2	Total Dependency	Total Operating Expenditure	-0.38	0.02	39
3	Child Dependency	Total own-source revenues	-0.45	<0.01	39
4	Child Dependency	Total Operating Expenditure	-0.37	0.02	39
5	Elderly Dependency	Total own-source revenues	-0.11	0.51	39
6	Elderly Dependency	Total Operating Expenditure	-0.09	0.57	39

Table 7.4: Dependency versus fiscal health indicators

7.6.1 *Total dependency versus total own-source revenues*

The Spearman correlation of -0.46 indicates that there is a negative moderate relationship between the variables. The p-value of <0.01 also points to the existence of a statistically significant relationship between the two variables.

7.6.2 *Total dependency versus total operating expenditure*

The relationship between the total dependency and total operating expenditure of intermediate cities points to a negative and weak correlation between the variables. The Spearman coefficient is -0.38. The p-value of 0.02 is statistically significant.

7.6.3 *Child dependency versus total own-source revenues*

The Spearman coefficient between these variables is -0.45 reflecting a negative and moderate relationship between the variables. The p-value of <0.01 suggests that there is strong evidence supporting the existence of this relationship.

7.6.4 *Child dependency versus total operating expenditure*

There is a negative and weak correlation between child dependency and total operating expenditure as indicated by the Spearman coefficient of -0.37. The p-value of 0.02 shows there is strong enough evidence to suggest that this relationship exists.

7.6.5 *Elderly dependency versus total own-source revenues*

The Spearman coefficient of -0.11 points to a very weak negative relationship between the variables. Furthermore, the p-value of 0.51 suggests no relationship between these variables.

7.6.6 *Elderly dependency versus total operating expenditure*

There is also a negative and very weak correlation between the elderly dependency rate and total operating expenditure. The Spearman coefficient is -0.09 while the p-value of 0.57 suggests no relationship between these variables.

7.7 Education versus fiscal health

Table 7.5: Education and fiscal health

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
1	No schooling (adults older than 20yrs)	Total own-source revenues	-0.55	<0.01	39
2	No schooling (adults older than 20yrs)	Total Operating Expenditure	-0.48	<0.01	39

3	Matric only (adults older than 20yrs)	Total own-source revenues	0.63	<0.01	39
4	Matric only (adults older than 20yrs)	Total Operating Expenditure	0.63	<0.01	39
5	Higher than matric (adults older than 20yrs)	Total own-source revenues	0.02	0.91	39
6	Higher than matric (adults older than 20yrs)	Total Operating Expenditure	-0.05	0.75	39

Table7.5: Education versus fiscal health indicators

7.7.1 *No schooling (adults aged 20 years and older) versus total own-source revenues*

The Spearman coefficient of -0.55 points to a strong negative correlation between the two variables. The p-value <0.01 implies a statistically significant relationship.

7.7.2 *No schooling (adults aged 20 years and older) versus total operating expenditure*

There is a moderate negative relationship between the variables with the Spearman coefficient being -0.48. The p-value of <0.01 is statistically significant pointing to a true relationship between these variables.

7.7.3 *Matric only (adults aged 20 years and older) versus total own-source revenues*

The Spearman coefficient of 0.63 indicates a strong positive relationship between the variables. The p-value of <0.01 suggests that there is strong evidence to support a true relationship between the variables.

7.7.4 *Matric only (adults aged 20 years and older) versus total operating expenditure*

There is also a strong positive relationship reflected by the Spearman coefficient of 0.63 between adults aged 20 years and older with only a matric certificate and total operating expenditure of the city. The p-value of <0.01 is statistically significant.

7.7.5 *Higher than matric (adults aged 20 years and older) versus total own-source revenues*

The Spearman coefficient of 0.02 indicates that a very weak and almost non-existent relationship between the two variables exists. The p-value of 0.91 indicates no relationship between the variables.

7.7.6 *Higher than matric (adults aged 20 years and older) versus total operating expenditure*

There is also a very weak negative relationship between adults aged 20 years and older and total operating expenditure with the Spearman being -0.05. The p-value of 0.75 indicates no relationship between the variables.

7.8   Economic indicators versus fiscal health

Table 7.6: Economic indicators and fiscal health

	Variable 1	Variable 2	Spearman	Spearman p-value	# cases
1	GDP-R	Total own-source revenues	0.63	<0.01	39
2	GDP-R	Total Operating Expenditure	0.66	<0.01	39
3	Average annual economic growth rate (2006-2016)	Total own-source revenues	-0.11	0.5	39
4	Average annual economic growth rate (2006-2016)	Total Operating Expenditure	-0.13	0.42	39
5	Tress Index	Total own-source revenues	-0.12	0.48	39
6	Tress Index	Total Operating Expenditure	-0.11	0.51	39

Table 7.6: Economic indicators versus fiscal health indicators

7.8.1   *GDP-R versus total own-source revenues*

The Spearman coefficient of 0.63 points to a strong positive correlation between these two variables. In addition, the p-value of <0.01 indicates a statistically significant relationship between the GDP-R and total own-source revenues.

7.8.2   *GDP-R versus total operating expenditure*

There is also a strong positive relationship between GDP-R and total operating expenditure expressed by a Spearman coefficient of 0.66. The p-value of <0.01 confirms this relationship.

7.8.3   *Average annual economic growth rate versus total own-source revenues*

The Spearman coefficient of -0.11 suggests a very weak negative correlation between the two variables. The p-value of 0.5 indicates no relationship between the variables.

7.8.4   *Average annual economic growth rate versus total operating expenditure*

The Spearman coefficient of -0.13 also indicates a very weak negative relationship between the average annual economic growth rate and total operating expenditure. The p-value of 0.42 indicates no relationship between the variables.

7.8.5   *Tress Index versus total own-source revenues*

There is a weak negative relationship between the Tress Index and total own-source revenues as reflected by the Spearman coefficient of -0.12. The p-value of 0.48 also indicates no relationship between the variables.

7.8.6 *Tress Index versus total operating expenditure*

The Spearman coefficient of -0.11 points to a very weak negative correlation between the variables. The p-value of 0.51 is statistically insignificant indicating no relationship between the variables.

7.9 Conclusion

This chapter was intended to present the statistical findings of the relationship between the socioeconomic variables identified in the literature review and municipal own-source revenues and municipal operating expenditure as proxies for municipal fiscal health. A discussion of the findings will follow in the next chapter.

Chapter 8: Discussion of the findings

The purpose of this chapter is to discuss the findings of the data to confirm or reject the theory that socioeconomic factors impact the fiscal health of cities. Specifically, the intention is to discuss which of the variables in each factor showed the strongest correlation with either the own-source revenues or the operating expenditure of cities. Based on the strength of these correlations, recommendations will be made as to whether adding these variables will enhance the current fiscal health monitoring system already in use in South Africa and assist in explaining why the current methods of intervention do not seem to yield positive results in the financial condition of a city.

8.1 Determining the impact of variables related to population and household size on municipal fiscal health

Seven variables were identified as appropriate indicators of population and household size. The choice of variables was also limited by publicly available municipal data. Poor and inconsistent municipal data was cited as a limitation in this study.

The variables related to population included the total, child, adult and elderly populations. The variables to assess the impact of household sizes and density on municipal fiscal health included the total number of households in a city, the average size of a household and population density.

Overall, the results showed a weak correlation between the total, adult and elderly populations and municipal own-source revenues. These results were statistically significant in respect of the total and adult populations but less so with the elderly population. The impact of the child population on total own-source revenues was even weaker with insufficient evidence to support that this relationship exists. The theory that population size impacts the own-source revenues of municipalities and thus increases the revenue-raising capacity of a municipality did not prove correct in terms of intermediate cities in South Africa.

However, the total and adult populations showed a moderate correlation with the total operating expenditure of the cities. This correlation was found to be statistically significant. This implies that a higher total population and a higher adult population as a particular cohort of the population shows a stronger correlation with municipal operating expenditure than it does on municipal revenue-raising capacity. However, the elderly and child population reflected a weak correlation with municipal operating expenditure similar to the impact of these variables on

municipal own-revenue sources. The findings were statistically significant in respect of the elderly population but less so in terms of the child population.

Overall, it can be concluded that population as a socioeconomic factor is theoretically relevant to municipal fiscal health but impacts more on the operating expenditure than on the revenue-raising capacity of a city. However, consideration should be given to the inclusion of only the total population as a variable in the development of a municipal fiscal health monitoring system since the analysis by age cohorts showed little impact on either the total own-source revenues or operating expenditure of the cities.

Concerning the total number of households, average household size and population density in a city, the total number of households showed a positive, moderate and statistically significant correlation to both the total own-source revenue of a city and the total operating expenditure. Similar to the total population, there was a stronger correlation between the total number of households and municipal operating expenditure than there was to the total number of households and municipal own-source revenues. This implies that a higher number of households is likely to have a greater impact on the operating expenditure of a city than it does in adding to the fiscal capacity.

This could partially be explained by the fact that the total number of households in a city is comprised of high-income, medium-income and poor-income households. Further stratification of households into different income levels will provide a better indication of the impact of each type of household on municipal fiscal health. This information, however, is not easy to obtain as households do not easily and accurately reveal their incomes and there are no processes in place to ensure that this data is frequently collected. This can form the subject of further research as it also relates to the capacity and ability to pay for municipal services.

The average household size showed a negative, moderate and statistically significant correlation to municipal own-source revenues and municipal operating expenditure. In respect of own-source revenues, the findings show that as household size increases, municipal own-source revenues decrease thus reducing fiscal capacity. However, the results also show that larger household sizes tend to reduce municipal operating expenditure. This could be the result of the city having to service fewer households with more occupants per household. It could also be the outcome of municipal subsidies being provided at the household level, rather than to individuals.

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From a fiscal capacity perspective, this could to some extent validate the assumption that larger households in South Africa are often poorer households and therefore do not contribute positively to the own-source revenues of a municipality. However, these results could not fully explain the negative relationship between average household size and municipal operating expenditure as larger households by implication would be larger consumers of services and hence it is expected that there would be a greater burden on municipal expenditure. However, given the unequal levels of access to services within the South African context, this could also be due to the levels of service provided to households. If larger households are poorer households, then they may be provided with a level of service that cannot be individually metered and billed for by the city. It is, therefore, appropriate to look at the average household size in conjunction with the levels of service provided in a city to discern the reasons more accurately for the relationship between the variables.

Population density showed a strong, positive and statistically significant correlation to municipal own-source revenues but only a moderate, positive but statistically significant relationship with municipal operating expenditure. This validates the assertion that cities can benefit from economies of scale in service provision, the closer households are located to each other, the more cost effective it becomes to provide the service.

The theory that the total number of households, the average household size and population density affect the fiscal health of a city is therefore supported by the data and the statistical significance of the relationship between the variables. The existence of a positive relationship between average household size and municipal own revenue sources and municipal operating expenditure was not supported as the relationship between the variables was negative. However, the impact of these variables on municipal fiscal health must also consider the contextual issues of poverty and service provision in South Africa.

8.2 The impact of poverty on municipal fiscal health

Five variables were used to represent poverty levels within the city. These were the registered number of indigent households in a city, the number of unemployed people, the percentage of people living below the food poverty line, the percentage of people living below the lower bound poverty line and the percentage of households with no income.

The findings revealed that there is a weak but positive correlation between the number of registered indigent households in a city and the city's own-source revenues and operating expenditure. The strength of the relationship was also determined to be statistically weak in

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both cases. It can therefore be concluded that the registered number of indigent households does not significantly impact municipal own-source revenues, nor does it impact significantly on municipal operating expenditure and that there is insufficient evidence in the dataset to support the theory that the variables are indeed correlated. Therefore, as a variable of poverty, the inclusion of the registered number of indigent households will not add value to fiscal health monitoring in South Africa. Furthermore, given that municipalities identify these households through a self-targeting mechanism, its inclusion as an indicator of fiscal health can be subject to manipulation by the city.

As an indicator of poverty, the number of unemployed people in cities showed a strong, positive correlation with municipal operating expenditure. The relationship between the number of unemployed people and municipal own-source revenues was also positive but the strength of the correlation was moderate. In both cases, the results were found to be statistically significant indicating that the relationship between the variables does exist and is not a correlation that exists by chance. Given the statistical significance of the correlation, including the number of unemployed people in a city will be a useful indicator of poverty in a fiscal health monitoring system.

Similarly, the number of people living below the food poverty line and the number of people living below the lower-bound poverty line correlated moderately with both the own-source revenues of a city and its operating expenditure. The relationship, however, was negative but statistically significant. Therefore, these would also be useful indicators of poverty to include in the development of a comprehensive fiscal health monitoring system.

The correlation between the percentage of households with no income and municipal own-source revenues was very weak. However, the percentage of households with no income showed a weak but comparatively stronger relationship to municipal operating expenditure than it does to own-source revenues. The relationship between these two variables was also statistically significant. Nevertheless, given the weak relationship between households with no income and municipal fiscal health, the inclusion of these variables as indicators of poverty would not be useful in a municipal fiscal health monitoring system.

Of the five variables selected to indicate poverty in a city, only three of the variables were found to be statistically significant supporting the theory that poverty does impact municipal fiscal health. These variables include the number of unemployed people in a city, the percentage of people living below the food poverty line and the percentage of people living below the lower-bound poverty line.

8.3   The impact of inequality on municipal fiscal health

There were eight variables identified as theoretically relevant and practical indicators of inequality. These included the Gini-coefficient, access by households to piped water either inside the dwelling or yard, the number of households with a flush toilet connected to a municipal sewerage system, the number of households supplied with electricity directly by the municipality either through a conventional or prepaid meter, the number of households with access to a weekly refuse removal service, the number of formal and informal dwellings in a city and the level of urbanisation.

The Gini-coefficient which is the most common measure of income inequality in South Africa showed a positive albeit very weak correlation to total own-source revenue. The strength of the relationship between the variables indicated a high possibility that the relationship exists by chance. The Gini-coefficient was also weakly correlated with municipal operating expenditure. However, the relationship was negative and statistically determined to be a relationship that exists more by chance. As a measure of inequality, the Gini-coefficient will not add value to a municipal fiscal health monitoring tool.

The theory suggests that there is a positive relationship between the number of households that have access to municipal services, the consumption of which can be metered and billed for, and municipal fiscal health indicators.

The correlation between household access to piped water inside the dwelling or yard, access to a flush toilet connected to a municipal sewerage system and access to a weekly refuse removal service with total own-source revenues was positive, very strong and statistically significant. A similar relationship was observed between these variables and total operating expenditure. The correlation between own-source revenues and household access to electricity supplied directly by the municipality either through a conventional or prepaid metering system was also positive, but it was observed that the strength of the relationship between these two variables was not as strong as the relationship between access to other services and own-source revenues. This could be indicative of a problem with the data and incorrect reporting by cities or it could also indicate that access to electricity as a basic service lags behind access to other services with fewer households being connected to electricity by the municipality. A further possibility could be that more households are supplied with electricity via other service providers, such as Eskom and not directly by the city. However, a similar relationship was observed between access to electricity supplied directly by the city and the total operating expenditure. The relationship was positive, statistically significant and strong, however, the strength of the relationship

between household access to electricity supplied by the municipality was weaker than the relationship of the other services and total operating expenditure.

Nevertheless, the theory that higher levels of access to services by households, the consumption of which can be metered and billed for by the city impact positively on municipal fiscal health is supported. Given the strength of the relationship between the variables and the statistical significance thereof, the inclusion of access to services as a measure of inequality will add value to better understanding the challenges of municipal fiscal health.

The split between informal and formal households was identified as a further variable of inequality that impacts municipal fiscal health. Higher levels of informal households are generally associated with increased poverty and municipal subsidisation which impacts negatively on municipal fiscal health. The converse is believed to be true where there are a higher number of formal households.

The relationship between the number of formal dwellings and municipal own-source revenues was positive but the strength of the relationship was determined to be moderate. Statistically, the relationship was significant. The relationship between formal dwellings and total operating expenditures, the data also revealed a positive, moderate and statistically significant relationship between the variables. However, the strength of the relationship between formal dwellings and operational expenditure was stronger than the relationship between formal dwellings and a city's revenue sources. This indicates that formalisation of households, although positively correlated with own-revenue sources, actually impacts more on municipal expenditure and hence harms municipal fiscal health in South Africa. This could be because formalisation of households as a measure does not distinguish between high-, medium- and low-income households, so the impact of each category of formal households was not individually determined. Furthermore, in South Africa, the formalisation of informal settlements also increases the number of formal households but given that most of these households are poor or indigent, they do not add to municipal revenue-raising capacity.

The relationship between the number of informal households and a city's own-source revenues was positive, moderate and statistically significant. A similar positive, moderate and statistically significant relationship was observed between the number of informal households and total operating expenditure. Interestingly though, the correlation between informal households and own-source revenues was marginally stronger than the correlation between informal households and total operating expenditure.

As for indicators of inequality, more work will be required to categorise formal households before it can add value to a municipal fiscal health monitoring system. Concerning informal households, the impact on municipal own revenue sources is almost equal to the impact of informal households on total operating expenditure, indicating that the revenue inflows and expenditure outflows would more or less cancel each other out, rendering the inclusion of this variable irrelevant in a fiscal health monitoring system for cities.

The percentage of urbanisation in a city as an indicator of inequality, showed a strong, positive correlation with municipal own revenue sources and a slightly more moderate but also positive correlation with municipal operating expenditure. Both these variables showed a statistically significant relationship with variables for municipal fiscal health. Urbanisation as an indicator of inequality would therefore be useful for inclusion into a fiscal health monitoring system.

Of the eight indicators determined through the literature review to be theoretically relevant and practical indicators of inequality, the only variables that were found to support the theory and hence be useful for inclusion in a municipal fiscal health system were the variables related to access to services by households and the percentage of urbanisation in a city. The Gini-coefficient was found to be irrelevant for inclusion. Further research is required on the possible categorisation of formal households and informal households to determine the impact on municipal fiscal health.

8.4   The impact of dependency rates on municipal fiscal health

Municipal fiscal health theory proposes that higher rates of dependency harm municipal revenue-raising capacity and have a positive relationship with municipal operating expenditure. The findings confirm this theory and reflected that total dependency, which is the sum of child and elderly dependency in a city is negatively correlated to municipal own-source revenues. The strength of the relationship between the two variables was moderate but statistically significant.

However, there was also a negative correlation between total dependency and municipal operating expenditure. The strength of the relationship was weak to moderate and was also determined to be statistically significant. The theory that an increase in dependency leads to an increase in municipal expenditure is therefore not supported by the data. Further research based on a larger sample of municipalities could be useful in trying to better understand this relationship.

The relationship between child dependency and municipal own-source revenues was very similar to that of total dependency and own-source revenues. There was a statistically significant, negative and moderate relationship between the two variables. There was also a similar relationship observed between child dependency and the total operating expenditure of a city to that of total dependency and total operating expenditure. The correlation was negative, statistically significant, but weak. Further research will also be required to explain why the data does not support the theory.

Elderly dependency on the other hand was very weakly correlated to both total own-source revenues of a city and operating expenditure. Similar to the other types of dependency described above, the relationship between the variables was also negative. However, the statistical significance of the relationship was weak with more than a 50% probability that the relationship exists by chance. Therefore, as an indicator of dependency, elderly dependency will add no real value if included in a fiscal health monitoring system for cities.

The theory that dependency impacts the municipal fiscal health of a city is therefore supported. However, given the similarities in the relationships between total dependency and child dependency, the inclusion of both indicators will not be necessary. The inclusion of total dependency only will be sufficient to determine the impact of this factor on municipal fiscal health.

8.5   The impact of education on municipal fiscal health

Education as a socioeconomic factor was determined to impact the fiscal health of a municipality. Higher levels of education indicate the types of employment available within the municipality which in turn impacts positively on the revenue-raising capacity. Three variables that cities commonly report on were identified as being relevant indicators of the level of education in a city. These variables included adults aged 20 years and older with no schooling, adults aged 20 years and older with a matric certificate and adults aged 20 years and older with a qualification higher than matric. The focus was on education amongst the adult population since this cohort usually adds to the revenue-raising capacity of a city.

The data showed that there was a negative correlation between adults aged 20 years and older with no schooling and own-source revenues. The strength of the relationship was moderate, and the results showed that the correlation was statistically significant. This supports the theory that low levels of education impact the fiscal health of a city negatively. The data also showed that there was a negative, moderate and statistically significant correlation between the adults

aged 20 years and older with no schooling and the total operating expenditure of a city. The data, however, did not support the theory that adults with low levels of education within a city increase the fiscal burden and drive-up municipal expenditure.

The correlation between adults with a matric certificate and total own-source revenues of the city showed a strong, positive and statistically significant relationship with both the total operating revenues and total operating expenditure of a city. This supports the theory that progressively higher levels of education impact positively on municipal own-source revenues. It also supports the theory that people with more education demand higher and better levels of service from the city. The strength of the relationship was equal in both cases implying that the increase in own revenues is met with an increase in operating expenditure. The net impact on the fiscal health of a city would almost cancel each other out and therefore the inclusion of this variable in a fiscal health monitoring system is unlikely to add value as the net inflows are matched by the net outflows.

The correlation between adults aged 20 years and older who have a qualification higher than matric, showed a very weak, positive and statistically insignificant relationship with the own revenue sources of cities. This means that qualifications higher than matric did not influence the fiscal capacity of a city and hence the theory that progressively higher levels of education are positively correlated with the revenue-raising capacity of a city, is not supported. The relationship between qualifications higher than a matric amongst the population aged 20 years and older showed a negative correlation with total operating expenditure. The correlation was very weak and exists more by chance. Therefore, the theory is again not supported by the data.

Education as a socioeconomic factor does not impact the fiscal health of a city according to the data provided. Therefore, it is not recommended for inclusion into a fiscal health monitoring system.

8.6 The impact of economic variables on municipal fiscal health

Three variables were identified to determine the impact of the local economy on the fiscal health of a city. It must be noted that there were additional variables related to tourism and business that were identified in the theory as being relevant. However, the data for these variables could not be obtained from the existing planning and budgeting documents of the cities. The three variables for which information could be obtained included the regional gross domestic product (GDP-R), the average annual economic growth rate over ten years (2006-2016) and the Tress Index which indicates the level of diversification in the local economy.

The impact of the regional gross domestic product of a city showed a strong, positive and statistically significant relationship to both the own revenue sources and total operating expenditure of the city. This indicates that the higher the value of goods and services produced within a city's borders, the greater the impact on the fiscal capacity of the city. However, higher regional GDPs were also correlated with higher total operating expenditure presumably because of the demand for higher levels of municipal services, including water, electricity, transport and road networks amongst other services. The net impact of this variable as an indicator of municipal fiscal health is one that simultaneously increases and decreases municipal fiscal health.

The correlation between the average annual economic growth rate over ten years (2006-2016) and municipal own-source revenues was negative and very weak. There was also weak evidence to prove that the relationship between the variables does exist. A similar observation was made concerning the average annual economic growth rate and total operating expenditure of the city. Therefore, the theory that the annual economic growth rate could be a useful indicator in a municipal fiscal health monitoring system, is not supported.

Similar to the results on the average annual economic growth rate, there was also a very weak and negative correlation between the Tress Index and the own-source revenues and total operating expenditure of the city. There was also weak evidence to support the existence of such a relationship between the variables. Therefore, diversification of the local economy does not have an impact on the municipal fiscal health of a city.

Concerning economic variables identified in this research study, it is only the regional gross-domestic product that impacts municipal fiscal health.

8.7   Conclusion

Based on the above results, the theory that socioeconomic indicators affect the fiscal health of a city is in general supported as there were strong correlations observed between some of the variables and the proxies for municipal fiscal health. Within each of the six socioeconomic factors identified, some variables showed moderate to strong correlations with municipal fiscal health and were determined to be statistically significant. These included the total population, average household size, population density, the number of unemployed people in a city, the percentage of people living below the food poverty line and the lower-bound poverty line,

access by households to water, sanitation, electricity and refuse removal services the consumption of which can be metered and billed for by the municipality, urbanisation, total dependency and the regional gross domestic product.

Further research is however required to determine why a negative correlation exists between the total number of households and municipal fiscal health. Further differentiation of households into different income categories should in future be considered to better understand the impact of each category of households on municipal fiscal health.

Therefore, the inclusion of socioeconomic variables into the municipal fiscal health monitoring system for South Africa will add value and deepen the understanding of some of the underlying challenges. It will also assist in ensuring that remedies for improving municipal fiscal health are targeted towards the underlying problem rather than on a general assumption of the problem in cities/municipalities.

Chapter 9: Conclusion and recommendations

9.1 Conclusion

A central objective of this study was to identify theoretically relevant and practical socioeconomic factors of municipal fiscal health and determine the impact of these factors on the own revenue sources and the total operating expenditure of intermediate cities in South Africa. Through a literature review, common socioeconomic factors used in previous academic research were identified. Practical socioeconomic factors, such as poverty, inequality and unemployment were derived from the unique contextual circumstances faced by municipalities in South Africa which are not commonly referred to in the mainstream literature. Most of the literature on this topic is focused on the experiences of countries in the developed world. It was observed that the literature on municipal fiscal health in developing countries is limited and is an area for further research.

A set of variables by which each of these factors could be measured were identified. Using quantitative analysis techniques, the relationship between these variables and municipal fiscal health variables were assessed. The study concludes that socioeconomic factors do impact the fiscal health of a city. However, not all variables identified through the literature as relevant were found to impact the municipal fiscal health of cities in the manner suggested by the theory. This could be due to problems of reporting in the dataset or perhaps attributable to some of the unique contextual circumstances in South Africa. For example, the average household size reflected a negative correlation to total own-source revenues and total operating expenditure of a city presumably because in South Africa poor households are considered to be larger. Furthermore, the unequal levels of access to services can influence the findings as discussed in the research. More work will also be required to further disaggregate some of the variables, such as the total number of households and classify them according to income levels. Additional variables should also be identified in further research for some of the socioeconomic factors.

It must be noted that the availability of data on municipal finances and municipal socioeconomic information posed a limitation to this study. Only publicly available data published by government institutions was used in the analysis. In some cases, the data was also outdated and based on the last Census information undertaken in 2011, ten years ago. Nevertheless, consistency in the dataset was ensured by using only information of the same year and from the same source for all cities in this research.

Several conclusions can be drawn from this research study. Based on the mainstream literature, the first conclusion is that municipal financial health is a multidisciplinary topic and has links to finance, economics, political science, public administration and other fields of study. It is therefore affected by an array of different factors and variables. Some of these are common to municipalities and others are specific to the context within which a municipality operates, such as the political environment.

Secondly, there are many gradations of fiscal health. Fiscal strain, fiscal distress and fiscal crises can all be seen to represent different points on a spectrum of municipal fiscal health. Different variables should therefore be used to measure each gradation of the concept. It is important for purposes of early warning and remediation to clearly understand the differences between the different gradations of municipal fiscal health. Furthermore, fiscal health is also not a static concept, it is affected by time, factors within and beyond the control of a municipality and can thus deteriorate rapidly if not properly managed. In many of the current models, municipal fiscal health is also expressed in terms of different types of solvencies, which can be linked to timeframes, such as long-run solvency, cash solvency, budgetary solvency and service-level solvency.

Thirdly, the research showed that despite four decades of literature on the topic, there is no single approach that can be used to measure municipal fiscal health. The different approaches proposed by researchers and academics tend to differentiate between disciplines. There are those approaches that are purely financial, using a set of financial ratios to determine municipal fiscal health. Even within the financial ratio-based approach, there is a difference of opinion amongst researchers on which are the most appropriate indicators to use. Some academics also hold the view that the focus should be on the measurement process and not the factors that influence or drive it.

There is also the socioeconomic approach which views municipal fiscal health more from a social and economic perspective, trying to understand the influence of the environment on a municipality's finances. Rather than just measuring municipal fiscal health, these approaches try to better understand the factors that cause certain fiscal health outcomes. This type of approach is useful for both predicting potential problems in the fiscal health of a municipality and for designing appropriate solutions to remedy municipal fiscal challenges.

There is also a third type of approach that focuses on a more comprehensive system of fiscal health measurement, one that seeks to incorporate financial, environmental and organisational

factors. Ultimately, the design of any fiscal health monitoring system should be informed by the objectives of the system and the needs of the user.

Municipal financial health can also be understood in absolute and relative terms. However, absolute scores can often hide problems within individual indicators that make up that score while the outcome of relative assessments can be manipulated through the choice of comparator municipalities.

A further important conclusion to be drawn from this study is that the process to transform municipalities in South Africa appeared to be flawed in certain instances. Two issues, in particular, can be seen to have a direct effect on the fiscal health of a municipality. The first relates to the fact that the criteria adopted by the Municipal Demarcation Board in the determination of municipal boundaries did not consider municipal financial sustainability as the only criterion for demarcation. In some cases, trade-offs amongst the criteria used had to be made. It was also noted in this study that the Municipal Demarcation Board held the view that issues of financial sustainability would be compensated for by the local government fiscal framework and the allocation of intergovernmental grants to financially unsustainable municipalities.

The second flaw in the design of the local government fiscal system was the assumption in the 1998 White Paper on Local Government (RSA, 1998) that municipalities would be self-financing and thus able to fund approximately 90% of their operating expenditure from municipal own-source revenues. Although the intergovernmental fiscal system has undergone several revisions over the past 20 years to increase funding to local government, the fundamental assumption of a self-financing local government sector contained in the White Paper is still the foundation upon which the local government fiscal framework is built. It was also noted in this study, based on the conclusion of other research, that the self-financing assumption lacked an empirical base to start with.

The study also concluded that the principles of decentralisation and developmentalism which form the bedrock of the post-apartheid local government system in South Africa can often conflict with each other. Decentralisation which is intended to give municipalities more authority over decision making within their jurisdictions can compromise the progressive realisation of basic rights in South Africa.

However, the most important conclusion to be drawn from this study is that municipal financial health in South Africa is affected by factors other than the management of financial resources

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and governance. Thus, attempting to solve all municipal financial health problems only focusing on improved management and governance, will not always ensure a successful outcome. This could perhaps partly explain the low success rates in the over 140 Section 139 constitutional interventions invoked since the Constitution was adopted. The research demonstrated that there are indeed correlations between the factors in the social and economic environment in which a municipality operates and municipal fiscal health. Therefore, in attempting to diagnose and correct problems of poor fiscal health, it is important to adopt a more holistic approach, one that considers the influence of the social, economic and structural environment on the finances of municipalities.

The researcher concludes that there is merit and value to be added by included socioeconomic variables into the current fiscal health monitoring system in use in South Africa. However, the value to be derived from such a system will only be realised if municipal socioeconomic data is available, regularly updated and most importantly credible. Additionally, municipalities must also be trained on how to interpret socioeconomic information to better inform planning and decision-making at the local level. If statistical information is used incorrectly, it can have the same effect on planning and budgeting as that of bad statistics or data. During this research study, it was observed from the integrated development plans of some cities that the interpretation and use of statistical information by municipalities is poor which can be misleading and harmful to the fiscal health of a municipality. Two additional benefits of including socioeconomic indicators into the current fiscal health monitoring system are that it can firstly help with identifying appropriate remedies to correct fiscal health problems in municipalities and it can aid in the prediction of future financial problems allowing for the problem to be addressed before it morphs into a crisis.

The population for this study included all 39 intermediate cities in South Africa as per the categorisation of the South African Cities Network. Further research can also be done to determine if these factors are equally relevant to other Category B municipalities in South Africa.

9.2 Recommendations

The following recommendations emanating from this study are:

(a) Extend the fiscal health monitoring tool used by the National Treasury to include a component that measures the impact of socioeconomic factors on municipal fiscal health.

(b) Identify additional socioeconomic variables by which the measurement of the underlying constructs can be improved where the theory and findings did not match.

(c) Disaggregate household information to distinguish between high-, medium- and low-income households to ascertain the impact of different categories of households on municipal fiscal health and to improve understanding of household dynamics.

(d) Undertake this analysis in respect of all category B (local) municipalities including those who do not raise significant own revenues to determine the impact on intergovernmental fiscal allocations.

(e) Improve the response to municipal fiscal health challenges by including specific remedies to deal with the challenges emanating from the external, socioeconomic environment of the municipality.

(f) Introduce a differentiated funding framework for local government that takes into account the specific challenges within the different categories of municipalities.

(g) Review the assumptions on the level of self-financing by municipalities as a one size fits all approach does not work even within the same municipal category.

(h) Initiate national processes, either through Statistics South Africa or the National Treasury to standardise, collect and update municipal socioeconomic information on a more regular basis. This standardised set of data can then be used in integrated planning and development processes and will also assist in strengthening monitoring and evaluation of institutional performance issues. Standardised sets of data will also provide a credible base to verify performance on IDP implementation and progress towards the National Development Plan (NDP).

(i) Capacity to analyse and interpret statistical information is key and this capacity should be strengthened at all levels of government.

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